

**The Persuasive Impact of Autobiographical Memories Ads:
Schema-triggered Affect or Episodic Self-referencing ?**

by

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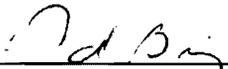
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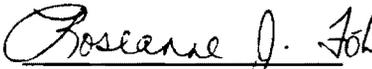
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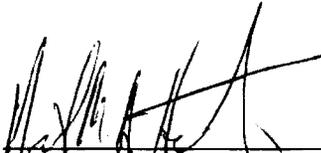
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(ABSTRACT)

Marketers frequently use autobiographical memories ads to induce persuasion. However, the few existing studies of autobiographical memories ads have produced inconsistent results regarding their persuasive impact. Moreover, there is little empirical support for the presumed process by which autobiographical memories ads work (i.e., episodic self-referencing). Similar to previous studies, the current study found scant evidence of episodic self-referencing. This study recharacterized self-referencing using the more general term "self-focus". In addition, this study suggested that a schema-based process can better explain the persuasive process in autobiographical memories ads rather than priming a specific episode from one's life.

To test these competing explanations (episodic self-referencing vs. schema-based), an experiment was conducted that exposed participants to a Florida vacation package ad either for a spring (schema-consistent) or a Thanksgiving (schema-inconsistent) break. The ad either made no explicit reference to the self (product-focus-ad) or made a reference to a past break experience (self-

focus-ad). There were three different versions of the self-focus-ad. Participants in the Self-focus-ad condition simply viewed the ad. Participants in the Self-focus-ad Pre-essay condition wrote an essay on a past break experience prior to viewing the ad. Participants in the Self-focus-ad Post-essay wrote the essay after viewing the ad. The presentation order of two primary dependent measures (product evaluation and cognitive response) was also manipulated. Participants provided product evaluation ratings on the Florida college vacation package. The cognitive response measure was a thought listing task on the advertised product. A computer presented all stimuli and recorded participants' responses.

In general, the results support a schema-based process rather than episodic self-referencing in explaining the persuasive impact of autobiographical memories ads when the product evaluation measure preceded the cognitive response measure. A consistent schema-match produced a higher product evaluation than an inconsistent schema-match. Additionally, increasing self-focus after viewing the ad forced participants to contrast their past experience with the ad, resulting in a lower product evaluation. The results suggest that the persuasive mechanism underlying autobiographical memories ads can be better characterized by self-focus and self-relevance rather than by self-referencing of a past event. Implications for persuasion and advertising are discussed.

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The Persuasive Impact of Autobiographical Memories Ads: Schema-Triggered Affect or Episodic Self-Referencing ?

Think back to the last time you had a romantic getaway at the beach, just the two of you. Imagine the romantic possibilities... strolling hand in hand along the sea-side at sunset... gazing at each other over a bottle of fine wine...making every evening special for that special someone. Whether it is your honeymoon, anniversary or a fun-filled weekend with a secret lover, Vacation Express has an exclusive travel package just for you...

Did this brief scenario force you to retrieve a romantic episode from your life? Did you feel an increase in positive affect? Advertisers hope that the answers to these questions are yes. The scenario depicts an autobiographical memories advertisement, an increasingly popular persuasive technique. The goal of advertisers is to have consumers retrieve fond memories of their past personal experiences and transfer these emotions to the product (Sujan, Bettman, & Baumgartner, 1993). The retrieval of autobiographical memories has been considered as a special case of self-referencing (Brewer, 1986).

Autobiographical memory can also be conceptualized as episodic memory retrieval (Tulving, 1972). The memory is experienced as the representation of an event at a particular time and location (Brewer & Pani, 1983).

Studies have provided empirical support that autobiographical memories ads lead to an increase in autobiographical data being retrieved from memory.

People rate these ads as more personal and real and report an increase in overall positive affect (Baumgartner, Sujan, & Bettman, 1992). Despite these findings, evidence for the effectiveness of autobiographical memories ads as a persuasive technique is mixed (Baumgartner et al., 1992). One study found that it was an effective persuasive technique and led to a higher evaluation of the product compared to a more traditional product focus type of advertisement (Sujan et al., 1993). A second study found that the autobiographical memory ad lead to a higher evaluation of the ad itself, but this did not translate to a higher rating of the product compared to other types of ads (Baumgartner et al., 1992). Thus, our understanding of the persuasive impact of autobiographical memories ads remains unclear. In fact, few empirical studies have been conducted on autobiographical memories ads and the possible role of self-referencing.

If the self is viewed as representing a cognitive structure, then examining the literature on the interplay of affect and cognition is an initial starting point to understanding the persuasive mechanism behind autobiographical memories ads. This proposal will first provide an overview of that literature, then provide a summary of our current understanding of autobiographical memories ads, which tends to view persuasion effects as produced by episodic memory, or more specifically as a result of increased attention to idiosyncratic attributes associated with a past self-referenced event. An alternative explanation, semantic memory or a schema-based approach will be proposed for the

persuasive effects of autobiographical memories ads. To test these two competing explanations (episodic self-referencing vs. schema-based), a study was conducted to determine which model best reflects the persuasive process in autobiographical memories ads.

Reciprocal Processes of Affect and Cognition

"There is no good nor bad; it is only
thinking that makes it so." --Hamlet

Providing summary comments on a symposium on affect and cognition, Simon (1982) noted that the interaction of affect and cognition in mental functioning was in some ways incongruent, wondering how such disparate processes can influence each other at all. Affect is diffuse, hard to describe and harder to differentiate and classify. Affect is susceptible to continuous gradations; there are degrees of sadness. Affect is better suited to be measured through an analogue device. Cognition, by contrast, is highly specific, mostly representable by strings or structures and more digital in character (Simon, 1982). However, despite these differences, affect and cognition clearly influence one another. The type of cognitive structure in place influences the role affect plays and affect influences the way information is processed. Due to the dynamic nature of the interactions between these two mechanisms, it is difficult to know what processes precede and what processes follow. Fiske and Taylor (1991) note that affect and cognition are often divided in empirical research for

analytical purposes, to isolate the influence of each separately. They also note that this separation of affect and cognition is something of a fiction and done to some extent arbitrarily.

The Influence of Affect on Cognition

The social cognition literature provides numerous examples that suggest that affect influences the way information is encoded, biases subsequent retrievals, and thus influences our judgements and other cognitive processes (Isen, 1989). Moods influence the way we make judgements. Elated people are expansive, inclusive, and somewhat impulsive; they make decisions quickly (Isen & Means, 1983), and work quickly at simple tasks (Mayer & Bremer, 1985). Research suggests that a person in a positive affective state who is asked to make a judgement or solve a problem will tend to reduce the complexity of the judgment or decision task and engage in speedy, simplified kinds of processing. That is, a person who is feeling good will be more likely to choose the simpler strategy for solving a problem if more than one strategy is possible (Isen & Means, 1983).

Affective states have been found to influence cognitive organization, the way items or units are grouped together, or the relatedness seen in cognitive material. In a series of studies, Isen and Daubman (1984) examined the role of positive and negative affect in categorization. Affect was manipulated by having participants view a comedy or a Nazi concentration camp film. Participants were next asked to categorize items that were either strong, weak or moderate

exemplars of a class. Results revealed that weak exemplars were more likely to be rated as category members in the positive affect condition. Participants in the negative affect condition tended, though not significantly, to categorize weak exemplars as a category member. Thus, the affect manipulations broadened the scope of categorization compared to the control conditions.

There is also considerable research to suggest that people in a positive mood exhibit little systematic processing of complex information and instead rely on rapid, less effortful judgment heuristics (Mackie & Worth, 1991). Mackie and Worth (1989) note that this may be due in part to the fact that a positive mood appears to activate positive material stored in memory, which in turn activates other material to which it is linked. The presence of such material might merely reduce space in a capacity-limited system or the easy and simultaneous accessibility of material might defocus attention. Mood might therefore function as a distraction, interfering with the ability to engage in careful elaborative processing (Petty & Brock, 1976). From this perspective, people in a positive mood may wish to process incoming information systematically, but because their capacity and attention are being used elsewhere, they cannot. A more motivational explanation is that being in a good mood is intrinsically pleasurable and people may be motivated to engage in cognitive and behavioral activities that maintain or enhance this state and avoid activities that would diminish it (Isen, 1987).

The Influence of Cognition on Affect

There is much empirical research that indicates that the type of cognitive structure in place directly impacts one's affective response. Fiske's (1982) schema-triggered affect model directly addresses this issue. To the degree that an instance is perceived to fit the schema, it will receive the affect linked to that category. Otherwise, the instance receives a moderate positive affect, by default, pending its possible categorization as a good example of something else. In this model, affect is stored at the top level of the schematic structure without access to all the category's features and their respective evaluations; affect is linked to the initial act of categorization. This matching effect has been demonstrated for a variety of person schemas: old flames, politicians, college majors, occupations, experience with prior instances to the category as a whole and then back to new instances (Fiske & Taylor, 1991). If the categorization attempt fails, either because no applicable category is cued by the configuration of attributes or because the most applicable category implies some attributes that are dramatically inconsistent with the category, a bottom-up type of processing would be more likely to occur, that is, an attribute-based approach, to evaluation (Fiske & Pavelchak, 1986).

To test the schema-triggered affect model, Fiske and Gup (1980) manipulated negative and moderate student stereotypes for an artist, an engineer, a ROTC student, and a gay activist. Behaviors consistent and

inconsistent with the stereotype were manipulated. Examples for the artist stereotype included, smoking marijuana and perching in a tree to play the flute. Consistent behaviors for the engineer included staying up all night in the computer room and wearing dull, dated, mismatched clothes. Behaviors of the ROTC student included helping a woman with her coat. The gay activist behaviors included a well-equipped kitchen, and cooking with a Chinese wok (remember that this data was likely collected in the mid to late 70's). Subjects' made evaluations on the general likability of the individuals. Results revealed that a good match to the negative stereotype produced negative affect, whereas a poor match did not, even when holding constant the components of evaluation.

It is clear that individuals use a combination of information processing strategies from schema-based to an attribute-based in forming evaluations (Fiske & Pavelchak, 1986). To explain this range of information processing strategies, Fiske has developed her model along a continuum of impression formation processes as a function of attention and interpretation (Fiske & Neuberg, 1990). This model assumes that perceivers attempt category-based (i.e., schema-based) processes before they use more attribute-based processes. The progress along the impression formation continuum depends on the ease with which a perceiver can interpret the target's attributes as fitting an available category. To the extent that a perceiver can interpret a target's attributes to fit a category, the more likely that category-based processes will dominate. Once a

perceiver categorizes an individual, either as belonging to a particular category about which a perceiver has specific knowledge or as merely belonging to an outgroup, category-based responses about the individual become accessible. That is, information required to form category-based impressions is more accessible to a perceiver rather than attribute-based information. This implies that the accessible attributes are filtered with the initial category label. For example, a child taking an eraser from another may be perceived as mean and threatening if black, but not so if white. In this case the perceiver uses "black" as the salient outgroup category label to filter the information (Duncan, 1976; Sagar & Schofield, 1980). To the extent that a perceiver can not fit a target's attributes to an appropriate category, the more likely an attribute-oriented processes will occur. Additionally, Fiske's model notes that differential attention to attribute information is necessary for the perceiver to use piecemeal processing. The perceiver's motivation (i.e., goal relevance) can also influence the type of processing that occurs (Fiske & Neuberg, 1990).

To clarify further the difference between category-based versus attribute-based processes, distinctions need to be made between what constitutes a "category" and what constitutes an "attribute". Individuals possess many features that can be used in impression formation. These features may be observed (e.g., hair color), communicated by a third party (e.g., Polly is a schizophrenic) or inferred by the perceiver through attributions from a behavior in

a context (e.g., telling the truth, despite strong temptation to lie, suggests honesty). The feature that a perceiver uses to organize and understand the remaining features defines the category label; the other features are defined here as attributes. For example, if a bigoted white perceiver encounters an individual who is black, well dressed and outgoing, to the extent this perceiver organizes the target's features in terms of skin color (e.g., assumes that the person is well off, so the expensive clothes reflect money obtained illegally), the perceiver is using "black" as the category label and the remaining features as attributes (Fiske & Neuberg, 1990). Thus, the category label has stronger links to the attributes than any single attribute has to the other attributes; hence, the category label can be said to organize the attributes (Fiske & Neuberg, 1990).

Another model that interrelates cognitive structure and affect, and has direct implications for piecemeal or attribute-based processes, is Linville's self- or level of complexity model. The basic hypothesis of the model is, that the less complex a person's representation of a given domain, the more extreme will be the person's affect regarding stimuli in that domain. When the representation is more complex, affect will be more moderate (Linville, 1982). Complexity has been operationalized in multiple ways. In a semantic network structure, greater complexity may be defined in terms of a greater number of nodes or more interconnections among the nodes (Anderson, 1976). Linville has conceptualized complexity in terms of the number of independent features

underlying a person's thinking about the self or other. Complexity is in part domain specific, with degree of complexity dependent on the type and amount of familiarity and experience regarding a specific domain. As people gain greater experience or familiarity, they develop more complex knowledge structures. The tendency to perceive a stimulus as good in some respects yet bad in others will have a moderating effect on affective ratings. Complexity can be seen as an individual difference variable or can be directly manipulated (Linville, 1982).

In one study, complexity was directly manipulated through task instructions that induced subjects to adopt a simple or a complex orientation toward a set of stimuli. Subjects were asked to evaluate several law school application essays, each describing why the applicant wished to attend law school. One of the essays was strong in quality, whereas the other was relatively weak. Subjects were asked to think about the essay in terms of several features for a brief time period prior to making one favorableness rating of the essay. Subjects never rated nor expected to rate the essay on the individual features. In the high-complexity condition, six features were listed for the subject to think about before rating the essay (e.g., motivation, writing style); in the low complexity condition, only two features were listed. Those in the low-complexity, strong essay condition made more extreme ratings (more favorable toward the strong essay and more unfavorable toward the weak essay) compared to subjects in the high-complexity condition, who were more moderate (Linville, 1982). In a similar

design, subjects tasted and evaluated five different types of chocolate-chip cookies ranging in quality. Subjects thinking about two features (e.g., how buttery, chewy) were more extreme in their favorableness rating of each cookie than those thinking about six features. The high-complexity condition produced a smaller variance across the five-cookie ratings, compared to the low complexity condition (Linville, 1982).

Another relevant theory, one that might appear to contradict Linville's hypothesis, is Tesser's model of thought polarization. Tesser (1978) notes that thought polarizes feelings because it leads to perceiving a tighter organization of the attributes of a given stimulus (Tesser, 1978). This may contradict Linville's complexity-extremity hypothesis, in that Linville claims that complexity moderates evaluations, but Tesser claims that thought polarizes evaluations. However, there are some differences in the two models. Linville's complexity-extremity hypothesis refers to initial evaluations at one point in time, while the thought polarization hypothesis refers to changes over time (Linville, 1982). The thought polarization effect occurs when subjects make an initial public commitment to their evaluations, whereas the complexity-extremity effect is obtained in the absence of such commitment (Fiske & Taylor, 1991). Finally, the thought-polarization effect occurs when the schema's dimensions are substantially correlated (i.e., ratings on one dimension predict ratings on other dimensions) because the schema's structure is more intrinsically coherent (Millar & Tesser,

1986).

Summary of Affect and Cognition

This brief review of the literature suggests two differing models of information processing that a perceiver may use in making evaluations, category-based and attribute-based. The category-based model is based on Gestalt principles which posit that evaluations are based on holistic impressions and initial categorization (e.g., schema-based processes). In contrast, an attribute-based model assumes that evaluative impressions are the combination (sum or average) of the evaluations of isolated attributes. The attribute-based model posits that the evaluative component of each attribute is determined independently of the others present, and then the isolated evaluations are combined into a summary judgement (Fiske & Pavelchak, 1986).

Although the two proposed models (categorical-based vs. attribute-based) may represent diametrically opposed approaches to information processing, the final evaluation of any stimulus may be quite similar and the perceiver may fluctuate between the two approaches depending on the context and the goal. Additionally, because these two models represent cognitive processes, researchers can not directly observe the mechanism. These considerations in testing the two competing models often require that experimental designs become more creative or at least more complicated. Despite these obstacles, the current literature does suggest that whether a stimulus is evaluated

categorically or through an attribute-based process has potentially differing consequences for the role that affect plays in subsequent evaluations. Research by Linville (1982) suggests that the role of affect is attenuated in complex cognitive structures. Thus, when evaluation occurs through an attribute-based process, affect will be a function of each attribute (where some will be positive and some will be negative) and reduce the likelihood of an extreme evaluation. Research on Fiske's (1982) schema-triggered affect model suggests that the degree to which an instance is perceived to fit the schema, it will receive the affect linked to that category. Thus, the affect associated with the initial category label will have the most impact rather than the affect associated with any individual attribute. With this backdrop mind, let us now return to the literature on autobiographical memories ads.

Autobiographical Memories Ads: Current Understanding Versus an Alternative Explanation

As noted in the introduction, the retrieval of autobiographical memories has been conceptualized as a special case of self-referencing (Brewer, 1986), or as episodic memory retrieval (Tulving, 1972). Autobiographical episodes differ from semantic knowledge concerning the self, such as self-schemas, which represent cognitive structures that contain abstract or generic knowledge self-descriptions (e.g., extroverted; Baumgartner et al., 1992). One recent advertisement using this method is a Kodak ad displaying nostalgic photographs of family events and

warning consumers not to trust their memories to anything less than Kodak film. Judgments concerning the product are thought to be based on the positive emotions aroused by the retrieval of an autobiographical episode rather than by product information. In the case of Kodak, consumers' retrieve memories for a past family event and associate their positive feelings with the family event with Kodak film.

The current understanding of autobiographical memories ads is as follows: First, they are seen in terms of episodic memory retrieval. That is, idiosyncratic attributes associated with a past self-referenced event are made accessible to a consumer by the presentation of these ads. Second, positive affect is increased as a result of the increased attention to idiosyncratic attributes of a past self-referenced episode. The increase in positive affect is transferred to the product, which leads to a favorable evaluation of the advertised product. The assumption is made that consumers primarily retrieve positive rather than negative idiosyncratic attributes from their past. Third, self-referencing is characterized as a cognitively demanding task in which a consumer focuses attention on the idiosyncratic attributes of their past event and away from the product, resulting in a poorer recall of product features (Sujan, et al., 1993).

However, there are several reasons to question the current understanding of autobiographical memories ads. First, the two empirical studies of autobiographical memories ads currently available have mixed findings. In one

study, Baumgartner et al (1992) had subjects retrieve a specific personal memory using the product. Results indicated that though subjects in the autobiographical memory condition had a higher rating of positive affect, and recalled more personal events compared to either the general situation use or product focus conditions, this did not translate into a higher rating of the product.

In a second study, Sujan et al (1993) encouraged autobiographical retrieval by priming a specific memory for an evening with a friend. Results in this study indicated that subjects evaluated the product more favorably in the autobiographical-memories-encouraged condition compared to the product focus condition. Researchers in this study reported a significant positive correlation between affect and product evaluation. One might expect that there would similarly be a positive correlation between self-referencing and product evaluation. However, there was no reported information on the correlation between the number of self-referenced thoughts on the thought-listing task (the primary dependent measure for self-referencing) and product evaluation. This is a curious omission in their study considering that the phenomenon is described as a self-referencing effect. Although, in both studies, subjects in the autobiographical memories conditions appeared to produce more thoughts related to personal memories and reported a higher rating of positive affect, only one study found the ad effective in persuasion. Thus, it would appear that the mere presence of positive affect and self-referencing is not sufficient for the

persuasive impact of autobiographical memories ads to occur.

