This research examined attitudes toward condom purchase. Recent evidence is mixed. While some studies show attitudes have become more positive, other studies suggest that negative attitudes still dominate. Our own research examined the possibility that such attitudes may be ambivalent, meaning that the same individuals may simultaneously hold both positive and negative beliefs about condom purchase. The results confirmed this prediction. Study 1 showed that condom purchase evoked a combination of both negative beliefs about lifestyles and positive beliefs concerning the personal confidence of the consumer. These beliefs had competing effects on more global attitudes toward condom purchase. Specific beliefs about condoms were shown to provide the best indication of whether participants actually used condoms. Study 2 employed standard measures of attitudinal ambivalence. The results conceptually replicated the finding that ambivalence was greater for those who purchased condoms compared to controls.

Research (e.g., Fisher & Fisher, 1992; Raghubir & Menon, 1998; Sheeran, Abraham, & Orbell, 1999) has shown that social and psychological barriers to condom use pose a serious threat to the prevention of HIV and many other sexually transmitted diseases (STDs). One of these barriers is the stigma that historically has been associated with condom use (Gamson, 1990; Valdiserri, 1988). According to Lupton (1994), “First used as a prophylactic against sexually
transmitted disease, and traditionally worn in encounters with prostitutes, the condom before the advent of AIDS had acquired a negative image as a symbol of furtive and socially unacceptable sexuality” (p. 304). These perceptions are thought to contribute to negative attitudes toward condoms, as well as to the reluctance of individuals to acquire, carry, and use them (Helweg-Larsen & Collins, 1994; Sacco, Rickman, Thompson, Levine, & Reed, 1993).

There has been a great deal of research concerning the use of condoms over the past decade or more. This research has examined a wide variety of issues including the demographics of condom use, attitudes toward condoms, perceptions of condom users, and the effectiveness of intervention programs aimed at increasing the use of condoms. In contrast, much less research has examined the purchase of condoms. This is somewhat surprising, considering that condom purchase is an important area of investigation in its own right and that purchase is a common antecedent to the use of condoms. The existing research on purchase behavior has focused largely on the effects that embarrassment can have in making consumers reluctant to buy condoms (Dahl, Gorn, & Weinberg, 1998; Dahl, Manchanda, & Argo, 2001; Helweg-Larsen & Collins, 1994; Miller, 1996; Sable & Libbus, 1998). For instance, Dahl et al. (1998) found that condom purchase was commonly associated with embarrassment (approximately 60% of their sample reported some level of embarrassment). Additional studies have suggested that this embarrassment may be a result of concerns about the social context of condom purchase, and violations of privacy in particular. Specifically, Dahl et al. (2001) showed that embarrassment was greater when condoms were purchased in the presence of a social observer than when no observer was present. Overall, there seems to be reasonable evidence that embarrassment is one of the factors that limits condom purchase.

The current research focuses on the nature of attitudes concerning condom purchase and examines whether such perceptions might play a role in determining whether consumers actually purchase and use condoms. We begin by briefly reviewing past research concerning attitudes about condom use, which provides a useful background for understanding what factors might influence purchase behavior. We then introduce the idea that current attitudes toward condoms are somewhat mixed in valence and suggest that this may be partly a result of the fact that such attitudes are ambivalent. With this background, we conducted two studies that examine the role of ambivalence in evaluations of condom purchase, as well as discuss implications for behavior relating to condoms.

Attitudes and Condom Use

Over the past two decades, health organizations and government agencies have committed significant resources to educational efforts and social marketing campaigns aimed at altering negative attitudes toward condoms. Initial evaluations of
these programs provide some evidence that attitudes toward condoms are often more positive following intervention (Fisher, Fisher, Misovich, Kimble, & Malloy, 1996; Sanderson & Jemmott, 1996; Schuster, Bell, Berry, & Kanouse, 1998), which is often associated with greater condom use or intended use (Fisher et al., 1996; Sanderson & Jemmott, 1996). These intervention studies, therefore, suggest some amount of success in increasing condom use for social programs that focus on creating more positive attitudes.