A second problem with the current understanding of autobiographical memories concerns the interplay of affect and self-referencing. It is assumed that attention to idiosyncratic attributes of a past self-referenced episode increases positive affect, as people primarily recall positive rather than negative attributes of a past event. However, if the self is viewed as an elaborate cognitive structure, then increasing attention to idiosyncratic attributes of a past self-referenced episode might reduce the impact of affect, as suggested by Linville's self (or level of) complexity model. Recall that Linville (1982) noted that extremity in evaluation is tied to the complexity of the cognitive knowledge structure. Specifically, when the representation is simple, affect will be relatively extreme. When the representation is more complex, affect will be more moderate (Linville, 1982). If self-referencing is conceptualized on a continuum, then a high degree of self-referencing is analogous to high self complexity and a low degree of self-referencing can be thought of as low self complexity. Thus, increasing self-referencing should lead to an attribute-based approach to evaluation because the perceiver is attending to more past self-referent idiosyncratic attributes. This would reduce the influence of any one attribute and, overall, attenuate the role that affect plays. If self-referencing is decreased (fewer idiosyncratic attributes retrieved), then affect would be more influential and lead to a more extreme evaluation of the product (either positive or

negative). This suggests that the role of affect during low self-referencing would operate similar to a schema-based process. That is, the affect associated with the initial few attributes (or schema label) has the most impact in determining evaluation. The evaluation could either be extremely positive or negative depending on the initial schema categorization (i.e., consistent or inconsistent label).

There is an assumption made in the above argument that increasing self-referencing is similar to increasing self-complexity. Fortunately, there are empirical data to support the notion that attention to the self also increases self-complexity. In a study by Salovey (1992), subjects that were in the self-focused condition also reported more self-complexity compared to external focus or control subjects. That is, they saw themselves in more dimensions in both negative and positive mood manipulations compared to the external focus or control subjects. This would imply that increasing self-referencing through a self-focus manipulation would also increase the number of self-referent dimensions considered.

Linville's self-complexity model might also integrate the two conflicting studies on autobiographical memories ads that currently exist (Baumgartner et al., 1992; Sujan et al., 1993). Both studies did find an increase in personal memories and affect in the autobiographical memories ads compared to the other; however, only one study found the autobiographical memory ad effective in persuasion.

The study that did not find the persuasive impact instructed subjects to think of a specific situation where they would use the product. The second study primed subjects to recall a favorable dinner with a friend (which likely primed a schema-triggered affect for a dinner with a friend). The first study asked subjects to think of a situation in which they used the product and was probably more episodic because it asked subjects to retrieve a memory on their own rather than priming a category label. As a result, each subject likely considered many idiosyncratic attributes for a past self-referenced event. Research suggests that a nonlabeled category increases the likelihood of an attribute-based process (Fiske, Neuberg, Beattie, & Milberg, 1987). As suggested by Linville's self-complexity model (1982), if the evaluation of the self-referenced event was done in a piecemeal manner, then evaluation should be more moderate. Thus one possible explanation for the persuasive effects of the second study, is that a schema was primed (e.g., dinner with a friend), and as a schema-triggered affect model would predict, affect was retrieved initially through the category label, and filtered any additional information. Thus the persuasive impact likely occurred from a global impression of the category label "dinner with a friend" rather than any idiosyncratic attributes of a specific past memory.

A final problem with the current understanding of autobiographical memories ads, concerns the explanation that because self-referencing is a cognitively demanding task, it produces poorer recall of product features (Sujan et al.,

1993). It is believed that people elaborate on the idiosyncratic attributes of the self-referenced past episode, which prevents them from attending to the product features. However, this is counter to what is known about self-referent tasks, which have repeatedly produced superior recall and ratings (Kuiper & Rogers, 1979). Self-reference tasks are thought to involve deep and semantically rich encoding that produces strong, elaborated, and integrated memory traces that facilitate recall. The self-referent effect is more likely to occur if the encoding representation is highly organized in memory, and if the retrieval representation has similar features as the encoding (Higgins & Bargh, 1987). This is perhaps another reason to question the notion of episodic self-referencing in autobiographical memories ads. Self-referencing during an autobiographical memories ad should actually facilitate recall, if the product features were learned in terms of the self-referenced event. However, the role of self-referencing in facilitating recall of product features is purely speculative because of the type of self-referencing that autobiographical memories ads produce. The literature on self-referencing distinguishes between two types of self-referent tasks, those requiring subjects to decide if a word describes them, which create rapid recall, and those requiring subjects to retrieve a personal (autobiographical) memory which creates slower recall (Klein, Loftus, & Burton, 1989). Despite this self-referencing distinction in the literature, studies have repeatedly shown that recall accuracy can be enhanced by encoding information in reference to the self. This

effect has been demonstrated when the self image was based on a specific autobiographical memory and did not hold when the self image was constructed based on general information (Kuiper & Rogers, 1979; Rogers, Kuiper & Kirkler, 1977).

To address these ambiguities in the current understanding of autobiographical memories ads, semantic memory was offered as an alternative explanation for the persuasive impact of autobiographical memories ads. If semantic memory is more descriptive of a consumer's cognitive process during autobiographical memories ads, than a schema-based process would best characterize the persuasive process. Thus, an autobiographical memories ad might produce a schema or a self-schema for the event "family reunion" in the Kodak ad. The attributes that are retrieved may be associated with our general knowledge of family reunions or self-referent attributes from our personal experiences with family reunions. If a schema label was triggered for "family reunion", then the affect associated with this event would also simultaneously be accessible. Similarly, self-schemas also contain an affective component and any self-referencing of a past event would be filtered with the initial category label "family reunion" and the associated affect. Self-referencing in the case of a schema-based process is directly linked to the initially primed global affect. The affect in a schema-based process does not come from the summation or the weighted average of the idiosyncratic self-referenced attributes of a specific

event but rather from the categorization of the event schema. Thus the persuasive impact of autobiographical memories ads is a function of a global evaluation of the schema-label (either consistent or inconsistent) rather than the retrieval of an episode and the associated affect with the idiosyncratic attributes of this past life event.

Overview of Study and Design

The goal of this dissertation was to explore further the role of self-referencing in determining persuasion in autobiographical memories ads by juxtapositioning our current understanding (i.e., episodic memory) with an alternative explanation (i.e., semantic memory). If autobiographical memories ads represent episodic self-referencing of a past event, then an attribute approach would best describe the persuasive process. In an attribute-based approach, the affect resulting from the increased focus on idiosyncratic attributes of a past self-referenced event are associated with a product to induce persuasion. If the persuasive impact of autobiographical memories ads is primarily a result of episodic self-referencing, then increasing attention to idiosyncratic attributes of a past self-referenced event would increase the likelihood of persuasion. Additionally, there should be no differences by schema-match (i.e., categorization of the event) when attention to idiosyncratic attributes of a past self-referenced event has been increased.

If autobiographical memories ads are closer to semantic memory then a schema-based approach would be more indicative of the persuasive process. In

a schema-based approach, the affect associated with a schema-label determines persuasion. If the persuasive impact of autobiographical memories ads represents a schema-based process, then an ad representing a consistent schema-match would be more persuasive than an ad representing an inconsistent schema-match. Additionally, increasing attention to idiosyncratic attributes of a past self-referenced event after viewing an autobiographical memories ad should lead to a moderate evaluation, as the role of affect is attenuated.

To test these competing explanations, an experiment was conducted that manipulated self-referencing level (None, Low, High Pre-ad, High Post-ad), degree of schema-match (Consistent, Inconsistent), and presentation order of two primary dependent measures: the product evaluation measure and the cognitive response measure.

Product Evaluation Predictions

Hypothesis 1: In a Consistent Schema-match, product evaluation will be higher in both the Low Self-referencing and High Self-referencing Pre-ad conditions compared to both the High Self-referencing Post-ad and Product Focus conditions.

Hypothesis 2: Product evaluation should be higher in a Consistent Schema-match than an Inconsistent Schema-match for the Low Self-referencing and High Self-referencing Pre-ad conditions.

Hypothesis 3: Product evaluation should not be significantly different in a Consistent Schema-match then an Inconsistent Schema-match for the High Self-referencing Post-ad condition.

Hypotheses related to the other dependent measures (i.e., cognitive responses) are presented in the results section with the appropriate measure.

Method

Pilot Study

A pilot study was initially conducted to determine the strongest manipulation for a consistent and an inconsistent schema-match for the experimental session. The pilot was advertised as “Consumer Lifestyle Preferences”. Forty-five undergraduate students enrolled in psychology classes during the summer session received extra course credit for participation. Participants were told that their responses would be used to create a database on college students’ lifestyles and consumer preferences for a marketing research firm. Participants provided typicality ratings on college break vacations, information on typical break activities, general lifestyle activities and demographic information (see Appendix A for the pilot study measure).

Typicality ratings were analyzed using a 4 (College Break: Spring, Summer, Thanksgiving, Christmas) x 3 (Vacation Location: Florida, Colorado, Europe) within subjects factorial design. Mean typicality ratings are shown in Table 1. As expected, results indicated a 2-way interaction between Vacation Location and

College Break, $F(6,264) = 91.76, p < .001$. A post hoc protected t-test indicated that the Florida Spring Break was rated as significantly more typical ($M = 7.2$) compared to a Florida Thanksgiving Break ($M = 3.2$), $t(264) = 14.51, p < .001$. There was also a main effect for Vacation Location $F(2,88) = 28.34, p < .001$ and for College Break $F(3,132) = 39.98, p < .001$. When holding the location constant, the pilot indicated that the strongest manipulation for the experimental session would be a Florida spring break package (Schema-consistent condition) versus a Florida Thanksgiving break package (Schema-inconsistent condition). Additionally, the typical spring break activities listed by undergraduates (i.e., partying, sailing, sun, relaxing etc.) were used to develop the content of the advertisement for the experimental session.

Experimental Session

Participants and Design

The participants were 240 undergraduates enrolled in psychology and marketing classes. They received extra course credit for participation. Because the experimental session was conducted in the fall semester, freshmen were excluded from the study because no college breaks had been experienced. The study used a 4 (Self-referencing: None (Product Focus), Low, High Pre-ad, High Post-ad) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects factorial design. Participants were randomly assigned to one of 16 conditions. See Table 2 for experimental

design.

Procedure

As in the pilot study, the experimental session was advertised as "Consumer Lifestyle Preferences" and used the same cover story. This prevented pilot participants from taking part in the experimental session. Participants came into the computer lab in groups of 1 to 7 and were greeted by two experimenters (one female graduate student and one male or female undergraduate student). Participants were told that a marketing research firm was creating a database on college students' lifestyles and consumer preferences. As such, a computer program had been created to compile this information. For this study, they would be presented with a variety of tasks, such as providing ratings on products or ads, writing a brief essay and/or listing their thoughts on a topic. Participants were instructed that if an exercise required them to list their thoughts, to write separate thoughts on separate lines so that the researchers could determine that they were different ideas. They were told not be concerned with spelling or grammatical errors as some of the exercises had time constraints. After the initial orientation, participants were escorted to individual cubicles where a computer presented all stimuli and recorded their responses. The computer program provided introductory comments, separate instructions for each exercise and a closing statement at completion. Participants usually completed the experiment within 20 minutes and were debriefed as a group.

Independent Variables

Self-referencing. Participants in the Low, High Pre-ad and High Post-ad Self-referencing conditions were presented with an ad that asked them to think back to a past spring (or Thanksgiving) break experience and provided information on product features (see self-referencing ad in Appendix B). The two High Self-referencing conditions (e.g., Pre-ad, Post-ad) required participants to write on various dimensions (i.e., social, planning, travel) of a past spring (or Thanksgiving) break experience. In the High Self-referencing Pre-ad condition, participants wrote the essay prior to viewing the ad. In the High Self-referencing Post-ad condition, participants wrote the essay after viewing the ad. Participants in the No self referencing (Product Focus) condition were also presented with an ad for a Florida spring (or Thanksgiving) break package. However, the product focus ad only provided information on product features and had no reference to a past break experience (see product focus ad in Appendix C). Participants in the Low Self-referencing and Product Focus conditions did not write an essay on a past break experience; instead they wrote an essay on the multiple uses and dimensions of paper towels (filler task) after viewing the ad. Paper towel was chosen as a topic because it is a product that is thought to evoke little affect by consumers (Baumgartner et al., 1992). Participants had 5 minutes to complete either the self-referencing essay or the paper towel essay. The computer indicated when 1 minute was remaining and terminated the task after 5 minutes.

Schema-match. Florida spring break was the Schema-consistent manipulation and Florida Thanksgiving break was the Schema-inconsistent manipulation in all conditions.

Response Order. Subjects either received the product evaluation questions first followed by the cognitive response measure or received the cognitive response measure first followed by the product evaluation questions. This constituted the response order manipulation. The other dependent variables, ad evaluation, affect measures, product recall, episodic event rating, autobiographical retrieval ratings, typicality ratings, and demographic questions followed these measures.

Experimental Conditions (each crossed with the Response Order manipulation)

Schema-consistent Low Self-referencing. Participants viewed the self-referencing ad for a spring break package in the Florida Keys, wrote an essay on paper towels, and completed the dependent measures.

Schema-consistent High Self-referencing Pre-ad. Participants wrote an essay on a past spring break experience, viewed the self-referencing ad for a spring break package in the Florida Keys, then completed the dependent measures.

Schema-consistent High self-referencing Post-ad. Participants viewed the self-referencing ad for a spring break package in the Florida Keys, wrote an essay on a past spring break experience, then completed the dependent

measures.

Schema-consistent Product Focus. Participants viewed the product focus ad for a spring break package in the Florida Keys, wrote an essay on paper towels, then completed the dependent measures.

Schema-inconsistent Low Self-referencing. Participants viewed the self-referencing ad for a Thanksgiving break package in the Florida Keys, wrote an essay on paper towels, then completed the dependent measures.

Schema-inconsistent High Self-referencing Pre-ad. Participants wrote an essay about a past Thanksgiving break experience, viewed the self referencing ad for a Thanksgiving break package in the Florida Keys, then completed the dependent measures.

Schema-inconsistent High Self-referencing Post-ad. Participants viewed the self-referencing ad for a Thanksgiving break package in the Florida Keys, wrote an essay about a past Thanksgiving break experience, then completed the dependent measures.

Schema-inconsistent Product Focus. Participants viewed the product focus ad for a Thanksgiving break package in the Florida Keys, wrote an essay on paper towels then completed the dependent measures.

Apparatus and Materials

Computers. Seven Gateway2000 486DX-33 computers with super VGA color monitors presented all stimuli.

Measures

Cognitive Responses. Participants were provided 2 minutes to list all the thoughts that went through their minds while viewing the Florida spring (or Thanksgiving) break package ad. The computer terminated the task after 2 minutes. Responses on separate lines were coded as individual thoughts. Two undergraduates who were blind to experimental conditions independently coded all thoughts.

The coding scheme used in this study was more extensive than in previous studies examining autobiographical memories ads. Sujana et al. (1993) coded thoughts on the cognitive response measure into five categories: autobiographical, ad, product, general usage situation, and other. A detailed analysis of the cognitive response measure was thought to be more informative in determining the interplay between affect and cognition. Thoughts in this study were coded first in terms of valence (positive, negative or neutral) and also into one of the following 6 categories:

1. Autobiographical- Participant specifically mentioned the self and described a past experience (i.e., "my spring break in Bahamas last year"). This category is thought to represent episodic self-referencing.
2. Future- Participant specifically used the self but used the future tense or imagined themselves there (i.e., "imagined myself going to Florida with scantily clad women"). Although, the individual still used the self in reference to the

ad, a future self thought did not represent episodic self-referencing because by definition a future self experience has not occurred. As a result, it was hypothesized that a future self thought is more likely to represent a schema-based process rather than piecemeal processing of a past event as an autobiographical thought.

3. Florida Vacation Imagery- The self was not explicitly mentioned but a general reference to related categories associated with a Florida vacation were listed (e.g., bikini, beer etc.). Florida vacation imagery thoughts suggest that the individual was elaborating beyond the specific ad or product description provided. These thoughts are believed to represent the use of an elaborate schema but also may represent some minimal level of self-referencing in that participants may have been fantasizing about being in Florida. This is a conservative strategy because it may include thoughts that are potentially an autobiographical thought but there was no explicit mention of the self. However, this coding scheme was similarly employed in previous studies (Sujan et al., 1993). Additionally, it is reasonable to assume that a Florida vacation imagery thought represents a category-related thought.
4. Product- A feature of the vacation package specifically described in the lower right hand corner of the ad. This would include items such as, roundrip airfare, for party of four or more etc.
5. Ad- A feature of the ad either presented visually (i.e., surf board, water) or

specifically written in the ad (i.e., relax from classes). Features of the vacation package are not coded as an ad thought but as a product thought (see above).

6. Other- All thoughts not identified in the previous categories.

Thoughts were summed to reflect the number of dimensions or categories (between 1-6) that were mentioned on the cognitive response measure for each participant. Additionally, total number of thoughts, percent of thought in each category, percent of positive, percent of negative and percent of neutral thoughts for each participant were tabulated. The average interjudge reliability across all thoughts was 95%. Disagreements were resolved by discussion.

Product Evaluation. Product evaluation was assessed on four 9-point semantic differential scales (unfavorable-favorable, bad-good, unpleasant-pleasant, negative-positive) with higher scores representing a more favorable evaluation of the product. The four measures were averaged to form an overall measure of product evaluation ($\alpha = .82$).

Ad Evaluation. Ad evaluation was assessed using the same four 9-point semantic differential scales (unfavorable-favorable, bad-good, unpleasant-pleasant, negative-positive) with higher scores representing a more favorable evaluation of the ad. The four measures were averaged to form an overall measure of ad evaluation ($\alpha = .88$).

Self-referencing Essays. Participants in the two High Self-referencing

conditions (i.e., Pre-ad and Post-ad) were asked to write an essay on a past spring (or Thanksgiving) break experience. They were specifically asked to write on multiple dimensions of a past break experience. Participants' essays were independently coded into different dimensions of a past break experience by two undergraduate students who were blind to the experimental condition. Thoughts were coded first in terms of valence (positive, negative or neutral) and also into one of the following dimensions: planning, travel, cost, social-family, social-friends, entertainment and other. Thoughts were summed to reflect the number of dimensions (between 1-7) that were mentioned on the essay for each participant. Additionally, total number of thoughts, percent of positive, percent of negative and percent of neutral thoughts for each participant were tabulated. The average interjudge reliability across all dimensions was 90%. Disagreements were resolved by discussion.

Affect Ratings. Participants indicated what their feelings were while viewing the ad, by responding to the following question, "My feelings when I was forming an impression of the spring (or Thanksgiving) break package were..." The 11 positive affect items were: joyous, affectionate, surprising, loving, delighted, happy, proud, exciting, sentimental, satisfying, fond. The 8 negative affect items were: embarrassing, frustrating, angry, annoying, fearful, regretful, sad, nervous. Participants responded on 9-point agree-disagree scales in which 9 was "completely agree" and 1 was "completely disagree." Previous studies

examining autobiographical memories ads used similar versions of these affective state scales (Sujan et al, 1993; Baumgartner et al, 1992). The feeling states were adapted from classifications of emotions (e.g., Batra & Holbrook, 1990; Burke & Edell, 1989). A principle components analysis of the 19 feeling states yielded two factors with eigenvalues greater than 1, which together explained 50% of the variance in the data. All 19 items loaded on one of the two factors, (criterion for inclusion was .5). The 11 items representing positive dimensions were averaged to form one "positive affect" score (alpha = .90). The 8 items representing negative dimensions were averaged to form one "negative affect" score (alpha = .60).

Product Recall. Participants were given 2 minutes to list all the features of the Florida spring (or Thanksgiving) break package that they could remember. The computer terminated the task after 2 minutes. Thoughts were independently coded by two undergraduate students who were blind to the experimental condition. The following categories were used: accurate product feature, inaccurate product feature, ad thought, and other. The average interjudge reliability across all categories was 98%. Disagreements were resolved by discussion.

Episodic Event Rating. Participants indicated on a 9-point scale whether, while viewing the ad, they thought about a specific spring (or Thanksgiving) break experience from their past (1) or thought of a general idea of what spring

(or Thanksgiving) breaks are like for college students (9). This served as a manipulation check on self-referencing.

Autobiographical Retrieval Ratings. Participants indicated on two 9-point bipolar scales whether their thoughts while viewing the ad could be described as (1) impersonal not involving the self or personal involving the self(9); and (1) not related to past spring (or Thanksgiving) break experience or related to past spring (or Thanksgiving) break experience(9). The reliability of these two measures ($\alpha = .52$) was weak and as a result they were analyzed separately rather than as an index of autobiographical retrieval. The previous study using this as an index had a slightly higher reliability rate ($\alpha = .63$; Sujan et al., 1993).

Schema-Consistency Ratings. Participants made ratings on a 9-point scale on whether college students spending spring and Thanksgiving break in Florida was not at all typical (1) or very typical (9). This served as a manipulation check for schema-match. These ratings were considered a within-subject factor as all participants provided typicality ratings for both spring and Thanksgiving breaks in Florida regardless of their schema-match condition.

Demographic and Lifestyle Information. Participants were asked if they had ever been to Florida for spring break, for Thanksgiving break, and for any reason. Demographic questions concerning gender and student status (i.e., senior) were asked. Additionally, questions were inserted to be consistent with

the cover story, such as experience with sailing and skiing, and personal lifestyle questions (i.e., smoking, alcohol consumption).

Reaction Time. Response latencies were collected for all dependent measures that required participants to make ratings on a likert-type scale (i.e., product evaluation, affect ratings). Latencies were rounded to milliseconds.

Results

Self-referencing Manipulation Checks

Episodic Event Rating. It was predicted that participants in the two High Self-referencing (Pre and Post) conditions would be more likely to think of a specific break experience from their past compared to participants in other Self-referencing conditions. The episodic event rating was analyzed using a 4 (Self-referencing: None, Low, High Pre-ad, High Post-ad) x 2 (Schema-match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects analysis of variance. Results indicated no significant differences across conditions (grand mean = 5.9). Given that the grand mean was above the midpoint (where, 1 = specific break experience; 9 = break experience for college students in general), this would suggest that overall participants tended to think of a break experience for college students in general rather than a specific break experience from their past.

Autobiographical Thoughts. It was predicted that the two High Self-referencing (Pre and Post) conditions would have more autobiographical thoughts on the cognitive response measure compared to the other Self-referencing conditions. Autobiographical thoughts were analyzed using a 4 (Self-referencing: None, Low, High Pre-ad, High Post-ad) x 2 (Schema-match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects analysis of variance. However, there were no significant differences in the number of autobiographical thoughts on the cognitive response measure across all conditions. In fact, only 22% of participants reported any autobiographical thought.

Lack of Evidence of Self-referencing in Autobiographical Memories Ads

The scant number of autobiographical thoughts on the cognitive response measure suggests that few participants considered a specific event while viewing the ad. Similarly, previous research has also indicated that autobiographical thoughts have not occurred frequently (29% is the highest for any self-referencing manipulation). One potential explanation for the lack of evidence of self-referencing on the cognitive response measure is that it is difficult to measure. Similar to previous studies (Sujan et al, 1993), this study used a conservative criterion to measure episodic self-referencing. Participants' thoughts had to refer specifically to the self in relation to an event on the cognitive response measure to be coded as an autobiographical thought.

However, unlike the previous studies, future self and autobiographical self thoughts were separated in this study. There was a slightly higher frequency of a future self-thought (31%) than an autobiographical thought (22%) in this study. It is possible that participants were also engaging in episodic self-referencing when they reported a Florida vacation imagery thought on the cognitive response measure. A Florida vacation imagery thought was a general reference (i.e., bikini, beer) with no reference to the self. This may help explain why there were few autobiographical thoughts reported on the cognitive response measure (22%) despite the fact that the majority of participants (85%) reported having been to Florida. However, it is equally plausible that Florida vacation imagery thoughts represent a schema-based process (i.e. categorical-related thought) instead of episodic self-referencing.

In addition to the lack of evidence of self-referencing on the cognitive response measure, the episodic event rating indicated no significant differences across conditions. The grand mean suggested that participants were more likely to think of a break experience for college students in general rather than a break experience from their past (see p. 35). Though the episodic event rating has not been used in previous studies as a manipulation check, there is some evidence for its validity. The episodic event rating was negatively correlated with the total number of autobiographical thoughts mentioned on the cognitive response measure across self-referencing conditions (see Table 3). This indicated that as

participants listed more autobiographical thoughts on the cognitive response measure, they were more likely to rate their thoughts while viewing the ad as relating to a specific spring (or Thanksgiving) break experience from their past rather than a general idea of what spring (or Thanksgiving) breaks are like for college students. Additionally, the episodic event rating is a straightforward measure for the degree of self-referencing and does not have the potential coding ambiguities of autobiographical thoughts on the cognitive response measure. Previous studies have also had difficulty with manipulation checks for autobiographical retrieval. Autobiographical retrieval ratings have not clearly distinguished autobiographical memories ads from product focus ads (see pp. 99-101 for comparison with previous studies) (Sujan et al, 1993).

When considering previous research (Baumgartner et al., 1992; Sujan et al., 1993) and results from this study, the label “self-referencing” appears to be an inaccurate characterization of the persuasive mechanism underlying autobiographical memories ads .

Self-Focus and Self-Relevance Explanation

If self-referencing is not manipulated, the obvious question becomes what is manipulated? To answer this question and to address the inherent ambiguities associated with the term “self-referencing”, a general term “self-focus” appears to be a more accurate characterization. Autobiographical memories ads, compared to product focus ads, may increase the likelihood that participants

attend to the self.

A post-hoc explanation of the data suggests that self-focus was manipulated in multiple ways in this study. Self-focus was initially increased for participants through the mere presentation of an autobiographical memories ad. Attention to the self was further increased for participants by writing the self-referencing essay on a past break experience.

In addition, there is another self-related construct that has consequences for the persuasive mechanism underlying autobiographical memories ads that needs to be distinguished from self-focus, and that is “self-relevance”. Self-relevance refers to processing information that has consequences for the processor. Self-relevance implies that the self is a function of the goal relevance of the material presented (Higgins and Bargh, 1987). It is possible to have self-focus but not self-relevance. For example, a participant may be in a self-focus condition but not view the ad as self-relevant if they contrast their past experience with the ad. Thus, self-focus and self-relevance are both potential factors in the persuasive process in autobiographical memories ads.

In an effort to reflect the revised characterization of autobiographical memories ads in terms of self-focus, the Self-referencing conditions have been renamed in the following ways. The Low Self-referencing condition is now labeled the Self-focus-ad condition. The High Self-referencing Pre-ad condition is now labeled the Self-focus-ad Pre-essay condition. The High Self-referencing

Post-ad condition is now labeled the Self-focus-ad Post-essay condition. The Product-focus-ad condition is not relabeled.

Implications for Category-based versus an Attribute-based Process

It was hypothesized that the Self-focus-ad condition would encourage a category-based process. The Self-focus-ad condition represents how consumers would typically view an autobiographical memories ad in the real world. That is, the Self-focus-ad condition minimally increases attention to the self compared to the Product-focus-ad condition. Research has shown that attention to the self increases positive affect as most people primarily retrieve positive dimensions about themselves (Wagenaar, 1986; White, 1982). This would suggest that positive affect would also simultaneously be retrieved during a self-focus manipulation. These research findings suggest that the schema-triggered affect model would be well suited to operate in the Self-focus-ad condition. In a schema-based process, affect is directly linked to the category label (Fiske, 1982). Thus, any thoughts in the Self-focus-ad condition would be filtered with the initial schema-label and its associated affect.

Research suggests that to encourage an attribute-based process, attention to the stimulus has to be increased further, as people generally engage in a category-based process (Fiske and Neuberg, 1990). To further increase attention to the self in this study, participants in the Self-focus-ad Pre-essay and Self-focus-ad Post-essay conditions were required to write a self-referencing

essay on a past break experience. This might suggest that writing the self-referencing essay would lead to an attribute-based process because attention to the self as been doubly increased (autobiographical memories ad and self-referencing essay). However, recall that one of the characteristics of an attribute-based process is dimensionality. That is, during an attribute-based process, multiple dimensions are considered (Linville, 1982). Thus, it is possible to increase the number of attributes that one retrieves (i.e. quantity) but not the number of dimensions (i.e., quality) during the self-referencing essay.

It was hypothesized that a category-based process would similarly occur for participants in the Self-focus-ad Pre-essay condition as it does for participants in the Self-focus-ad condition. As a result of writing the self-referencing essay prior to viewing the ad, participants in the Self-focus-ad Pre-essay condition will retrieve fewer dimensions in the self-referencing essay. This will occur because the ad cannot serve as a source of comparison for participants. The attributes on the self-referencing essay will primarily be positive, and as a result participants will likely assimilate their past experiences with the ad. Additionally, because there are fewer dimensions being considered, affect should be more influential in determining evaluation (Linville, 1982). As participants assimilate their idiosyncratic attributes on the self-referencing essay with the autobiographical memories ad, the ad will be viewed as self-relevant.

It was hypothesized that the Self-focus-ad Post-essay condition would lead to an attribute-based process. This would occur because participants would write the self-referencing essay after viewing the ad. As a result, the ad will serve as an anchor and encourage participants to consider multiple dimensions on the self-referencing essay. This will lead participants to compare and contrast their idiosyncratic experiences with the ad. Additionally, even if the attributes retrieved on the self-referencing essay are primarily positive, affect will be less influential in determining evaluation in an attribute-based process (Linville, 1982). As participants contrast their idiosyncratic attributes on the self-referencing essay with the autobiographical memories ad, the ad will be viewed as less self-relevant.

Post-hoc Comparisons for Self-focus and Self-relevance Measures

The overall results in this study suggest that the presentation of the cognitive response measure prior to the product evaluation measure encourages all participants to engage in attribute-based process (see discussion section, pp. 95-97). Differences primarily occur when the product evaluation measure is presented prior to the cognitive response measure. In addition, as would be expected, the strongest differences between category-based versus attribute-based processes occur within the Self-focus Schema-consistent conditions. As a result of these factors and for the sake of parsimony, post-hoc comparisons for the following subset of measures (i.e., self-focus measures, self-relevance

measures), will primarily be made within the Self-focus Schema-consistent Prod Eval First conditions rather than all 16 conditions.

Self-focus Measures

1. Related to a past break experience. The “related to a past break experience” autobiographical retrieval rating was analyzed using a 4 (Self-focus: None (Product-focus-ad), Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) analysis of variance. Post-hoc protected t-tests utilized the mean square error term.

Results indicated a marginal main effect for Schema-match, $F(1,224) = 2.95$, $p < .09$. Participants in the Schema-consistent condition tended to rate the ad as being more related to a past break experience ($M = 4.7$) compared to participants in the Schema-inconsistent condition ($M = 4.1$). There were no interaction effects with Self-focus or Response Order. Post-hoc comparisons between the Schema-consistent and the Schema-inconsistent conditions indicated that the only significant difference occurs in the Product-focus-ad condition. In the Product-focus-ad Prod Eval First condition, participants with the Consistent Schema-match rated the ad as significantly more “related to a past break experience” ($M = 6.2$) compared to participants with the Inconsistent Schema-match ($M = 3.4$), $t(224)$, $p < .05$. Within the other comparable Self-focus conditions, the Schema-match comparisons did not significantly differ on

this rating (see Table 4). These results suggest that the autobiographical memories ads may have differentially primed the self initially compared to the product focus ads. That is, the autobiographical memories ad may have increased self-focus regardless of schema-match. These results provide some evidence that autobiographical memories ads encourage self-focus initially compared to the product-focus-ad.

2. Episodic Event Rating Reaction Time. Participants' reaction time for the episodic event rating was analyzed using a 4 (Self-focus: None, Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects analysis of variance. The reaction time for the episodic event rating produced a main effect for Self-focus, $F(3,224) = 3.58, p < .02$. Post-hoc protected t-tests indicated that participants in the Self-focus-ad Post-essay condition displayed significantly quicker response latencies ($M = 9.7$) compared to participants in both the Self-focus-ad condition ($M = 11.2$), $t(224) = 2.0, p < .05$ and the Product-focus-ad condition ($M = 11.7$), $t(224) = 2.67, p < .01$ but were not significantly different from participants in the Self-focus-ad Pre-essay condition ($M = 9.9$). Results also indicated that the Self-focus-ad Pre-essay condition was not significantly different from the Self-focus-ad condition but was significantly different from the Product-focus-ad condition, $t(224) = 2.40, p < .05$. Thus, for this measure of self-focus, the Self-focus-ad Pre-essay and the Self-focus-ad conditions are not

significantly different. Additionally, these results suggest that writing the essay after viewing the ad increased attention to the self compared to both merely viewing the autobiographical memories ad alone and the product focus ad.

Self-relevance Measures

1. Personal and Involving the Self Rating. The autobiographical retrieval rating “personal and involving the self” was analyzed using a 4 (Self-focus: None (Product-focus-ad), Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects analysis of variance. Results revealed a marginal main effect for Self-focus, $F(3,222) = 2.49, p < .06$. Post hoc protected t-tests indicated that participants in the Self-focus-ad Post-essay condition rated their thoughts as significantly more impersonal and not involving the self while viewing the ad ($M = 5.6$) compared to participants in the Self-focus-ad condition ($M = 6.6$), $p < .05$, the Self-focus-ad Pre-essay condition ($M = 6.6$), $p < .05$ and the Product-focus-ad condition ($M = 6.5$), $p < .05$. These results suggest that participants in the Self-focus-ad Post-essay condition viewed the ad as less self-relevant than the other Self-focus-ad conditions. An anomalous finding is that participants in the Self-focus-ad Post-essay condition also viewed the ad as less self-relevant than participants in the Product-focus-ad condition.

2. Total Number of Thoughts on Cognitive Response Measure. The total number of thoughts listed on the cognitive response measure may indicate how relevant

participants viewed the ad. Total thoughts were analyzed using a 4(Self-focus: None (Product-focus-ad), Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects analysis of variance. Results indicated a main effect for Self-focus, $F(3, 218) = 2.58, p < .05$ in the total number of thoughts mentioned on the cognitive response measure. Participants in the Self-focus-ad Pre-essay condition listed significantly more thoughts ($M = 8.4$) than participants in the Self-focus-ad condition ($M = 6.6$), $p < .05$ and the Product-focus-ad condition ($M = 6.8$), $p < .05$ but were not significantly different from participants in the Self-focus-ad Post-essay condition ($M = 7.0$). Although, the two Self-focus-ad (Pre-essay and Post-essay) conditions had the largest number of thoughts overall, total thoughts listed for those conditions using a schema-based process (e.g., Schema-consistent Prod Eval First condition) are more informative. In the Schema-consistent Prod Eval First conditions, total thoughts mentioned on the cognitive response measure were higher in the Self-focus-ad Pre-essay ($M = 10.3$) and Self-focus-ad conditions ($M = 7.4$) compared to the Product-focus-ad ($M = 5.9$) and Self-focus-ad Post-essay conditions ($M = 5.9$). This provides some evidence that the Self-focus-ad Post-essay and Product-focus-ad conditions found the ad less self-relevant or involving than the other Self-focus conditions.

Indicators of Assimilation effects in Category-based processing and Contrast effects in Attribute-based processing

1. Correlations with Personal and Involving the Self Rating. Evidence of assimilation and contrast effects are indicated by correlations between the “personal and involving the self” autobiographical retrieval rating and the number of autobiographical thoughts reported on the cognitive response measure. The following correlations are for the Consistent Schema-match Prod Eval First conditions. In the Self-focus-ad Post-essay condition, the correlation between this rating and the total number of autobiographical thoughts mentioned was significantly negative ($r = -.57, p < .05$). This suggests that as participants considered more idiosyncratic attributes of a past break experience, they were more likely to contrast their experience with ad. The correlations for the comparable Self-focus conditions were all positive (see Table 5). Participants in the other comparable self-focus conditions were more likely to assimilate their autobiographical past experiences with the ad. A comparison of the correlations using Fisher's z' transformation indicated that in the Schema-consistent Prod Eval First conditions, the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad condition ($z = 2.04, p < .01$), the Self-focus-ad Pre-essay condition ($z = 2.09, p < .01$) and the Product-focus-ad condition ($z = 2.51, p < .007$).

2. Self-referencing Essay Correlations. Participants in the Self-focus-ad Pre-

essay and Self-focus-ad Post-essay conditions were asked to write on multiple dimensions of a past break experience. The following represents Schema-consistent Prod Eval First correlations. For the Self-focus-ad Post-essay condition, the number of dimensions of a past break experience discussed in the self-referencing essay and the “related to a past break experience” autobiographical retrieval rating were significantly negatively correlated ($r = -.53$, $p < .05$). In the Self-focus-ad Pre-essay condition, this rating and the number of dimensions discussed were positively correlated, though not significantly ($r = .20$). A Fisher’s z' transformation indicated that the Self-focus-ad Post-essay correlation was significantly different from the Self-focus-ad Pre-essay correlation ($z = 1.94$, $p < .05$). The Schema-inconsistent conditions indicated a similar pattern but were not significantly different (see Table 6). This provides further evidence that participants in the Self-focus-ad Post-essay condition engaged in an attribute-based process and contrasted their past experience with ad. Participants in the Self-focus-ad Pre-essay condition were engaged in category-based processing and were thus more likely to assimilate their past experience with the ad.

Summary

The recharacterization of self-referencing in terms of self-focus was necessary to make sense of the data after it became clear that participants engaged in little episodic self-referencing. Though the recharacterization still presents some

ambiguities in the data, it does provide a more compelling account than the previous self-referencing explanation. Given the fact that there are only two empirical studies on autobiographical memories ads currently available (Baumgartner et al, 1992; Sujan et al, 1993), this study should be considered exploratory in some ways. If participants assimilate their experience with the ad and view the ad as self-relevant, this appears to lead them to category-based processing. In a category-based process, affect is directly linked to the schema-label and should greatly influence evaluation (Fiske, 1982). If participants contrast their experience with ad and view the ad as not self-relevant, this appears to lead them to an attribute-based process. In an attribute-based process, affect is less influential in determining evaluation (Linville, 1982).

Schema-Consistency Manipulation

It was predicted that participants would rate a Florida spring break as more typical than a Florida Thanksgiving break. Participants' ratings of typicality were analyzed using a 4 (Self-focus: None (Product-focus-ad), Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) x 2 (Typicality: Spring break, Thanksgiving break) mixed factorial design. Self-focus, Schema-match and Response Order were the between-subject variables. Typicality was the within-subject variable.

As expected, there was a main effect for Typicality, $F(1,223) = 666.89$, $p < .001$. The Florida spring break was rated as significantly more typical

($M = 7.2$) than the Florida Thanksgiving break ($M = 2.9$). In addition, there was a 2-way interaction between Schema-match and Typicality, $F(1,223) = 4.71$, $p < .05$. Post hoc protected t-tests indicated no significant differences in cell means. However, the tendency was for participants in the Schema-consistent condition ($M = 7.4$) to rate spring break in Florida as more typical than participants in the Schema-inconsistent condition ($M = 6.9$). Similarly, participants in the Schema-inconsistent ($M = 3.0$) condition rated the Florida Thanksgiving break as more typical compared to participants in the Schema-consistent condition ($M = 2.7$).

Product Evaluation

Hypothesis Summary

It was hypothesized that if the persuasive impact of autobiographical memories ads represents a categorical approach to information processing (e.g., schema-triggered affect model), then the Self-focus-ad and the Self-focus-ad Pre-essay conditions should not significantly differ from each other and the transfer of positive affect from a Consistent Schema-match in these two conditions should lead to the highest product evaluation. Furthermore, engaging in an attribute-based processing of a past self-referenced experience in an autobiographical memories ad would lead to a lower product evaluation as the role of affect is attenuated as more dimensions of a past experience are considered. This should result in the Self-focus-ad Post-essay condition producing a lower product evaluation compared to both the Self-focus-ad and

the Self-focus-ad Pre-essay conditions in a Consistent Schema-match. The Product-focus-ad condition was also predicted to have a lower product evaluation compared to the Self-focus-ad and the Self-focus-ad Pre-essay conditions under a Consistent Schema-match.

In addition, if the schema-triggered affect model was operating, an Inconsistent Schema-match should result in moderate affect. Thus, for those conditions representing the use of a schema-based process, (i.e., Self-focus-ad and Self-focus-ad Pre-essay) product evaluation should be lower in an Inconsistent Schema-match compared to a Consistent Schema-match. As noted earlier, an attribute approach should be less impacted by affect level. Thus, in the Self-focus-ad Post-essay condition, the Consistent Schema-match should not be significantly different from the Inconsistent Schema-match in product evaluation as both are less impacted by affect. The Self-focus-ad Post-essay condition may even produce a higher product evaluation compared to the Self-focus-ad and the Self-focus-ad Pre-essay conditions in the Inconsistent Schema-match.

If the persuasive impact of autobiographical memories ads is primarily determined by self-focus to in relation to a past event, then increasing attention to a past self event alone should result in a higher product evaluation. From this perspective, it is assumed that people generally remember positive experiences from their life and thus increasing self-focus would bias people to consider even

more positive dimensions associated with a past break experience. Additionally, if the persuasive mechanism is more analogous to increased self-focus, then there should be no difference in product evaluation by schema-match. Thus, the Self-focus-ad Pre-essay and the Self-focus-ad Post-essay conditions would similarly have the highest product evaluation in both the Schema-consistent and Schema-inconsistent conditions.

Product Evaluation Predictions:

A 2-way interaction between Schema-match and Self-focus were predicted for the product evaluation index and can be characterized by the following 3 predictions.

Hypothesis 1: In a Consistent Schema-match, product evaluation will be higher in both the Self-focus-ad and Self-focus-ad Pre-essay conditions compared to both the Self-focus-ad Post-essay and Product-focus-ad conditions.

Hypothesis 2: Product evaluation should be higher in a Consistent Schema-match than an Inconsistent Schema-match for the Self-focus-ad and Self-focus-ad Pre-essay conditions.

Hypothesis 3: Product evaluation should not be significantly different in a Consistent Schema-match than an Inconsistent Schema-match for the Self-focus-ad Post-essay condition.

To test these hypothesis, the product evaluation index was analyzed using a 4 (Self-focus: None (Product-focus-ad), Ad, Ad Pre-essay, Ad Post-essay) x 2

(Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) analysis of variance.

The results indicated a 3-way interaction between Schema-match, Self-focus, and Response Order, $F(3,221) = 4.02, p < .01$ (See Table 7). Because there were no apriori predictions regarding the impact of Response Order on product evaluation, results were examined separately for the different response orders.

When product evaluations were collected before cognitive responses, the product evaluation index indicated a 2-way interaction between Schema-match and Self-focus, $F(3,109) = 4.70, p < .004$ (see Figure 1). Post-hoc protected t-tests provided support for the schema-triggered affect model. First, as predicted in hypothesis 1, in the Consistent Schema-match, both the Self-focus-ad ($M = 7.5$), and Self-focus-ad Pre-essay ($M = 7.3$) conditions, had a significantly higher product evaluation compared to the Self-focus-ad Post-essay ($M = 6.3$), $t(221) = 2.03, p < .05$. Additionally, as predicted in hypothesis 1, in the Consistent Schema-match, both the Self-focus-ad and the Self-focus-ad Pre-essay conditions, had a significantly higher product evaluation compared to the Product-focus-ad condition ($M = 6.0$), $t(221) = 2.91, p < .01$ (See Table 8).

Product evaluation comparisons for schema-consistent versus inconsistent cells within each Self-focus condition also provided some support for the schema-triggered affect model when product evaluations were collected before cognitive responses. As predicted in hypothesis 2, product evaluation in the

Self-focus-ad condition, was significantly higher in the Consistent Schema-match ($M = 7.5$) than in the Inconsistent Schema-match ($M = 6.5$), $t(221) = 2.0$, $p < .05$.

In the Self-focus-ad Pre-essay condition, there was directional support for hypothesis 2. Product evaluation was directionally higher in the Consistent Schema-match ($M = 7.3$) than the Inconsistent Schema-match ($M = 6.7$).

However, the difference was only significant in one of the four product evaluation questions (unpleasant - pleasant dimension), where the Self-focus-ad Pre-essay Schema-consistent condition was rated as significantly more pleasant ($M = 8.0$) compared to the Self-focus-ad Pre-essay Schema-inconsistent condition ($M = 6.9$), $t(221) = 2.15$, $p < .05$.

As predicted in hypothesis 3, product evaluation in the Self-focus-ad Post-essay condition, was not significantly different in the Consistent Schema-match ($M = 6.2$) compared to the Inconsistent Schema-match ($M = 6.8$).

There were no predictions regarding the schema-match comparisons for the Product-focus-ad condition. However, the results indicated that product evaluation in the Inconsistent Schema-match was significantly higher ($M = 7.4$) than the Consistent Schema-match ($M = 6.0$), $t(221) = 2.69$, $p < .01$.

When product evaluations were collected after cognitive responses, there were no significant differences in the product evaluation index across conditions (see Figure 2). As will be addressed later in the discussion section, the presentation of the cognitive response measure first may have increased the

likelihood that all participants engaged in piecemeal processing, resulting in less variance in product evaluation. The Response Order had less impact in the Schema-inconsistent condition where participants were hypothesized to be already engaging in piecemeal processing (see Table 7). Additional evidence from other dependent measures (i.e., percent of positive thoughts on the cognitive response measure) also suggest that presenting the cognitive response measure first increased the likelihood of piecemeal processing for all participants (see discussion section pp. 95-97).

Process Measures

A. Reaction Time for Product Evaluation

It was predicted that in the Self-focus-ad and Self-focus-ad Pre-essay conditions, participants with the Consistent Schema-match would exhibit significantly faster response latencies compared to participants with the Inconsistent Schema-match. However, a 4 (Self-focus: None, Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) analysis of variance using the product evaluation index as a dependent measure indicated no significant differences across conditions. The reaction time of the four product evaluation questions were averaged in this analysis. In addition, the reaction time of each of the four product evaluation questions were used as dependent measures in a manova procedure. Transformations were conducted on the reaction time of the four

product evaluation questions to deal with outliers but results indicated no significant differences across conditions.

B. Cognitive Response Measure

Thoughts on the cognitive response measure were analyzed using a 4 (Self-focus: None, Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) between-subjects analysis of variance. Post-hoc protected t-tests utilized the overall mean square error term.

Total Number of Autobiographical Thoughts. It was predicted that there would be more autobiographical thoughts in the Self-focus (Ad, Ad Pre-essay, Ad Post-essay) conditions compared to the Product-focus-ad condition. However, results indicated no significant differences across conditions. In fact, only 22% of participants listed any autobiographical thoughts, with a grand mean of .29. However, among those participants that listed at least one autobiographical thought, the majority were in the Self-focus conditions (33% in Ad, 29% in Ad Post-essay, 21% in Ad Pre-essay) rather than the Product-focus-ad condition (17%) (See Table 9). What are curious about the low number of autobiographical thoughts is that the majority of participants reported being in Florida at some point (85%) either for spring break or thanksgiving break or just visiting Florida not on a college break. In examining only subjects that have ever been to Florida, only 23% of participants reported an autobiographical thought.

Similarly only 27% of participants reported an autobiographical thought if they had been there for a spring break or thanksgiving break. Thus, even when it is possible to retrieve an autobiographical episode, there is no clear indication that participants engaged in self-referencing.

It was also predicted that if autobiographical memories ads represent a schema-based process rather than increased self-focus, then product evaluation and total autobiographical thoughts mentioned should not be correlated. Results indicated no significant correlations between the number of autobiographical thoughts mentioned and product evaluation in any condition (ranges of correlations between, $r = -.3$ and $r = .3$).

Percent of Autobiographical thoughts in Total Thoughts. There were no overall differences in the percent of autobiographical thoughts mentioned. Across all conditions, autobiographical thoughts represented a mere 5% of total thoughts (see Table 10 for comparison across all categories).

Percent of Autobiographical Positive thoughts in Total Autobiographical thoughts. There was a 2-way interaction between Schema-match and Response Order in the percent of autobiographical positive thoughts mentioned $F(1,36) = 4.74, p < .04$. Post hoc protected t-tests indicated no significant differences. However, the tendency was for the Consistent Schema-match to have a higher percent of autobiographical positive thoughts in the Prod Eval First condition (60%) compared to the Cog Resp First condition (40%). In the Inconsistent

Schema-match, the Cog Resp First condition had a higher percent of autobiographical positive thoughts (68%) compared to the Prod Eval First condition (42%).

Across all conditions, 52% of all autobiographical thoughts were positive (see Table 11). The number of autobiographical positive thoughts significantly correlated with product evaluation in the Self-focus-ad Schema-consistent Prod Eval First condition ($r = .66, p < .008$; recall that the product evaluation index was significantly higher for this condition compared to the comparable Self-focus-ad Post-essay and Product-focus-ad conditions). However, little can be made of this correlation because it only represented four participants. Additionally, only 52 participants across all conditions reported any autobiographical thought.

Percent of Autobiographical Negative thoughts in Total Autobiographical thoughts. The percent of autobiographical negative thoughts across all conditions was smaller (24%) than autobiographical positive thoughts (52%) mentioned. Results indicated a marginal 3-way interaction between Schema-match, Self-focus and Response Order, $F(3, 36) = 2.44, p < .08$ (See Table 12).

Percent of Autobiographical Neutral thoughts in Total Autobiographical thoughts. There was a 2-way interaction between Schema-Match and Response Order for the percent of autobiographical neutral thoughts mentioned, $F(1, 36) = 8.92, p < .01$. The grand mean was 24%. Post hoc protected t-tests indicated that with the Consistent Schema-match, the percent of autobiographical neutral

thoughts were significantly higher in the Cog Resp First condition (50%) compared to the Prod Eval First condition (5%), $t(36) = 2.54$, $p < .05$. In the Inconsistent Schema-match, the percent of autobiographical neutral thoughts did not differ as a function of the response order (see Table 13). These results are also consistent with the notion that the presentation of the cognitive response measure first had more impact in those conditions hypothesized to be using a schema-based process (e.g., Schema-consistent). Similar to the product evaluation results, the presentation order of the cognitive response measure had less impact in the Schema-inconsistent condition.

Percent of Future Self thoughts in Total thoughts. A future self thought by definition has not been experienced and thus it is unlikely that participants were retrieving idiosyncratic attributes of a past event. As a result, a future self thought is hypothesized to represent the use of a schema-based process.

Thirty-one percent of all participants listed at least one future self thought. Results indicated a main effect for Response Order in the percent of future self thoughts mentioned, $F(1,217) = 7.90$, $p < .005$. The Prod Eval First condition had a higher percent of future self thoughts (12%) compared to the Cog Resp First condition (6%). These results are consistent with the notion that the Cog Resp First condition increased the likelihood of an attribute-based approach rather than a schema-based process. Across all conditions, future self thoughts tended to be positive (75%) rather than negative (11%).

Percent of Florida Vacation Imagery thoughts in Total thoughts. Florida

vacation imagery thoughts represented a general reference to a Florida vacation with no reference to the self (i.e., bikini, beer etc.). More than half the participants listed at least one Florida vacation imagery thought on the cognitive response measure (55%). Florida vacation imagery thoughts likely represent the use of a schema but participants may also have been engaging in some minimal level of self-focus by imagining themselves in Florida. Across all conditions, Florida vacation imagery thoughts tended to be positive (83%) rather than negative (12%). Results indicated a main effect for Self-focus, $F(3, 218) = 3.15, p < .05$ in the percent of Florida vacation imagery thoughts mentioned. Post hoc protected t-tests indicated that the Self-focus-ad Pre-essay condition (35%) was significantly higher in the percent of Florida vacation imagery thoughts compared to the Self-focus-ad condition (19%), $p < .05$. The Self-focus-ad Pre-essay was directionally though not significantly higher than the Self-focus-ad Post-essay (26%) and the Product-focus-ad (25%) conditions. These results are curious if the Self-focus-ad and the Self-focus-ad Pre-essay conditions are similarly hypothesized to be using a schema-based process as the product evaluation data suggest. To test this hypothesis further, self-focus comparisons were made in those cells where the likelihood of a schema-based process was strongest (Schema-consistent Prod Eval First conditions). Results indicated that in the Schema-consistent Prod Eval First condition, the percent of Florida

vacation imagery thoughts in the Self-focus-ad Pre-essay condition (42%) was not significantly different from the Self-focus-ad condition (24%) but was significantly higher than the Self-focus-ad Post-essay condition, (18%), $t(218) = 2.15$, $p < .05$ and the Product-focus-ad condition (15%), $t(218) = 2.15$, $p < .05$ (see Table 14). These results suggest that the Self-focus-ad Pre-essay and Self-focus-ad conditions were more similar than originally indicated by the main effect. However, the Self-focus-ad condition was not significantly different from any of the self-focus comparisons. One possible explanation is that a schema-based process was even stronger for participants in the Self-focus-ad Pre-essay condition compared to the Self-focus-ad condition.

An interesting finding is across all conditions, when Florida vacation imagery thoughts constitute at least the second highest category of all thoughts, product evaluation is high (see Table 14). These results provide some support for the schema-triggered affect model in explaining the persuasive impact of autobiographical memories ads.

Percent of Ad thoughts in Total thoughts. There was a main effect for Self-focus in the percent of ad thoughts mentioned, $F(3,217) = 3.00$, $p < .03$, (grand mean = 34%). The Self-focus-ad condition had a significantly higher percent of ad thoughts (40%) compared to the Self-focus-ad Pre-essay condition (24%), $p < .01$. The percent of ad thoughts in the Self-focus-ad condition was not significantly different from either the Product-focus-ad (38%) or the Self-focus-

ad Post-essay (34%) conditions. Across all conditions, ad thoughts tended to be more positive (59%) than negative (32%).

Percent of Product Thoughts in Total Thoughts. There were no significant differences in the percent of product thoughts mentioned. The overall mean across all conditions was 19%. Product thoughts tended to be evenly distributed between negative (40%) and positive (38%) product thoughts.

Total Number of Thoughts. There was a main effect for Self-focus, $F(3, 218) = 2.58, p < .05$ in the total number of thoughts mentioned on the cognitive response measure. Participants in the Self-focus-ad Pre-essay condition listed significantly more thoughts ($M = 8.4$) than participants in the Self-focus-ad condition ($M = 6.6$), $p < .05$ and the Product-focus-ad condition ($M = 6.8$), $p < .05$ but were not significantly different from participants in the Self-focus-ad Post-essay condition ($M = 7.0$).

The number of thoughts listed on the cognitive response measure may indicate how involved the participant was during the ad. There is a trend for more thoughts to be in those cells with a higher product evaluation (see Table 15). One explanation for this effect is that total thoughts and Florida vacation imagery thoughts were significantly positively correlated in all 16 conditions, with an overall average of $r = .83$. This was not true for any other category on the cognitive response measure. As noted previously, a higher percent of Florida vacation imagery thoughts were represented in those cells with a higher product

evaluation.

Total number of categories. There was a marginal main effect for Schema-match in the total number of categories discussed, $F(1, 218) = 3.29$, $p < .07$. Participants in the Schema-inconsistent condition tended to mention more dimensions ($M = 2.8$) compared to participants in the Schema-consistent condition ($M = 2.6$). This is consistent with the notion that an Inconsistent Schema-match is more likely to encourage an attribute-based approach.

Percent of Positive thoughts. There was a 3-way interaction between Self-focus, Schema-match and Response Order in the percent of positive thoughts mentioned, $F(3, 218) = 3.15$, $p < .03$. Similar to the product evaluation results, the percent of positive thoughts were not significantly different for the Cog Resp First condition but produced a 2-way interaction between Schema-match and Self-focus, $F(3, 111) = 3.54$, $p < .05$ in the Prod Eval First condition (see Table 16).

Post-hoc protected t-tests indicated the following for the Prod Eval First condition. For the Consistent Schema-match, the Self-focus-ad Pre-essay condition had a significantly higher percent of positive thoughts (73%) compared to both the Self-focus-ad Post-essay condition (48%), $p < .05$ and the Product-focus-ad condition (40%), $p < .01$, but was not significantly different from the Self-focus-ad condition (59%).

Within each Self-focus condition, comparisons between the Consistent and

Inconsistent Schema-match were as follows (all for the Prod Eval First condition). In the Self-focus-ad Pre-essay condition, the Consistent Schema-match had a significantly higher percent of positive thoughts (73%) compared to the Inconsistent Schema-match (44%), $p < .05$. In the Product-focus-ad condition, the Inconsistent Schema-match had a higher percent of positive thoughts (68%) compared to the Consistent Schema-match (40%), $p < .05$. In the Self-focus-ad condition, the Consistent Schema-match was directionally higher (59%) than the Inconsistent Schema-match (35%). See Table 16 for percent of positive thoughts across all conditions. Across all conditions, the majority of positive thoughts were not from autobiographical thoughts (4%); instead they were primarily composed of Florida vacation imagery thoughts (34%), ad thoughts (32%), and future self thoughts (14%).

The percent of positive thoughts mentioned were significantly correlated with product evaluation in those cells hypothesized to be using a schema-based process (e.g., Schema-consistent Prod Eval First condition). The percent of positive thoughts and product evaluation were significantly positively correlated in the Self-focus-ad Pre-essay ($r = .52$, $p < .05$) and Self-focus-ad conditions ($r = .71$, $p < .01$). In the Product-focus-ad condition, the correlation was positive but was not significant ($r = .42$, $p < .14$). Participants in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition were hypothesized to be engaging in an attribute-based process, thus attenuating the role of affect in determining

product evaluation. And in fact, participants in this condition had little correlation between product evaluation and the percent of positive thoughts ($r = -.16$, $p < .70$). A Fisher's z' transformation indicated that the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad condition ($z = 2.45$, $p < .01$), the Self-focus-ad Pre-essay condition ($z = 1.72$, $p < .05$), and marginally significantly different from the Product-focus-ad condition ($z = 1.42$, $p < .08$).

Percent of Negative Thoughts. There were no significant differences across conditions in the percent of negative thoughts (See Table 17). The grand mean was 30%. Across all conditions, the primary categories that composed negative thoughts were ad thoughts (38%) and product thoughts (32%).

Despite the null ANOVA results across conditions, correlational analyses indicated that the percent of negative thoughts was significantly correlated with product evaluation in those conditions where the schema-triggered affect model was hypothesized to be operating (e.g., Schema-consistent Prod Eval First conditions). The correlational analysis for the percent of negative thoughts were similar to the percent of positive thoughts. The percent of negative thoughts and product evaluation were significantly negatively correlated in the Self-focus-ad Schema-consistent Prod Eval First condition ($r = -.67$, $p < .01$) and in the Self-focus Pre-essay Schema-consistent Prod Eval First condition ($r = -.52$, $p < .05$). In the Product-focus-ad Schema-consistent Prod Eval First condition, product evaluation and negative thoughts tended to be negatively correlated

though not significantly ($r = -.34, p < .24$). In the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, there was virtually no correlation between the percent of negative thoughts and product evaluation ($r = .05, p < .90$). A comparison of these correlations using Fisher's z' transformation indicated that in the Schema-consistent Prod Eval First condition, the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad condition ($z = 2.01, p < .01$) and marginally significantly different from the Self-focus-ad Pre-essay condition ($z = 1.46, p < .08$). The Product-focus-ad condition was not significantly different from any of the conditions. These results are consistent with the hypothesis that participants in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition engaged in an attribute-based approach and were subsequently less influenced by affect.

C. Affect Measures

Positive and negative affect scores were analyzed separately using a 4 (Self-focus: None, Ad, Ad Pre-essay, Ad Post-essay) \times 2 (Schema Match: Consistent, Inconsistent) \times 2 (Response Order: Prod Eval First, Cog Resp First) analysis of variance.

Positive and Negative Affect Scores. There were no significant differences in the positive affect score. There was a marginal main effect for Self-focus in the negative affect score, $F(3, 223) = 2.27, p < .08$. The tendency was for the Self-focus conditions (Ad, $M = 2.5$; Ad Pre-essay, $M = 2.2$; Ad Post-essay, $M = 2.5$) to

have a higher negative affect score compared to the Product-focus-ad condition ($M = 2.0$). These results are consistent with the previous research examining autobiographical memories ads that found the self-focus ads to have higher affect ratings (both positive and negative) compared to the Product-focus-ad ad (Sujan et al., 1993).

The affect scores did significantly correlate with product evaluation in those conditions where the schema-triggered affect model is hypothesized to be most strongly operating (e.g., Schema-consistent Prod Eval First condition). It would be expected that the positive affect score would be positively correlated with product evaluation and the negative affect score would be negatively correlated with product evaluation. Correlations between product evaluation and the affect scores support this hypothesis. In the Schema-consistent Prod Eval First conditions, product evaluation was significantly positively correlated with the positive affect score for the Self-focus-ad condition, ($r = .70$, $p < .004$) and the Product-focus-ad condition ($r = .76$, $p < .002$). Similarly, product evaluation was significantly negatively correlated with the negative affect score in the Self-focus-ad Pre-essay condition ($r = -.58$, $p < .03$). In the Self-focus-ad Post-essay condition, product evaluation was uncorrelated with either affect score (positive, $r = .08$; negative, $r = .07$). A comparison of the correlations using Fisher's z' transformation indicated that the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad condition ($z = 1.89$, $p < .05$) and the

Product-focus-ad condition ($z = 2.17, p < .05$). The negative affect score in the Self-focus-ad Post-essay was also significantly different from the Self-focus-ad Pre-essay condition ($z = -1.75, p < .05$). The Schema-inconsistent Prod Eval First conditions provided similar correlations but a Fisher's z' transformation indicated that they were not statistically significant (see Table 18).

D. Self-Referencing Essays

Self-referencing essay thoughts were analyzed using a 2 (Self-focus: Ad Pre-essay, Ad Post-essay) \times 2 (Schema-match: Consistent, Inconsistent) \times 2 (Response Order: Prod Eval First, Cog Resp First) analysis of variance. Post hoc protected t-tests utilized the mean square error term.

Number of Dimensions from a Past Break Experience. Results indicated a main effect for Self-focus, $F(1, 109) = 7.69, p < .007$ in the number of dimensions of a past break experience that were discussed in the self-focus essay. Participants in the Self-focus-ad Post-essay condition discussed significantly more dimensions of a past break experience ($M = 4.7$) compared to participants in the Self-focus-ad Pre-essay condition ($M = 4.1$). This is consistent with the hypothesis that writing the essay after viewing the ad encouraged an attribute approach by forcing participants in the Self-focus-ad Post-essay condition to compare and contrast their past break experience with the ad, thereby increasing the number of dimensions they considered in evaluating the product. Results also indicated a main effect for Schema-match

$F(1, 109) = 4.0, p < .05$ in the number of dimensions of a past break experience discussed. Participants in the Schema-consistent condition discussed significantly more dimensions of a past break experience ($M = 4.6$) compared to participants in the Schema-inconsistent condition ($M = 4.2$).

The number of dimensions of a past break experience was significantly related to product evaluation in the Self-focus-ad Pre-essay Schema-consistent and Schema-inconsistent conditions, albeit in different directions. In the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition, the number of dimensions of a past spring break experience ($M = 4.2$) was significantly positively correlated with product evaluation ($r = .69, p < .01$), suggesting that participants were more likely to assimilate their past experiences with the ad. In the Self-focus-ad Pre-essay Schema-inconsistent Prod Eval First condition, the number of dimensions of a past Thanksgiving break experience ($M = 4.3$) was significantly negatively correlated with product evaluation ($r = -.59, p < .02$), suggesting that participants were more likely to contrast their past experiences with ad.

One explanation for the assimilation effects by participants in the Schema-consistent condition is that positive affect was higher than for participants in the Schema-inconsistent condition. Research indicates that people in a good mood are more likely to categorize items as similar compared to people in a neutral mood (Isen and Daubman, 1984). And in fact, participants in the Self-focus-ad

Pre-essay Schema-consistent Prod Eval First condition had a significantly higher percent of positive thoughts on the cognitive response measure than participants in the Self-focus-ad Pre-essay Schema-inconsistent Prod Eval First condition.

The number of dimensions of a past break experience in the Self-focus-ad Post-essay condition was not significantly correlated with product evaluation in either the Schema-consistent Prod Eval First condition ($M = 4.7$, $r = -.05$) or the Schema-inconsistent Prod Eval First condition ($M = 4.3$, $r = .05$).

A comparison of the correlations using Fisher's z' transformation indicated that in the Schema-consistent Prod Eval First condition, the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad Pre-essay condition ($z = 2.20$, $p < .01$). Similarly, in the Schema-inconsistent Prod Eval First condition, the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad Pre-essay condition ($z = 1.79$, $p < .05$).

Percent of Negative Past Experience Thoughts. There was a 3-way interaction for Schema-match, Self-focus and Response Order in the percent of negative past experience thoughts mentioned, $F(1, 109) = 3.99$, $p < .05$. Post hoc protected t-tests indicated that in the Self-focus-ad Pre-essay Schema-inconsistent condition, participants mentioned a higher percent of negative past experience thoughts in the Prod Eval First condition (20%) compared to the Cog Res First condition (6%), $p < .05$ (See Table 19).

Overall, there was a trend for the percent of negative past experience

thoughts mentioned to vary as a function of Schema-match and Response Order in the Self-focus-ad Pre-essay condition. Schema-match and the Response Order had less impact in the Self-focus-ad Post-essay condition in the percent of negative past experience thoughts mentioned (see Table 19). These results are consistent with the idea that conditions that were initially characterized by a schema-based approach (e.g., Self-focus-ad Pre-essay) were more likely to have an extreme response compared to those conditions that were hypothesized to be engaging in an attribute-based approach (e.g., Self-focus-ad Post-essay) where a moderate evaluation is more likely overall.

Percent of Positive Past Experience Thoughts. There were no significant differences in the percent of positive past experience thoughts discussed in the self-focus essay. However, the pattern of results were similar to the percent of negative past experience thoughts, in that participants in the Self-focus-ad Pre-essay condition were more likely influenced by Schema-match and Response Order than participants in the Self-focus-ad Post-essay condition (see Table 20).

E. Product Recall

Product recall was analyzed using a 4 (Self-focus: None, Ad, Ad Pre-essay, Ad Post-essay) x 2 (Schema Match: Consistent, Inconsistent) x 2 (Response Order: Prod Eval First, Cog Resp First) analysis of variance. Post hoc protected t-tests utilized the means square error term.

Accurate Product Features. There was a main effect for Self-focus, $F(3,222)$

= 4.17, $p < .007$. Post hoc protected t-tests indicated that participants in the Self-focus-ad Pre-essay condition recalled more accurate product features conditions ($M = 3.5$) compared to participants in both the Self-focus-ad ($M = 2.4$), $p < .01$ and Self-focus-ad Post-essay conditions ($M = 2.3$), $p < .01$. The Self-focus-ad Pre-essay condition was directionally but not significantly different from the Product-focus-ad condition ($M = 2.9$). As noted earlier, the Self-focus-ad Pre-essay condition had the highest percent of Florida vacation imagery thoughts on the cognitive response measure. The Self-focus-ad Pre-essay condition likely primed a rich network for a Florida vacation schema and provided an encoding advantage to participants in this condition. The Product-focus-ad condition might have had a higher recall in product accuracy because they were more likely considering product features while evaluating the ad.

An interesting finding was that in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, the episodic event rating (i.e., (1) thought of a specific break experience from my past (9) thought of breaks for college students in general) was significantly negatively correlated with product accuracy ($r = -.70$, $p < .004$). That is, as participants rated the ad as representing a specific past spring break rather than a spring break for college students in general, product recall accuracy increased. This is consistent with the current literature that finds a recall advantage for self-referencing orientation tasks (Kuiper & Rogers, 1979). This suggests that participants in this condition were

more likely to be engaging in episodic self-focus and comparing and contrasting their experience with the ad. Episodic event rating and product accuracy were not significantly correlated in either the Self-focus-ad Pre-essay Schema-consistent Prod Eval First ($r = .16, p < .56$) or in the Self-focus-ad Schema-consistent Prod Eval First conditions ($r = -.11, p < .7$). These conditions were hypothesized to be using a schema-based process in evaluating the ad; as such their recall advantage did not come from self-focus of a past event. A comparison of these correlations using Fisher's z' transformation indicated that the Self-focus-ad Post-essay condition was significantly different from the Self-focus-ad Pre-essay condition ($z = 2.52, p < .006$) and the Self-focus-ad condition ($z = 1.85, p < .03$).

Inaccurate Product Features. It was predicted that the Self-focus-ad Schema-consistent condition should have a greater number of inaccurate product features compared to the Self-focus-ad Schema-inconsistent condition. However, there were no significant differences in inaccurate product features. In fact, there were few inaccurate product features listed (grand mean = .11)

Discussion

The Persuasive Process in Autobiographical Memories Ads

Self-referencing has been used to explain the underlying persuasive mechanism in autobiographical memories ads (Sujan et al., 1993; Baumgartner

et al., 1992). However, despite the claim that self-referencing is responsible for the persuasiveness of autobiographical memories ads, there is scant evidence of its existence in previous research (Sujan et al., 1993; Baumgartner et al., 1992). Similarly, results from this study also indicated that self-referencing does not significantly occur during the presentation of an autobiographical memories ad. A lack of evidence of self-referencing on the cognitive response measure may partially be explained by the difficulty of measuring self-referencing accurately. Similar to previous studies, this study used a conservative criterion to measure idiosyncratic attributes associated with a past event (see pp. 36-37 for discussion of ambiguities associated with coding autobiographical thoughts). However, the manipulation check for self-referencing, the episodic event rating indicated no significant differences across conditions. The grand mean of the episodic event rating tends to suggest that most participants thought of a break for college students' in general rather than a specific break experience from their past (see p. 35). Previous research on autobiographical memories ads (Sujan et al., 1993) has also indicated ambiguities with self-referencing manipulation checks (see pp. 99-101).

Despite the lack of evidence of self-referencing, the results clearly indicate that there is something unique and persuasive about autobiographical memories ads. In an effort to understand the uniqueness of autobiographical memories ads and to address the inherent ambiguities associated with the term "self-

referencing”, a more conservative characterization was proposed, “self-focus”. Autobiographical memories ads compared to product focus ads may increase the likelihood that participants increase attention to the self. In addition to self-focus, another self construct was proposed, self-relevance, that has potential consequences for the persuasiveness of autobiographical memories ads. Self-relevance refers to processing information that has consequences for the processor. Self-relevance implies that the self is a function of the goal relevance of the material presented (Higgins and Bargh, 1987). Self-focus and self-relevance do not necessarily occur in parallel during the presentation of an autobiographical memories ad. For example, a participant may view an autobiographical memories ad (thus increase self-focus) but not view the ad as self-relevant if they contrast their past idiosyncratic experiences with the ad. Thus, self-focus and self-relevance are both potentially important to the persuasive process underlying autobiographical memories ads. It should be noted that self-focus and self-relevance were proposed as post-hoc explanations of the data and have their own ambiguities in explaining the data. However, self-focus and self-relevance provide a more compelling explanation of the persuasive mechanism underlying autobiographical memories ads than does the current self-referencing explanation.

Category-based versus an Attribute-based Process in Autobiographical Memories Ads

The results suggest that the persuasive mechanism in autobiographical memories ads can be described as a two step process. First, autobiographical memories ads increase self-focus. Second, whether the autobiographical memories ad is viewed as self-relevant or not results in two very different information processing strategies (category-based vs. attribute-based) with different consequences for product evaluation.

Autobiographical memories ads increase self-focus and as a result simultaneously increase positive affect (Wagenaar, 1986; White, 1982). Affect influences the way information is categorized, items are seen as more similar when people are in a positive mood (Isen and Daubman, 1984). This suggests that a category-based or a schema-based process would likely operate during an autobiographical memories ad. Affect is directly linked to the schema-label and filters any incoming information.

To encourage an attribute-based process, research suggests that attention to a stimulus has to be increased further as people generally engage in a category-based process (Fiske and Neuberg, 1990). In this study, attention to the self was further increased by writing a self-referencing essay on a past break experience compared to merely viewing the autobiographical memories ad alone. One might then expect that writing the self-referencing essay would result

in an attribute-based process. However, an attribute-based process also requires dimensionality. During an attribute-based process, multiple dimensions are considered (Linville, 1982). It is possible to increase the number of attributes that one retrieves (i.e. quantity) but not the number of dimensions (i.e., quality).

What determines the number of dimensions considered in the self-referencing essay? The results indicate that the presentation order of the self-referencing essay determines the number of dimensions and the information processing strategy used by participants. A category-based approach occurs if participants write about a past break experience prior to viewing the ad. The number of dimensions retrieved are fewer because the ad cannot be used as a source of comparison. Additionally, because people primarily recall positive aspects from their life (Wagenaar, 1986; White, 1982), positive affect is also increased. This makes it likely that participants assimilate their idiosyncratic attributes in the self-referencing essay with the attributes of the ad. As a result, participants view the ad as self-relevant and evaluate the product favorably.

An attribute-based approach occurs if participants write about a past break experience after viewing the ad. The ad serves as an anchor and encourages participants to consider multiples dimensions in the self-referencing essay. This leads participants to compare and contrast their idiosyncratic attributes with attributes of the ad. Additionally, even if participants primarily recall positive attributes relating to a past break experience, affect is less influential during an

attribute-based process (Linville, 1982).

Evidence For a Schema-based Process

Self-focus Comparisons

It was hypothesized that if the persuasive impact of autobiographical memories ads represents a categorical approach to information processing (e.g., schema-triggered affect model), then the Self-focus-ad and Self-focus-ad Pre-essay conditions should not significantly differ from each other and the transfer of positive affect from a Consistent Schema-match in these two conditions should lead to the highest product evaluation. Furthermore, engaging in an attribute-based process during an autobiographical memories ad would lead to a lower product evaluation as the role of affect is attenuated as more dimensions of a past experience are considered. This should result in the Self-focus-ad Post-essay condition producing a lower product evaluation compared to both the Self-focus-ad and Self-focus-ad Pre-essay conditions in a Consistent Schema-match. The Product-focus-ad condition was also predicted to have a lower product evaluation compared to the Self-focus-ad and the Self-focus-ad Pre-essay conditions under a Consistent Schema-match.

In addition, if the schema-triggered affect model was operating, an Inconsistent Schema-match should result in moderate affect. Thus, for those conditions representing the use of a schema-based process, (i.e., Self-focus-ad and Self-focus-ad Pre-essay) product evaluation should be lower in an

Inconsistent Schema-match compared to a Consistent Schema-match. As noted earlier, an attribute approach should be less impacted by affect level. Thus, in the Self-focus-ad Post-essay condition, the Consistent Schema-match should not be significantly different from the Inconsistent Schema-match in product evaluation as both are less impacted by affect.

If the persuasive impact of autobiographical memories ads is primarily as a result of attention to the self, then further increasing attention to idiosyncratic self attributes should result in an even higher product evaluation. From this perspective, it is assumed that people generally remember positive experiences from their life and thus increasing attention to the self would bias people to consider even more positive attributes associated with a past break experience. Additionally, if the persuasive mechanism is more analogous to attention to idiosyncratic attributes, then there should be no differences in product evaluation by schema-match. This would occur because it is not the categorization of the event that leads to a favorable evaluation but the fact that attention to idiosyncratic attributes has been increased. Thus, the Self-focus-ad Pre-essay and Self-focus-ad Post-essay conditions would similarly have the highest product evaluation in both the Schema-consistent and Schema-inconsistent conditions. In these two conditions attention to idiosyncratic attributes has been increased similarly by writing an essay on a past break experience.

Results provided support for a schema-based process in explaining the persuasive process underlying autobiographical memories ads. In the Schema-consistent Prod Eval First condition, product evaluation was similarly higher in the Self-focus-ad ($M = 7.5$) and Self-focus-ad Pre-essay conditions ($M = 7.3$) compared to both the Self-focus-ad Post-essay ($M = 6.3$) and Product-focus-ad conditions ($M = 6.0$). If attention to the self had been the primary determiner of persuasion then increasing self-focus would have resulted in the highest product evaluation in both the High Self-focus conditions (Pre-ad and Post-ad).

If participants in the Self-focus-ad and Self-focus-ad Pre-essay Schema-consistent Prod Eval First conditions are similarly using a schema-based approach then the process indices should also be similar for these two conditions. One such indicator is the percent of positive thoughts mentioned on the cognitive response measure. Results indicated that in the Schema-consistent Prod Eval First condition, the Self-focus-ad Pre-essay condition (73%) had a significantly higher percent of positive thoughts compared to the Self-focus-ad Post-essay (48%) and Product-focus-ad (40%) conditions but was not significantly different from the Self-focus-ad condition (59%).

Another process indicator was the percent of Florida vacation imagery thoughts mentioned on the cognitive response measure. Florida vacation imagery thoughts represent a general reference to a Florida vacation (i.e., bikini, beer etc) with no specific reference to the self, and are thought to reflect the use

of a schema-based process. Results indicated that in the Schema-consistent Prod Eval First condition, participants in the Self-focus-ad Pre-essay condition mentioned a significantly higher percent of Florida vacation imagery thoughts (42%) compared to participants in both the Self-focus-ad Post-essay (18%) and Product-focus-ad (15%) conditions but were not significantly higher than participants in the Self-focus-ad condition (24%). It is interesting to note that when Florida vacation imagery thoughts were one of the two largest categories of thoughts on the cognitive response measure, product evaluation tended to be high. This suggests that the persuasive impact of autobiographical memories ads may reflect a schema-based process.

Overall, the results suggest that the schema-triggered affect model was likely stronger in the Self-focus-ad Pre-essay condition compared to the Self-focus-ad condition. The highest percent of Florida vacation imagery thoughts overall were in the Self-focus-ad Pre-essay condition, which might indicate that a schema-based process was even stronger for this condition. The Self-focus-ad Pre-essay condition also produced the highest product recall accuracy, suggesting that this condition likely primed a rich network for a Florida vacation and provided an encoding advantage.

Schema-match Comparisons

If autobiographical memories ads represent a schema-based process, there should also be differences in schema-match comparisons (i.e., schema

consistent versus inconsistent) for the Self-focus-ad and Self-focus-ad Pre-essay conditions. If the persuasive impact is a result of increased attention to the self or an attribute-based process then there should be no differences in schema-match. The schema-match comparisons in each Self-focus condition tend to support the schema-triggered affect model. In the Self-focus-ad Prod Eval First condition, product evaluation in the Consistent Schema-match ($M = 7.5$) was significantly higher than in the Inconsistent Schema-match ($M = 6.5$). Similarly, the percent of positive thoughts mentioned on the cognitive response measure was directionally higher in the Consistent Schema-match (59%) compared to the Inconsistent Schema-match (35%) for the Self-focus-ad Prod Eval First condition.

In the Self-focus-ad Pre-essay Prod Eval First condition, product evaluation was directionally higher overall in the Consistent Schema-match ($M = 7.3$) compared to the Inconsistent Schema-match ($M = 6.7$) and was significantly higher for one of the four product evaluation questions. The percent of positive thoughts mentioned was significantly higher in the Consistent Schema-match (73%) than the Inconsistent Schema-match (44%) in the Self-focus-ad Pre-essay Prod Eval First condition. The self-referencing essay in the Self-focus-ad Pre-essay condition also indicated differences by schema-match. In the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition, the number of dimensions of a past break experience discussed on the self-referencing essay

were significantly positively correlated with product evaluation ($r = .69$). In the Self-focus-ad Pre-essay Schema-inconsistent Prod Eval First condition, the number of dimensions of a past break experience discussed were significantly negatively correlated with product evaluation ($r = -.59$). These correlations suggest that participants in the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition were more likely to assimilate their past break experience with the ad. Participants in the Self-focus-ad Pre-essay Schema-inconsistent Prod Eval First condition were more likely to contrast their past break experience with ad. One reason that participants in the Consistent Schema-match were more likely to assimilate their break experience with the ad was that they were higher in positive affect as indicated by the significantly higher percent positive thoughts on the cognitive response measure and by the directionally higher percent of positive thoughts on the self-referencing essay compared to participants in the Inconsistent Schema-match. Research has indicated that participants in a good mood are more likely to categorize items as similar compared to neutral mood participants (Isen and Daubman, 1984).

In the Self-focus-ad Post-essay Prod Eval First condition, product evaluation in the Consistent Schema-match ($M = 6.3$) was not significantly different from the Inconsistent Schema-match ($M = 6.8$). Similarly, the percent of positive thoughts on the cognitive response measure in the Consistent Schema-match (48%) was not significantly different from the Inconsistent Schema-match (54%). In

addition, the number of dimensions of a past break experience discussed on the self-referencing essay were uncorrelated with product evaluation in either schema-match condition. These results would be expected if participants in the Self-focus-ad Post-essay condition are using an attribute-based approach, which results in a less extreme evaluation overall regardless of schema-match.

Interestingly, in the Product-focus-ad Prod Eval First condition, product evaluation in the Inconsistent Schema-match ($M = 7.4$) was significantly higher than in the Consistent Schema-match ($M = 6.0$). Similarly, the percent of positive thoughts was significantly higher in the Inconsistent Schema-match (68%) than in the Consistent Schema-match (40%). The results of the Product-focus-ad condition present an interesting source of comparison for the schema-based conditions and will be addressed at length in the discussion of the unique role of the self (see, pp. 91-93).

Implications for an Attribute-based Process

Self-focus Comparisons

Participants in the Self-focus-ad Post-essay condition were hypothesized to be engaging in an attribute-based process. As a result, participants in the Self-focus-ad Post-essay condition rated the ad as significantly less involving and impersonal compared to participants in the Self-focus-ad, Self-focus-ad Pre-essay and Product-focus-ad conditions. Furthermore, for participants in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, this

involvement rating was significantly negatively correlated with the total number of autobiographical thoughts mentioned on the cognitive response measure. This suggests that as participants in this condition considered more thoughts about a specific past spring break, they were more likely to contrast their past break experience with the ad, which resulted in rating the ad less indicative of their own experience (i.e., less personal and involving). In the other comparable Self-focus conditions, this involvement rating was positively correlated with the total number of autobiographical thoughts mentioned on the cognitive response measure, suggesting that participants in these conditions were more likely to assimilate their past spring break experience with the ad. A comparison of the correlations indicated that the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition was significantly different from the other comparable Self-focus conditions. These results are particularly interesting because there were no overall differences in the total number of autobiographical thoughts mentioned on the cognitive response measure.

There is some evidence that suggests that participants in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition engaged in episodic self-referencing. In this condition, the episodic event rating was significantly negatively correlated with product accuracy. That is, as participants rated the ad as representing a specific past spring break rather than a spring break for college students in general, product recall accuracy increased. This is consistent

with the current literature that finds self-referencing orientation tasks (i.e., Describes me or not) to enhance recall accuracy (Kuiper & Rogers, 1979). The Self-focus-ad Post-essay Schema-consistent Prod Eval First condition were likely encoding product features in relation to their past break experience. Episodic event rating and product accuracy were not significantly correlated in the comparable Self-focus-ad and Self-focus-ad Pre-essay conditions. A comparison of the correlations indicated that the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition was significantly different from the other comparable Self-focus conditions.

Self-referencing essay Comparisons

Results on the self-referencing essay indicated that the two High Self-focus conditions processed the past break experience differently. Overall, participants in the Self-focus-ad Post-essay condition ($M = 4.7$) discussed significantly more dimensions of a past break experience compared to participants in the Self-focus-ad Pre-essay condition ($M = 4.1$). This suggests that the ad likely served as an anchor for participants in the Self-focus-ad Post-essay condition because the self-referencing essay was done after viewing the ad. The Self-focus-ad Post-essay encouraged an attribute-based approach because participants used the ad as source of comparison when they considered multiple dimensions of their own past break experience. Thus, participants in this condition were more likely to compare and contrast dimensions of their past break experience with the

ad. These results are consistent with the broader literature on self-reference orientation tasks, whereby a trait is presented and the participant evaluates whether the trait is descriptive of them or not (Higgins and Bargh, 1987).

Participants in the Self-focus-ad Pre-essay condition were also asked to write an essay on multiple dimensions of a past break experience but the essay was done prior to viewing the ad; as a result the ad could not have been used as source of comparison.

There is further evidence that participants in the Self-focus-ad Post-essay condition used an attribute-based approach and participants in the Self-focus-ad Pre-essay condition used a categorical-based approach. In the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, the two autobiographical retrieval ratings (involvement and related to a past break experience) were significantly negatively correlated with the number of dimensions of a past break experience discussed in the self-referencing essay. Thus as participants considered more idiosyncratic attributes of a past spring break experience, they were more likely to evaluate each dimension of their spring break with the ad. As a result they viewed the ad as more impersonal and less indicative of their own past spring break experience. In the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition, these ratings tended to be positively correlated with the number of dimensions of a past break experience, suggesting that participants in this condition were more likely to

focus on similarities and assimilate their past break experience with ad. A comparison of these correlations indicated that two Self-focus-ad conditions were significantly different from each other. Additionally, in the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition, the number of dimensions of a past spring break experience and product evaluation were significantly positively correlated. In the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, the number of dimensions of a past spring break experience were uncorrelated with product evaluation. These correlations were found to be significantly different from each other.

One explanation of the assimilation and contrast effects is that affect differentially influenced the two Self-focus-ad conditions. As noted earlier, research indicates that participants in a positive mood are more likely to categorize items as similar compared to participants in a neutral mood (Isen and Daubman, 1984). There is some evidence to suggest that participants in the Self-focus-ad Pre-essay were higher in positive affect. In the Schema-consistent Prod Eval First condition, participants in the Self-focus-ad Pre-essay condition mentioned a significantly higher percent of positive thoughts (73%) on the cognitive response measure compared to participants in the Self-focus-ad Post-essay condition (48%). Additionally, the percent of positive thoughts on the self-referencing essay was directionally higher for participants in the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition (71%) compared to

participants in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition (57%). A higher level of positive affect in the Self-focus-ad Pre-essay condition may also have encouraged participants in this condition to use the peripheral route rather than the systematic route (Petty and Cacioppo, 1988) in evaluating the ad.

The variability in the percent of positive and negative thoughts discussed on the self-referencing essay also suggested that participants in the Self-focus-ad Post-essay were more likely to use an attribute-based approach while participants in the Self-focus-ad Pre-essay were more likely to be using a categorical-based approach. The percent of positive and negative thoughts varied as a function of Schema-match and Response Order for the Self-focus-ad Pre-essay condition. For example, when product evaluation was presented prior to the cognitive responses, the Inconsistent Schema-match (20%) had a higher percent of negative past experience thoughts compared to the Consistent Schema-match (10%) in the Self-focus-ad Pre-essay condition. When cognitive responses was presented prior to the product evaluation, the Consistent Schema-match (18%) had a higher percent of negative past experience thoughts compared to the Inconsistent Schema-match (6%) in the Self-focus-ad Pre-essay condition. Schema-match and Response Order appeared to have little impact in the Self-focus-ad Post-essay condition in determining the percent of negative and positive past experience thoughts mentioned on the self-

referencing essay. These results are consistent with the idea that conditions that were initially characterized by a schema-based approach (e.g., Self-focus-ad Pre-essay) were more likely to have an extreme response compared to those conditions that were hypothesized to be engaging in an attribute-based approach initially (e.g., Self-focus-ad Post-essay) where a moderate evaluation was more likely overall.

Implications for Affect in a Schema-based and an Attribute-based Process

Affect has been shown to operate differently in a schema-based versus an attribute-based process. In the schema-triggered affect model, affect is directly linked to the category label and thus should strongly influence evaluation (Fiske, 1982). In an attribute model, the role of affect is attenuated as multiple dimensions are considered in evaluation (Linville, 1982). This would imply that the Self-focus-ad and the Self-focus-ad Pre-essay conditions should be strongly influenced by affect level compared to the Self-focus-ad Post-essay condition. The results on the affect indices support this prediction for those conditions hypothesized to be using a schema-based process (e.g., Schema-consistent Prod Eval First condition). The positive affect score and product evaluation were significantly positively correlated in the Self-focus-ad and the Product-focus-ad Schema-consistent Prod Eval First conditions. The negative affect score and product evaluation were significantly negatively correlated in the Self-focus-ad Pre-essay Schema-consistent Prod Eval First condition. Similarly,

product evaluation was significantly positively correlated with the percent of positive thoughts and significantly negatively correlated with the percent of negative thoughts on the cognitive response measure for the Self-focus-ad and the Self-focus-ad Pre-essay Schema-consistent Prod Eval First conditions. In the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, there was little correlation between product evaluation and either affect score or the percent of positive and negative thoughts on the cognitive response measure. A comparison of the correlations indicated that the Self-focus-ad Post-essay was significantly different from comparable Self-focus conditions. These results suggest that participants in the Self-focus-ad Post-essay condition, who were hypothesized to be engaged in an attribute-based process were less influenced by affect compared to participants hypothesized to be engaged in a schema-based process (i.e., Self-focus-ad and Self-focus-ad Pre-essay conditions).

The Unique Role of the Self in Autobiographical Memories Ad

The results provide preliminary support for the schema-triggered affect model in explaining the persuasive impact of autobiographical memories ads. However, even if persuasion effects occur primarily with an increase in the percent of Florida vacation imagery thoughts mentioned, the role of the self needs to be examined further. If autobiographical memories ads purely represented the schema-triggered affect model then product evaluation would not have been significantly lower in the Product-focus-ad condition compared to the Self-focus-

ad and Self-focus-ad Post-essay conditions, as a consistent schema-match was made accessible for all participants. One potential explanation is the amount of self relevance or involvement participants felt during the ad. If people elaborate more on tasks that they are involved with, then the total number of thoughts listed on the cognitive response measure might indicate the level of self relevance or involvement with the task. Although, the Self-focus-ad (Pre-essay and Post-essay) conditions had the largest number of total thoughts overall, total thoughts listed for those conditions using a schema-based process (e.g., Schema-consistent Prod Eval First condition) are more informative. In the Schema-consistent Prod Eval First conditions, total thoughts mentioned on the cognitive response measure were higher in the Self-focus-ad Pre-essay ($M = 10.3$) and Self-focus-ad conditions ($M = 7.4$) compared to the Product-focus-ad ($M = 5.9$) and Self-focus-ad Post-essay conditions ($M = 5.9$). The number of total thoughts becomes relevant as it is positively significantly correlated with the number of Florida vacation imagery thoughts in all 16 conditions. There is no other category on the cognitive response measure that is correlated with total thoughts in all 16 conditions. This would suggest that increasing the number of total thoughts would lead to an increase in category related thoughts (i.e., Florida vacation imagery) which would increase the likelihood of persuasion.

If involvement is a potential explanation for the persuasive impact of autobiographical memories ads, it is necessary to explore the factors that

influence perceived self involvement (or relevance). As noted earlier, the Self-focus-ad Post-essay condition was significantly lower on “involving the self” rating, compared to the Self-focus-ad Pre-essay and Self-focus-ad conditions. Participants in the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition may have found the ad less relevant or involving because it was less indicative of their past break experience (recall the negative correlation between the “involving the self” rating and the number of autobiographical thoughts and the number of dimensions on the self-referencing essay). Participants in the Product-focus-ad Schema-consistent Prod Eval First condition may have found the ad less relevant or involving because the self was not primed initially. There is evidence on the “related-to-a-past-break-experience” autobiographical retrieval rating to suggest that the Self-focus-ad condition differentially primed the self first compared to the Product-focus-ad condition. The rating on “related-to-a-past-break-experience” produced a marginal main effect for Schema-match. Participants in the Schema-consistent condition tended to rate the ad as more related to a past break experience compared to participants in the Schema-inconsistent condition. However, the only significant difference in schema-match occurs between the Product-focus-ad Schema-consistent Prod Eval First condition and the Product-focus-ad Schema-inconsistent Prod Eval First condition. The other comparable schema-match comparisons in each Self-focus condition were not significant. This suggests that the self-focus ads may have

initially primed the self in relation to a past break experience regardless of the schema-match manipulation. These results might explain the relatively high product evaluation for participants in the Product-focus-ad Schema-inconsistent Prod Eval First condition. Participants in this condition had the highest product evaluation for a Thanksgiving break package. Thus, not considering a past break experience while viewing the Thanksgiving break package was advantageous. Participants may have focused on the novelty of a Thanksgiving break package and not the self in relation to a past break experience which led to persuasion.

These findings suggest that the persuasive impact of autobiographical memories ads can be characterized as “perceived self-relevance” rather than self-referencing. To clarify this point further, the different roles of a self cognitive structure need to be considered. Higgins and Bargh (1987) have distinguished between three special self cognitive structures (i.e., self-referencing, episodic memory, and self-relevance) that are often used interchangeably when discussing the unique processing advantage of the self. Self-referencing refers to processing input in reference to a self-knowledge structure. Episodic memory reflects the use of a personal experience with an unique cognitive self structure. Self-relevance refers to processing events that have consequences for the processor.

Higgins and Bargh (1987) note that among the special cognitive structures of

the self, the most difficult to evaluate is the concept of self-relevance. Self-relevance may reflect the use of self-serving biases, defensiveness, personal values and orientations (Bem, 1981, Markus & Sentic, 1982, Mills, 1983). These effects can be produced by motivational factors or the chronic accessibility of individual self-constructs or both. Self-relevance does not necessarily indicate that information was processed in reference to the organized and interconnected elements of a self-knowledge structure. They note that self-relevance only implies that the self is a function of the goal relevance of the material presented. In self-relevance, the "self" part of the label only indicates that information production and the goal is associated with oneself rather than someone else, not that a self-knowledge or a self-system is involved (Higgins and Bargh, 1987). Thus, perceived self-relevance might be more descriptive of the process in autobiographical memories ads than self-focus.

Limitations of the Study

The Role of the Cognitive Response Measure

There were no apriori predictions about the Response Order manipulation, but the results suggested that the presentation of the cognitive response measure first (i.e., before product evaluation) increased the likelihood that participants engaged in piecemeal processing. Furthermore, the Response Order had more impact in the Schema-consistent conditions than the Schema-inconsistent conditions. This would be expected if participants in the Schema-inconsistent

condition are already engaging in an attribute approach rather than a categorical approach in evaluating the ad; as a result the cognitive response measure would not increase piecemeal processing substantially. Product evaluation did not differ significantly in the Cog Resp First condition. Additionally, when product evaluations for the 8 Schema-inconsistent conditions are examined separately, it is striking to note that none the cells differ significantly from each other.

There was additional evidence on the cognitive response measure that indicated that the presentation of the cognitive response measure first increased the likelihood of piecemeal processing. The 3-way interaction in the percent of positive thoughts indicated no significant differences for the Cog Resp First condition. The 2-way interactions between Schema-match and Response Order in the percent of autobiographical neutral thoughts and the percent of autobiographical positive thoughts also provided further evidence of an attribute-based processing.

In the Consistent Schema-match, the percent of autobiographical neutral thoughts were significantly higher in the Cog Resp First condition compared to the Prod Eval First condition. In the Inconsistent Schema-match, the percent of autobiographical neutral thoughts did not differ as a function of the Response Order. These results indicated that participants considered less extreme valenced (positive or negative) thoughts and more neutral autobiographical thoughts as they engaged in piecemeal processing (i.e. presentation of the

cognitive response measure first). As in the product evaluation results, the response order had less impact in the Schema-inconsistent condition. Similarly, the percent of autobiographical positive thoughts discussed varied as a function of Response Order. In a Consistent Schema-match, the percent of autobiographical positive thoughts were higher in the Prod Eval First condition. In the Inconsistent Schema-match, the percent of autobiographical positive thoughts were higher in the Cog Resp First condition. These results are consistent with the notion that the presentation of the cognitive response measure first leads participants to elaborate upon their initial evaluation. In a Consistent Schema-match the initial evaluation is generally positive and an Inconsistent Schema-match, the initial evaluation is more negative.

Threats to Validity and Discrepancies in the Study

One potential threat to validity in this study was that the Self-focus-ad Pre-essay condition was the only condition that received the dependent measures immediately following the ad. Participants in this condition wrote their 5 minute essay prior to viewing the ad whereas participants in the other Self-focus conditions wrote their 5 minute essay after viewing the ad. However, given that the product evaluation results for the Self-focus-ad and Self-focus-ad Pre-essay conditions were similar and that the product evaluation results for the Self-focus-ad Post-essay and Product-focus-ad conditions were similar, this is likely not a major threat to validity. The only way to address this concern adequately would

have been to create four additional Product-focus-ad conditions in which participants wrote the essay prior to viewing the ad. However, due to the laborious task of increasing the number of cells from 16 to 20, this was not implemented.

Another potential concern in this study is that the autobiographical retrieval ratings did not clearly distinguish between the Self-focus-ad conditions and the Product-focus-ad condition. In the Schema-consistent Prod Eval First condition, the “involving-the-self” autobiographical retrieval rating was directionally though not significantly lower in the Product-focus-ad condition ($M = 6.6$) compared to the Self-focus-ad condition ($M = 7.2$) and the Self-focus-ad Pre-essay condition ($M = 7.4$). However, in the Schema-inconsistent Prod Eval First condition, the Product-focus-ad condition had a directionally higher “involving-the-self” rating ($M = 7.4$) compared to the Self-focus-ad ($M = 5.8$) and the Self-focus-ad Pre-essay conditions ($M = 7.3$). Recall that the only significant effect produced by this rating was a main effect for self-focus. The Self-focus-ad Post-essay condition had a significantly lower “involving-the-self” rating compared to all the other Self-focus conditions. Furthermore, though the “related-to-a-past-break-experience” autobiographical retrieval rating provided some evidence that the self-focus ads and the Product-focus-ad condition differentially primed the self (see above in discussion of unique role of the self), the evidence could have been stronger. These ratings have been used in previous studies as

manipulation checks for autobiographical retrieval; however the results from previous studies also question the validity of using these ratings as manipulation checks (Sujan et al., 1993; see discussion below in comparison with previous study).

The “involving-the-self” autobiographical retrieval rating might be a better indicator of affect. This rating was strongly related to the positive affect score in the Self-focus-ad and negative affect score in the Self-focus-ad Pre-essay Schema-consistent Prod Eval First conditions. The affect indices in these two conditions were significantly related product evaluation. A higher rating on the “personal-and-involving- the-self” rating might indicate a high level of positive affect. In fact, when all the cells are collapsed to represent only the four Self-focus conditions, the “personal-and-involving- the-self” rating is significantly positively correlated with the positive affect score in each Self-focus condition.

Comparison with Previous Autobiographical Memories Ads Studies

Previous studies attempted to argue that the affect associated with an autobiographical past episode was uniquely different and produced the persuasive impact (Sujan et al, 1993; Baumgartner et al, 1992). The study that found the self-focus ad to be effective used a 2(Autobiographical: Encouraged, Not Encouraged) x 2 (Brand link: Present, Not Present) between subjects-design (Sujan et al., 1993). The advertised product was Callaway wine. The Autobiographical Encouraged condition was the self-focus manipulation in the

ad, where participants were asked to recall a previous dinner with a friend. The Brand Link Present condition, provided the following statement: "Next time make it more special with a bottle of Callaway". The manipulation check for autobiographical retrieval on the Sujan et al., (1993) study indicated that the two independent variables were not orthogonal. The autobiographical retrieval rating was the highest in the Autobiographical Encouraged and the Brand Link Present conditions. Thus, even when self-focus was not explicitly encouraged in the ad, the Brand Link Present condition produced a high autobiographical retrieval rating.

As noted earlier, their original argument was that the affect associated with a past event uniquely produced a higher product evaluation. To provide evidence of this, they noted that positive affect was higher in the Autobiographical Encouraged condition compared to the Autobiographical Not Encouraged condition (Sujan et al., 1993). However, the results indicated that participants had the highest product evaluation and listed the most autobiographical thoughts in both the Autobiographical Encouraged and Brand Link Present conditions. Additionally, affect indices and product evaluation correlated with product evaluation in all conditions. The correlation between the number of autobiographical thoughts mentioned on the cognitive response measure and product evaluation was not provided. Thus, it is not clear that the self-focus ads uniquely primed a specific past event and, additionally, that the affect from an

autobiographical episode uniquely led to a favorable evaluation.

One possible explanation is that the Brand Link Present condition made participants think of a future self experience rather than a past self experience. In their coding scheme, there was no category for a future self thought as in this study. Their categories were limited to: autobiographical, product, ad, general usage situation and other. One possibility is that thoughts about a past and a future self experience were all categorized as an autobiographical thought on the cognitive response measure.

The current study was methodologically different from the previous studies. In the two previous studies (Sujan et al, 1993; Baumgartner et al, 1992), the cognitive response measure was always presented prior to product evaluation: In Sujan et al, (1993) the Autobiographical Encouraged and the Brand Link Present conditions lead to a higher evaluation and in Baumgartner et al, (1992) the self-focus ad provided no advantage in persuasiveness. In this study, when the cognitive response measure was presented prior to the product evaluation questions, there were no significant differences in product evaluation. Thus, self-focus as a persuasive technique may be tenuous and very sensitive to fluctuations in perceived self-relevance (either through the presentation of the cognitive response measure or comparison with a previous past experience).

Alternative Explanation and Future Research

An alternative explanation for the persuasiveness advantage of

autobiographical memories ads is that they prime a specific person along with a situation. Research indicates that providing information about a specific person and a situation is easier to process than information about a situation alone (Cantor, Mischel, and Schwartz, 1982). Thus, the self is not uniquely advantageous but rather a specific person was provided along with the Florida spring break vacation. This might explain why the Product-focus-ad Schema-consistent Prod Eval First condition had a lower product evaluation. However, the Self-focus-ad Post-essay Schema-consistent Prod Eval First condition, which also primed a specific person and a situation, resulted in a lower product evaluation.

The results of this study also suggest that imagining the future self might explain the persuasive impact of autobiographical memories ads. There were more future or anticipatory self thoughts (i.e., imagining themselves in Florida at some point in the future) compared to past autobiographical thoughts (i.e., a specific episode from their past spring break) on the cognitive response measure. Additionally, given the Brand Link Present results from the Sujan et al (1993) study, the future self might be equally important as episodic self-focus in determining persuasion. A future self thought has the advantage of self-involvement as well as increasing the likelihood of a schema-based process. Additionally, given the considerable research that indicates that people are very optimistic about the likelihood of positive future life events for themselves versus

others (Weinstein, 1980), this should also result in simultaneously priming positive affect. Thus, any self-focus would be filtered by the initial positive affect. Future research should to juxtapose the processing advantage of future and past self thoughts.

Implications for Advertising and Persuasion

The results suggest that the self can be useful in eliciting consumer involvement particularly for typical (i.e., schema-consistent) products. However, information relating to the self or a past experience has to be kept at a general level so that consumers can assimilate any of their prior and/or future experiences with the ad. Additionally, positive affect needs to be primed early in the ad so that any attention to the self that occurs is filtered through the initial affect.

One of the more interesting findings in this study is that a Product-focus-ad type advertisement can also be very persuasive, particularly for products that a consumer does not typically associate with the self. This has implications for expanding markets for products that are generally targeted toward a specific gender or demographic group. In those cases, emphasizing the product rather than the usually targeted population may be a more persuasive technique for expanding markets.

References

- Anderson, J. R. (1976). Language, memory and thought. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Batra, R., & Holbrook, M. B. (1990). Developing a topology of responses presented prior to product evaluation affective responses to advertising. Psychology and Marketing, 7, 11-25.
- Baumgartner, H., Sujan, M., & Bettman, J. R. (1992). Autobiographical memories, affect and consumer information processing, Journal of Consumer Psychology, 1, 53-82.
- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. Psychological Review 88, 354-364.
- Bless, J., Mackie, D. M. & Schwarz, N. (1992). Mood Effects in Attitude Judgments: Independent effects of mood before and after message elaboration. Journal of Personality and Social Psychology, 63, 585-595.
- Brewer, W. F. (1986). What is autobiographical memory? In D. C. Rubin, (Ed.), Autobiographical Memory (pp. 25-49). Cambridge: Cambridge University Press, 25-49.
- Brewer, W. F. & Pani, J. R. (1983). The structure of human memory. In G. H. Bower (Ed.), The psychology of learning and motivation: Advances in research and theory (Vol. 17, pp. 1-38). New York: Academic.

Burke, M. C., & Edell, J. A. (1989). The impact of feelings on ad-based affect and cognition, Journal of Marketing Research, 16, 69-83.

Duncan, S. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of blacks. Journal of Personality and Social Psychology, 34, 590-598.

Fiske, S. T. (1982). Schema-triggered affect: Applications to social perception. In M. S. Clark & S. T. Fiske (Eds.), Affect and cognition: The 17th Annual Carnegie Symposium on Cognition (pp. 55-78). Hillsdale, NJ: Erlbaum.

Fiske, S. T., & Gup, D. (1980). Effects of stereotype-behavior timing and consistency on attention, evaluation, and memory. Unpublished manuscript, Carnegie-Mellon University.

Fiske, S. T. & Neuberg, S. T. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In M. P. Anna (Ed.), Advances in experimental social psychology (Vol. 23, pp. 1-74). New York: Academic Press.

Fiske, S. T., Neuberg, S. L., Beattie, A. E., & Milberg, S. J. (1987). Category based and attribute-based reactions to others: Some informational conditions of stereotyping and individuating processes. Journal of Experimental Social Psychology, 23, 399-427.

Fiske, S. T. & Pavelchak, M. A. (1986). Category-based versus piecemeal-based affective responses: Developments in schema-triggered affect. In R. M. Sorrentino & E. T. Higgins (Eds.), Handbook of motivation and cognition: Foundations of social behavior (pp. 167-203). New York: Guilford Press.

Fiske, S. T., & Taylor, S. E. (1991). Social Cognition. New York, McGraw-Hill, Inc.

Higgins, E. T., & Bargh, J. A. (1987). Social cognition and social perception. In M. R. Rosenweig & L. W. Porter (Eds.), Annual review of psychology. (Vol. 38, pp. 369-425). Palo Alto, CA: Annual Reviews.

Isen, A. M. (1989). Some ways in which affect influences cognitive processes: Implications for advertising and consumer behavior. In P. Cafferata and A. Tybout, (Eds.) Cognitive and Affective Responses to Advertising, (pp. 91-117). Lexington, MA: Lexington Books.

Isen, A. M. & Daubman, K. A. (1984). The influence of affect on categorization. Journal of Personality and Social Psychology, 47, 1206-1217.

Isen, A. M. & Means, B. (1983). The influence of positive affect on decision-making strategy. Social Cognition, 2, 18-31.

Klein, S. B., Loftus, J., & Burton, H.A. (1989). Two self-reference effects: The importance of distinguishing between self-descriptiveness judgments and autobiographical retrieval in self-referent encoding. Journal of Personality and Social Psychology, 55, 5-11.

Kuiper, N. A. & Rogers, T. B. (1979). Encoding of personal information: Self-other differences. Journal of Personality and Social Psychology, 37, 499-514.

Linville, P. W. (1982). Affective consequences of complexity regarding the self and others. In M. S. Clark & S. T. Fiske (Eds.), Affect and cognition: The 17th Annual Carnegie Symposium on Cognition (pp. 79-109). Hillsdale, NJ: Erlbaum.

Mackie, D. M. & Worth, L. T. (1989). Processing Deficits and the Mediation of Positive Affect in Persuasion. Journal of Personality and Social Psychology, 57, 27-40.

Mackie, D. M. & Worth, L. T. (1991). Feeling good, but not thinking straight: The impact of positive mood on persuasion. In J. Forgas (Ed.), Emotion and social judgments (pp. 201-219). Oxford, England: Pergamon Press.

Markus, H. & Sentis, K. (1982). The Self in Social Information Processing. In J. Suls (Ed.), Psychological Perspectives on the Self, Vol. 1, Hillsdale, NJ: Erlbaum.

Mayer, J. D., & Bremer, D. (1985). Assessing mood with affect-sensitive tasks. Journal of Personality Assessment, 49, 95-99.

Millar, M. G., & Tesser, A. (1986). Thought-induced attitude change: The effects of schema structure and commitment. Journal of Personality and Social Psychology, 51, 259-269.

Mills, C. J. (1983). Sex-typing and self-schemata effects on memory and response latency. Journal of Personality and Social Psychology, 45, 163-172.

Petty, R. E., & Brock, T. C. (1976). Effects of responding or not responding to hecklers on audience agreement with a speaker. Journal of Applied Social Psychology, 6, 1-17.

Rogers, T. B., Kuiper, N. A., & Kirkler, W. S. (1977). Self-reference and the encoding of personal information. Journal of Personality and Social Psychology, 35, 677-688.

Salovey, P. (1992). Mood-induced self-focused attention. Journal of Personality and Social Psychology, 62, 699-707.

Simon, H. A. (1982). Affect and Cognition: Comments In M. S. Clark & S. T. Fiske (Eds.), Affect and cognition: The 17th Annual Carnegie Symposium on Cognition (pp. 333-342). Hillsdale, NJ: Erlbaum.

Sagar, H. A., & Schofield, J. W. (1980). Racial and behavioral cues of black and white children's perceptions of ambiguously aggressive acts. Journal of Personality and Social Psychology, 39, 590-598.

Sujan, M., Bettman, J. R. & Baumgartner, H. (1993). Influencing consumer judgments using autobiographical memories: A self-focus perspective. Journal of Marketing Research, 0, 422-436.

Stayman, D. M. & Batra, R. (1991). Encoding and retrieval of ad affect in memory. Journal of Marketing Research, 28, 232-239.

Tesser, A. (1978). Self-generated attitude change. In L. Berkowitz (Ed.), Advances in experimental social psychology, (Vol. 11, 289-338). New York: Academic Press.

Tulving, E. (1972). Episodic and semantic memory. In E. Tulving & W. Donaldson (Eds.), Organization of memory (pp. 381-403). New York: Academic.

Wagenaar, W. A. (1986). My memory: A study of autobiographical memory over six years. Cognitive Psychology, 18, 225-252.

White, R. T. (1982). Memory for personal events. Human Learning, 1, 171-183.

Table 1

Mean Typicality Ratings by College Break and Vacation Location in Pilot Study

Vacation Location	College Break				
		Spring	Summer	Thanksg.	X-mas
Florida		7.2	6.1	3.2	3.9
Colorado		5.1	2.1	4.6	6.3
Europe		3.2	5.8	2.5	3.7

Table 2

Experimental Design: Schema-Match by Self-Referencing by Response Order

		Consistent Schema-Match (Spring Break)	Inconsistent Schema-Match (Thanksgiving Break)
Product Focus	Prod Eval First		
	Cog Resp First		
Low Self- referencing	Prod Eval First		
	Cog Resp First		
High Self- Referencing Pre-Ad	Prod Eval First		
	Cog Resp First		
High Self- Referencing Post-Ad	Prod Eval First		
	Cog Resp First		

Table 3

Mean Episodic Event Rating and Correlations between Episodic Event Rating and Number of Autobiographical Thoughts on the Cognitive Response Measure by Self-Focus Condition

	Product-focus-ad	Self-focus-ad	Self-focus-ad Pre-essay	Self-focus-ad Post-essay
Mean Episodic Event Ratings ¹	5.6	6.0	5.7	6.3
Correlation with Number of Autobiog. Thts	$r = -.32$ $p < .02$	$r = -.45$ $p < .001$	$r = -.29$ $p < .03$	$r = -.10$ $p < .45$

1

Higher numbers indicate that participants were more likely to think of a college break for college students in general rather than a specific break experience from their past.

Table 4

Mean Rating on Related to a Past Break Experience by Schema-match, Self-focus and Response Order

	Consistent Schema		Inconsistent Schema-	
	prd qst first	cog resp first	prd qst first	cog resp first
Product-focus-ad	6.2 (2.6) ²	4.9 (3.3)	3.4 (2.6) ¹	4.0 (3.2)
Self-focus-ad	4.1 (3.4)	4.6 (3.1)	4.0 (2.7)	4.5 (2.9)
Self-focus-ad Pre-essay	4.5 (3.1)	5.2 (2.7)	4.9 (3.0)	3.7 (3.3)
Self-focus-ad Post-essay	3.5 (3.0)	4.5 (3.3)	4.3 (3.0)	3.4 (2.6)

¹ The Product-focus-ad Schema-inconsistent Prod Eval First cell is significantly lower than the Product-focus-ad Schema-consistent Prod Eval First condition, $t(222) = 2.56, p < .05$. The other comparable schema-match comparisons in the other self-focus conditions are not significant.

² Numbers in parentheses indicate standard deviation for that condition.

Table 5

Correlation between Involving the Self rating and the number of total
Autobiographical Thoughts Mentioned on the Cognitive Response Measure by
Schema-match and Self-focus for Product Evaluation First Condition

	Schema-consistent Prod Eval First	Schema-Inconsistent Prod Eval First
Product-focus-ad	$r = .39$ $p < .16$	$r = .29$ $p < .30$
Self-focus-ad	$r = .20$ $p < .47$	$r = .05$ $p < .85$
Self-focus-ad Pre-essay	$r = .22$ $p < .43$	$r = .20$ $p < .47$
Self-focus-ad Post-essay	$r = -.57$ $p < .04$	$r = -.17$ $p = .57$

Table 6

Correlations between Related to a Past Experience Rating and the Number of Dimensions of a Past Break Experience Discussed on the Self-referencing essay by Schema-match and Self-focus for Product Evaluation First Condition

	Schema-consistent Prod Eval First	Schema-Inconsistent Prod Eval First
Self-focus-ad Pre-essay	$r = .20$ $p < .47$	$r = .46$ $p < .09$
Self-focus-ad Post-essay	$r = -.53$ $p < .04$	$r = -.16$ $p = .56$

Table 7

Mean Product Evaluation by Schema-match, Self-focus, and Response Order

	Consistent Schema Match (spr brk)		Inconsistent Schema Match (thnks brk)	
	prod qst first	cog resp first	prod qst first	cog resp first
Product-focus-ad	6.0 (1.7) ³	7.2 (1.6) ¹	7.4 (1.1)	6.5 (1.8)
Self-focus-ad	7.5 (.81) ²	6.4 (1.5)	6.5 (1.8)	6.6 (1.1)
Self-focus-ad Pre-essay	7.3 (.98)	6.9 (1.2)	6.7 (1.2)	6.6 (1.4)
Self-focus-ad Post-essay	6.3 (2.0)	7.0 (1.2)	6.8 (1.1)	6.5 (1.3)

1

Product-focus-ad Cog Resp First was significantly higher than Product-focus-ad Prod Eval First, $t(221) = 2.36, p < .05$ in the Schema-consistent condition.

2

Self-focus-ad Prod Eval First was significantly higher than the Self-focus-ad Cog Resp First, $t(221) = 2.15, p < .05$ in the Schema-consistent condition.

3

Numbers in parenthesis indicate standard deviation for that condition.

Table 8

Mean Product Evaluation by Schema-match and Self-focus for Product

Evaluation First Condition

	Schema-Consistent Prod Eval First	Schema-Inconsistent Prod Eval First
Product-focus-ad	6.0 ^{1,2}	7.4
Self-focus	7.5	6.5 ³
Self-focus-ad Pre-essay	7.3	6.7
Self-focus-ad Post-essay	6.3 ⁴	6.8

1

In the Schema-consistent conditions, the Product-focus-ad condition was significantly lower than the Self-focus-ad Pre-essay and the Self-focus-ad conditions, $p < .01$.

2

Additionally, in the Product-focus-ad condition, Schema-consistent condition was significantly lower than the Schema-inconsistent condition, $p < .01$.

3

In the Self-focus-ad condition, the Schema-inconsistent condition was significantly lower than the Schema-consistent condition, $p < .05$.

4

In the Schema-consistent condition, the Self-focus-ad Post-essay was significantly lower than the Low Self-referencing and Self-focus-ad Pre-essay conditions, $p < .01$

Table 9

Mean Number of Autobiographical Thoughts Mentioned on the Cognitive Response Measure by Schema-match, Self-focus and Response Order

	Consistent Schema Match (spr brk)		Inconsistent Schema Match (thnks brk)	
	prod qst first	cog resp first	prod qst first	cog resp first
Product-focus-ad	.33	.13	.27	.07
Self-focus-ad	.27	.43	.40	.57
Self-focus-ad Pre-essay	.07	.20	.33	.27
Self-focus-ad Post-essay	.21	.29	.43	.47

Table 10

Percent of Each Category Discussed on the Cognitive Response Measure by Schema-match, Self-focus and Response Order

		Prod Eval	Auto- biog.	Futr Self	Florida Vacation Imagery	Ad	Prod	Othr
Schema- consistent Product-focus-ad	Prd qst first	6.0	8	10	15	35	26	7
	Cog rsp first	7.2	2	6	23	44	19	5
Schema- inconsistent Product-focus-ad	Prd qst first	7.4	5	9	31	33	19	3
	Cog rsp first	6.5	1	6	30	39	18	4
Schema- consistent Self-focus-ad	Prd qst first	7.5	4	12	24	41	14	5
	Cog rsp first	6.4	12	6	15	42	24	0
Schema- inconsistent Self-focus-ad	Prd qst first	6.5	10	7	12	38	24	9
	Cog rsp first	6.6	7	5	23	37	20	8
Schema- consistent Self-focus-ad Pre-essay	Prd qst first	7.3	.5	13	42	21	19	4
	Cog rsp first	6.9	4	3	37	34	22	0
Schema- inconsistent Self-focus-ad Pre-essay	Prd qst first	6.7	4	18	32	17	16	13
	Cog rsp first	6.6	4	8	29	23	17	18
Schema- consistent Self-focus-ad Post-essay	Prd qst first	6.3	3	13	18	39	20	7
	Cog rsp first	7.1	5	5	34	42	7	6
Schema- inconsistent Self-focus-ad Post-essay	Prd qst first	6.8	7	10	31	23	20	10
	Cog rsp first	6.5	6	6	22	31	25	10

Table 11

Percent of Autobiographical Positive Thoughts in Total Autobiographical Thoughts by Schema-match, Self-focus and Response Order

	Consistent Schema Match (spr brk)		Inconsistent Schema Match (thnks brk)	
	prod qst first	cog resp first	prod qst first	cog resp first
Product-focus-ad	33	0	100	0
Self-focus-ad	75	50	00	88
Self-focus-ad Pre-essay	100	50	38	50
Self-focus-ad Post-essay	50	33	40	80

Table 12

Percent of Autobiographical Negative Thoughts in Total AutobiographicalThoughts by Schema-match, Self-focus and Response Order

	Consistent Schema Match (spr brk)		Inconsistent Schema Match (thnks brk)	
	prod qst first	cog resp first	prod qst first	cog resp first
Product-focus-ad	67	0	0	100
Self-focus-ad	25	0	50	0
Self-focus-ad Pre-essay	0	25	38	25
Self-focus-ad Post-essay	25	17	20	20

Table 13

Percent of Autobiographical Neutral Thoughts in Total Autobiographical Thoughts by Schema-match and Response Order

	Schema-Consistent spring break	Schema-Inconsistent Thanksgiving break
Prod Eval First	5	31
Cog Resp First	50	11

Table 14

Percent of Florida Vacation Imagery Thoughts in Total Thoughts by Schema-match, Self-focus and Response Order

	Consistent Schema Match (spr brk)		Inconsistent Schema Match (thnks brk)	
	prod qst first	cog resp first	prod qst first	cog resp first
Product-focus-ad	15 (25) ²	23 (30)	31 (27)	30 (32)
Self-focus-ad	24 (33)	15 (22)	12 (.23)	23 (29)
Self-focus-ad Pre-essay	42 (34) ¹	37 (33)	32 (32)	29 (38)
Self-focus-ad Post-essay	18 (27)	34 (34)	31 (28)	22 (27)

¹ In the Schema-consistent condition, the Self-focus-ad Pre-essay was significantly higher than the Product-focus-ad condition, $t(218) = 2.15, p < .05$ and the Self-focus-ad Post-essay condition, $t(218) = 2.15, p < .05$.

² Numbers in parentheses indicate standard deviation for that cell.

Note: The original ANOVA produced a main effect for Self-focus, $F(3, 218) = 3.15, p < .05$, whereby the Self-focus-ad Pre-essay (35%) had a significantly higher percent of Florida vacation imagery thoughts compared to the Self-focus-ad (19%), $p < .05$ and was directionally higher than the Self-focus-ad Post-essay (26%) and the Product-focus-ad (25%) conditions.

Table 15

Mean Number of Total Thoughts Mentioned on the Cognitive Response Measure
by Schema-match, Self-focus and Response Order

	Consistent Schema		Inconsistent Schema-	
	prd qst first	cog resp first	prd qst first	cog resp first
Product-focus-ad	5.9 (6.0) ¹ (1.8) ₂	7.3 (7.2) (3.4)	6.7 (7.4) (2.7)	7.6 (6.5) (4.5)
Self-focus-ad	7.4 (7.5) (5.0)	5.6 (6.4) (3.2)	6.7 (6.5) (3.0)	6.8 (6.6) (2.3)
Self-focus-ad Pre-essay	10.3 (7.3) (7.2)	8.5 (6.9) (3.8)	6.3 (6.7) (3.0)	8.5 (6.6) (4.1)
Self-focus-ad Post-essay	5.9 (6.3) (1.4)	7.8 (7.1) (4.0)	7.4 (6.8) (3.5)	6.9 (6.5) (4.1)

¹ Numbers in first parentheses indicate mean product evaluation for that cell.

² Numbers in second parentheses indicate standard deviation for total thoughts in that cell.

Table 16

Percent of Positive Thoughts Mentioned on the Cognitive Response Measure by Schema-match, Self-focus, and Response Order

	Consistent Schema		Inconsistent Schema-	
	prd qst first	cog resp first	prd qst first	cog resp first
Product-focus-ad	40 (39) ⁴	67 (31)	68 (38) ¹	63 (31)
Self-focus-ad	59 (36)	46 (40)	35 (33)	57 (25)
Self-focus-ad Pre-essay	73 (34) ^{2,3}	64 (31)	44 (34)	61 (33)
Self-focus-ad Post-essay	48 (33)	62 (37)	54 (31)	55 (33)

¹ In Product-focus-ad, Prod Eval First condition, the Schema-inconsistent cell was significantly higher than the Schema-consistent cell, $t(218) = 2.26, p < .05$.

² Within the Schema-consistent, Prod Eval First conditions, the Self-focus-ad Pre-essay cell was significantly higher than the Self-focus-ad Post-essay cell $t(218) = 1.98, p < .05$ and the Product focus-ad cell $t(218) = 2.66, p < .01$.

³ Additionally, within the Self-focus-ad Pre-essay, Prod Eval First conditions, the Schema-consistent cell was significantly greater than the Schema-inconsistent cell, $t(218) = 2.34, p < .05$.

⁴ Numbers in parentheses indicate standard deviation for that cell.

Table 17

Percent of Negative Thoughts Mentioned on the Cognitive Response Measure
by Schema-match, Self-focus and Response Order

	Consistent Schema		Inconsistent Schema-	
	prd qst first	cog resp first	prd qst first	cog resp first
Product-focus-ad	48 (36) ¹	25 (27)	20 (34)	22 (28)
Self-focus-ad	37 (35)	34 (36)	43 (34)	25 (29)
Self-focus-ad Pre-essay	14 (17)	24 (29)	35 (33)	28 (28)
Self-focus-ad Post-essay	39 (34)	26 (35)	23 (25)	31 (29)

1

Numbers in parentheses indicate standard deviation for that cell.

Table 18

Correlations between Affect Score and Product Evaluation by Self-focus andSchema-Match for Product Evaluation First Condition

		Product-focus-ad	Self-Focus-ad	Self-Focus-ad Pre-essay	Self-Focus-ad Post-essay
Schema Consistent Prod Eval First	positive affect score	$r = .76$ $p < .002$	$r = .70$ $p < .004$	$r = .26$ $p < .36$	$r = .07$ $p < .8$
	negative affect score	$r = -.22$ $p < .45$	$r = -.07$ $p < .81$	$r = -.58$ $p < .03$	$r = .08$ $p < .8$
Schema Inconsistent Prod Eval First	positive affect score	$r = .47$ $p < .08$	$r = .62$ $p < .01$	$r = .64$ $p < .01$	$r = .33$ $p < .23$
	negative affect score	$r = -.37$ $p < .19$	$r = -.20$ $p < .48$	$r = -.10$ $p < .72$	$r = -.31$ $p < .27$

Table 19

Percent of Negative Past Experience Thoughts on the Self-referencing essay by Schema-match, Self-focus and Response Order

	Self-focus-ad Pre-essay		Self-focus-ad Post-essay	
	Prod Eval First	Cog Resp First	Prod Eval First	Cog Resp First
Schema-consistent	10 (11) ¹	18 (18)	17 (26)	12 (12)
Schema-inconsistent	20 (19)	6 (12)	14 (13)	12 (14)

¹ Numbers in parentheses indicate standard deviation for that cell.

Table 20

Percent of Positive Past Experience Thoughts on the Self-referencing essay by Schema-match, Self-focus and Response Order

	Self-focus-ad Pre-essay		Self-focus-ad Post-essay	
	Prod Eval First	Cog Resp First	Prod Eval First	Cog Resp First
Schema-consistent	71 (17) ¹	59 (26)	57 (35)	61 (25)
Schema-inconsistent	55 (28)	63 (34)	52 (29)	62 (25)

¹ Numbers in parentheses indicate standard deviation for that cell.

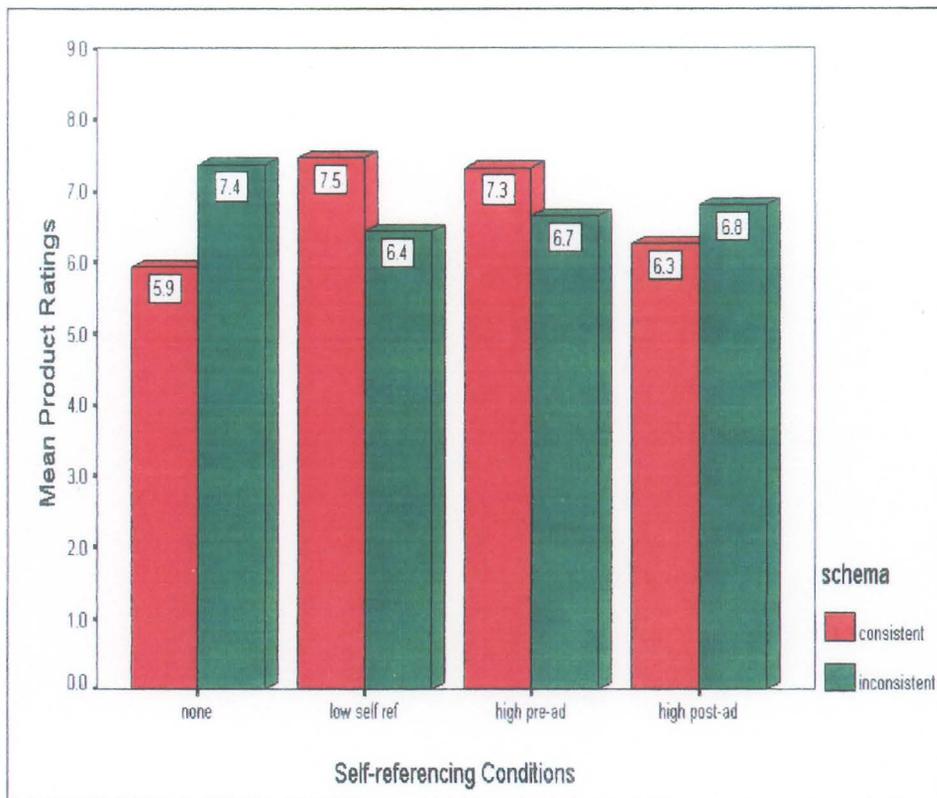


Figure 1. 2-way Interaction between Self-referencing and Schema-match for Product Evaluation First Condition

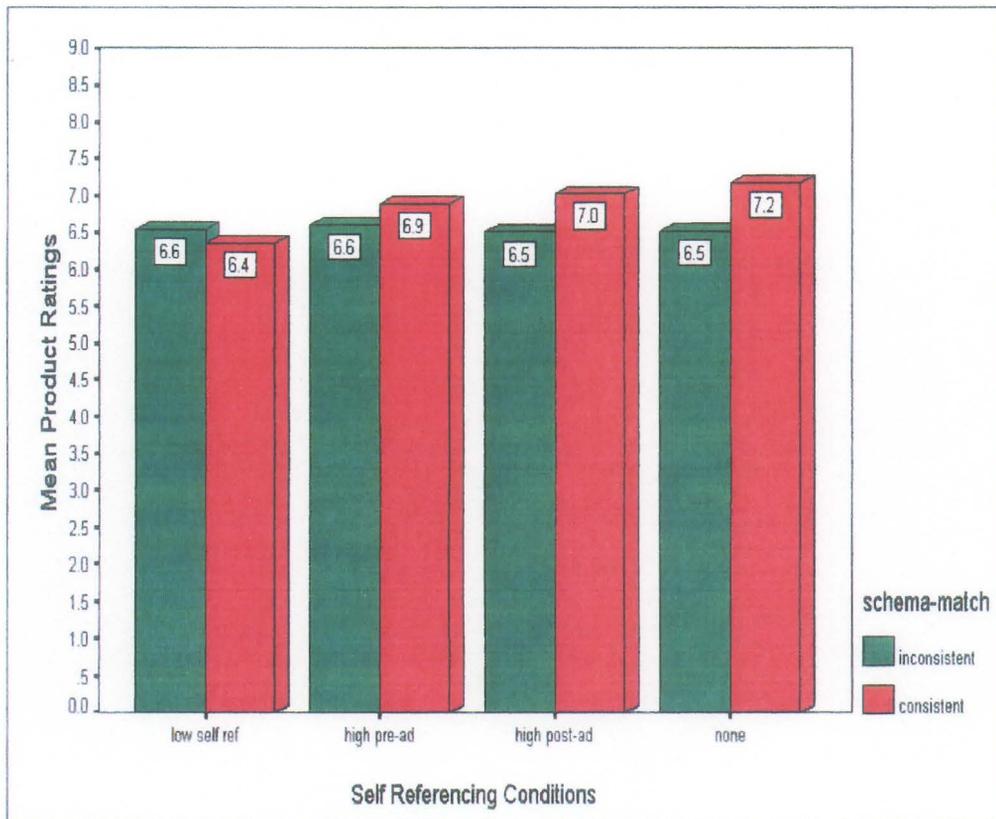


Figure 2. 2-way interaction between Self-referencing and Schema-match for Cognitive Response First Condition

Appendix A
Pilot Study Measure

Please read each question carefully. Answer each question as accurately and honestly as possible. All the information you provide will be held confidential. Thank you for your participation!

Name: _____

ID: _____

1. What is your age? _____
2. What is your gender? Female _____ Male _____
3. My student status is: Frshmn. _____ Soph. _____ Junr. _____ Senr. _____
4. Do you smoke at all? Yes _____ No _____
5. Have you ever been skiing? Yes _____ No _____
6. Have you ever been rock climbing? Yes _____ No _____
7. Do you drink alcohol? Yes _____ No _____

Please provide information on how you spend time on the following school breaks. Answer where you usually go (e.g., Northern VA, home) and what activities you participate in (e.g., watching tv).

5. Thanksgiving break

Where: _____

What: _____

6. Christmas break

Where: _____

What: _____

7. Springbreak

Where: _____

What: _____

8. Summer break

Where: _____

What: _____

If money was not a concern where would you like to go for these breaks?

9. Thanksgiving break _____

10. Christmas break _____

11. Springbreak _____

12. Summer break _____

For the following questions, circle the one best answer.

- 13. Have you ever been to Florida? Yes No (if no skip to question 18)
- 14. Ever go to Florida during spring break? Yes No
- 15. Ever go to Florida during Thanksgiving break? Yes No
- 16. Ever go to Florida during Christmas break? Yes No
- 17. Ever go to Florida during summer break? Yes No
- 18. Have you ever been to Europe? Yes No (if no skip to question 23)
- 19. Ever go to Europe during spring break? Yes No
- 20. Ever go to Europe during Thanksgiving break? Yes No
- 21. Ever go to Europe during Christmas break? Yes No
- 22. Ever go to Europe during summer break? Yes No
- 23. Have you ever been to Colorado? Yes No (if no skip to question 28)
- 24. Ever go to Colorado for spring break? Yes No
- 25. Ever go to Colorado for Thanksgiving break? Yes No
- 26. Ever go to Colorado for Christmas break? Yes No
- 27. Ever go to Colorado for summer break? Yes No

Please circle the one number that best reflects your answer on how typical each event is for college students. An event that is typical is one that college students usually participate in.

28. How typical do you think it is for college students to go to Florida during spring break?

1 2 3 4 5 6 7 8 9
 Not at all Very
 typical typical

29. How typical do you think it is for college students to go to Florida during Thanksgiving break?

1 2 3 4 5 6 7 8 9
 Not at all Very
 typical typical

30. How typical do you think it is for college students to go to Florida during Christmas break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

31. How typical do you think it is for college students to go to Florida during summer break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

32. How typical do you think it is for college students to go skiing in Colorado during spring break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

33. How typical do you think it is for college students to go skiing in Colorado during Thanksgiving break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

34. How typical do you think it is for college students to go skiing in Colorado during Christmas break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

35. How typical do you think it is for college students to go skiing in Colorado during summer break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

36. How typical do you think it is for college students to go to Europe during spring break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

37. How typical do you think it is for college students to go to Europe during Thanksgiving break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

38. How typical do you think it is for college students to go to Europe during Christmas break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

39. How typical do you think it is for college students to go to Europe during summer break?

1 2 3 4 5 6 7 8 9
Not at all Very
typical typical

List all the activities that you think are typical and those activities that are not typical during the following breaks. Typical activities are activities that college students usually engage in during the breaks. Not typical activities are activities that college students do not usually engage in during breaks.

40. Typical activities during spring break are:

41. Not typical activities during spring break are:

42. Typical activities during Thanksgiving break are:

43. Not typical activities during Thanksgiving break are:

44. Typical activities during Christmas break are:

45. Not typical activities during Christmas break are:

46. Typical activities during summer break are:

47. Not typical activities during summer break are:

Appendix B

Self-referencing Ad

Think back to your spring break, a time to relax from classes

The glorious sun, a road trip with your friends, partying late into the night

Make your next spring break in the beaches of Key West Florida



University Travels has a spring break package just waiting for you, that includes:

- reasonable rates & flexible installment plans
- roundtrip airfare from Roanoke
- one week in an ocean front hotel
- watersport activities, like scuba, sailing, skiing
- for party of 4 or more

Appendix B

Appendix C

Product Focus-ad



University Travels offers a spring break package in Key West, Florida that includes:

- reasonable rates & flexible installment plans
- roundtrip airfare from Roanoke
- one week in an ocean front hotel
- watersport activities like, scuba, sailing, skiing
- for party of 4 or more

Appendix C

Simani M. Price

2406 Ridge Road

Blacksburg, VA 24060

(540) 552-6472

Education

Doctor of Philosophy, Candidate, Virginia Tech, Psychology, May 1996.

Preliminary Exam, Virginia Tech, December, 1994. General Social Psychology, Research Methods and Statistics, Specialty area in Attitudes.

Master of Science, Virginia Tech, December 1993. Psychology.

Master of Public Administration, University of Kentucky, May 1989. Area of Concentration in Organizational Behavior.

Bachelor of Arts, University of Kentucky, May 1987. Double major in Psychology and Political Science, Honors Program Graduate.

Current Research Activities

Persuasion and Advertising. Reciprocal process of affect and cognition in self-referencing advertisements. The persuasive impact of autobiographical memories ads: Schema-triggered affect or episodic self-referencing. Dissertation research.

Social Marketing and Health behavior. Behavior and attitude change in fiber consumption through the use of individualized brochures. Behavioral decision-making and attitude change models. Joint research program with David Brinberg, Ph.D, Dept. Head and Professor of Marketing, VPI&SU.

Psychology of Trauma. Beliefs about adjustment and the future likelihood of negative life events. Layers of protection from potential threats through social comparison processes. Joint research program with Danny Axsom, Ph.D, Associate Professor of Social Psychology, VPI & SU.

Professional Experience

Marketing Consultant, Presently on Contract with the Business Technology Center.

- Conduct survey research studies for multiple organizations
- Conduct in-depth interviews and provide statistical analysis
- Develop marketing strategies for target population
- Content areas of research include health care and education

Teaching Assistant, Department of Psychology, Virginia Tech, 8/93 - 5/95.

- Teach social psychology laboratory research methods course
- Train students on statistical software
- Assist the adv social and industrial/organizational psychology course faculty
- Lead class discussions and reviews

Interviewer, Decision Data Collection, McLean, VA, 6/94 - 8/94.

- Collect and analyze survey data for marketing research firm
- Conduct telephone and on-site interviews with general population and organizations

Research Associate, The Council of State Governments, Lexington, KY, 8/89 - 9/91.

- Information dissemination to national organization of state officials
- Research areas include, economic dev, telecommunications and environmental waste
- Conduct surveys, prepare reports and market state programs and initiatives
- Design and maintain computer database applications
- Conference planning and coordination
- Write and edit association newsletters

Counselor I, Lexington Spouse Abuse Shelter, Lexington, KY, 12/86-12/88; 5/91 - 8/91.

- Crisis line and referral counselor for victims of domestic violence
- Speak to community and professional groups on domestic violence
- Assist legal and hospital advocate with implementing programs

Research Assistant, Martin School of Public Administration, UK, 8/87 - 8/88.

- Survey design and research
- Preparation of literature reviews
- Assist faculty and students in computer applications

Analyst Intern, Council on Higher Education, Kentucky, 1/89 - 8/89.

- Prepare reports on accountability in higher education
- Evaluation of institutional indicators of growth and decline
- Attend legislative sessions relating to higher and secondary education

Research Intern, Center for Health and Regulation, 9/88 - 12/88.

- Answer inquiries regarding health regulation
- Prepare surveys and reports affecting health care workers

Computer Programs

SPSSPC+	Lotus	Q&A database	WordPerfect
SPSSwin	Quattro Pro	Liseral 8	

Unpublished Manuscript

Price, S. M. (1993) *The Effect of Rumination on Beliefs About Adjustment to Future Negative Life Events*. Master's Thesis, Virginia Tech, Blacksburg, Virginia.

Publications

Price, S., Axsom, D. & Coupey, E. The Persuasive Impact of Autobiographical Memories Ads: Episodic Self-referencing or Schema-triggered Affect? Presently under review for *Advances in Consumer Research*.

Axsom, D., Blanton, H. C., Watts, M. L. & Price, S. M. Beliefs about unique invulnerability to the effects of negative life events, *Journal of Social and Clinical Psychology*, (In Press).

Price, S. M. (June, 1991). California's Telecommuting Pilot Project, Innovations Report, The Council of State Governments, 1-8.

Price, S. M. & Marshall, K. (June, 1990). Telecommuting: Transporting Ideas Instead of People, Backgrounder Series Monograph, The Council of State Governments, 1-12.

Price, Simani M. (March, 1990). Telecommunications and State Economic Development, Backgrounder Series Monograph, The Council of State of Governments, 1-8.

O'Sullivan, C., Chen, A., Mohapatra, S. (Price), Siegelman, L., and Lewis, E. (1988). The Politics of Smooth Sounding Names, Journal of Applied Social Psychology, 18, 1094-1106.

Presentations

Price, S., Axsom, D. & Coupey, E. (Presently under review). *The Persuasive Impact of Autobiographical Memories Ads: Episodic Self-referencing or Schema-triggered Affect?* Competitive paper presentation at the Association for Consumer Research in Tucson, AZ.

Price, S. M., & Axsom, D. (July, 1994). *Rumination about adjustment to future negative life events*, Poster Presentation at the American Psychological Society in Washington, DC.

Price, S. M. (April, 1994). *The Effect of Rumination on Beliefs About Adjustment to Future Negative Life Events*, Poster Presentation at the Graduate Student Assembly, Virginia Tech, Blacksburg, VA.

Price, S. M., Blanton, H., C., & Axsom, D. (March, 1993). *Layers of Protection from the Treat of Traumatic Events*, Poster Presentation at the Southeastern Psychological Association in Atlanta, GA.

Price, S. M., Crawford, H. J., Plantier, M. E., Jones, E. P. (October, 1992). *Attentional Correlates of Hypnotic Susceptibility*, Paper presented at the Society for Clinical and Experimental Hypnosis in Washington, DC.

Professional Memberships

American Psychological Society
Society for Personality and Social Psychology
Southeastern Society of Social Psychologists
Society of Industrial and Organizational Psychology
Society for Consumer Psychology