The extent to which more positive attitudes will actually lead to behavior change is also likely to depend on perceptions of the social consequences attached to engaging in such behavior (Ajzen & Fishbein, 1977). Males often think proposing the use of a condom might cause their partners to perceive them negatively, and ultimately diminish their chance of having sexual intercourse (Bryan, Aiken, & West, 1999). Many consumers who maintain positive attitudes toward condoms may still fail to suggest their use at the time of a sexual encounter because of the concern that such behavior could convey a negative social impression to others (Sacco et al., 1993). The findings are similar for perceptions of people who carry condoms. Fear of negative social impressions might inhibit carrying condoms (Wilson, Jaccard, Endias, & Minkoff, 1993). Men and women appear to be concerned that their reputations might suffer if they are seen carrying condoms (Loxley, 1996), partly because this signals a promiscuous lifestyle (Hillier, Harrison, & Ware, 1998). In our research focusing on condom purchasers, it seems reasonable that, like carrying condoms, purchasing condoms would signal an intention to engage in sexual activity. Thus, perceptions of people carrying and purchasing condoms are likely to be similar.

Intervention programs also have attempted to build perceptions of self-efficacy or self-confidence in order to counteract any negative effects that social pressure might have (Fisher et al., 1996; Jemmott & Jemmott, 1992; Sanderson & Jemmott, 1996). For example, an intervention by Sanderson and Jemmott attempted to build the self-confidence of individuals in communicating with potential sexual partners about condom use through a role-playing exercise. Increased self-confidence encourages individuals to resist pressure from partners who prefer not to use condoms (Fisher & Fisher, 1992; Wulfert & Wan, 1993), as well as helping individuals to cope with any negative social impressions that might be related to condom use (Sherman, Nelson, & Steele, 2000; Steele, 1988). Research has shown that higher personal confidence, in fact, is associated with reports of greater condom use (Cecil & Pinkerton, 1998; McNair, Carter, & Williams, 1998; Sanderson & Jemmott, 1996).

It is important to note that while some studies show that social programs have been successful in creating more positive condom attitudes, evidence regarding

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3Both use of condoms and carrying condoms involve potential interaction with other people. Thus, perceptions of the users and carriers would likely overlap.
the overall valence of attitudes toward condoms is more mixed. Some studies have suggested that attitudes toward condoms are generally positive (Minoia & Rose, 1996; Murphy & Boggess, 1998; Richardson, Beazley, Delaney, & Langille, 1997; Thompson, Anderson, Freedman, & Swan, 1996), whereas other studies have indicated that negative perceptions of condoms are still the norm (Hetherington, Harris, Bausell, Kavanagh, & Scott, 1996; Lewis, Malow, & Ireland, 1997; Nguyen, Saucier, & Pica, 1996; Seal & Palmer-Seal, 1996). Moreover, careful examination of this literature shows that these studies have employed a wide range of evaluative measures, which differ in terms of the level of measurement used. Specifically, some studies have employed relatively global measures of positiveness–negativeness toward condom use (e.g., good vs. bad), while other studies have employed measures of more specific evaluative beliefs (e.g., promiscuous, confident). The possibility of seeming promiscuous is a particular concern for those who maintain negative views toward condoms (De Wit, Victoir, & van den Bergh, 1997; Hillier et al., 1998; Loxley, 1996). In summary, the literature includes a mixture of findings that show perceptions of condom use can be positive or negative, and we suggest that these conclusions may depend partly on differences in the particular dependent measures employed and the level of measurement associated with these measures (global evaluations vs. specific beliefs).

**Attitudinal Ambivalence**

We suggest that ambivalence (Katz, 1981) concerning the use of condoms may play some part in the conflicting results that have been observed in the existing literature. *Attitudinal ambivalence* is a structural property of evaluative judgment that arises when an individual holds incongruent beliefs about an attitude object (Thompson, Zanna, & Griffin, 1995). For instance, someone who holds an ambivalent attitude toward visiting the dentist may believe that such visits would help improve the health of their teeth, but the same individual may not like the time, inconvenience, or physical discomfort that is also involved.

The possibility that attitudes can be ambivalent follows from the well-accepted idea that global attitudes often reflect a combination of more specific structural beliefs or feelings (e.g., Anderson, 1962; Fishbein & Ajzen, 1975; Rosenberg & Hovland, 1960). When inconsistencies that exist between these more basic elements become salient, individuals are likely to experience ambivalence or conflict in their evaluations. Although people are often highly motivated to resolve inconsistencies in the structure of their beliefs (e.g., Festinger, 1957; Heider, 1946), the existing evidence suggests that attitudinal ambivalence may be relatively common (Kaplan, 1972). Furthermore, ambivalent attitudes are said to be rather unstable over time because they can be influenced easily by situational factors that temporarily increase the salience of either the positive or negative
beliefs that underlie global evaluations (Bargh, Chaiken, Govender, & Pratto, 1992). For this reason, ambivalent attitudes also are believed to be relatively poor predictors of behavior (Eagly & Chaiken, 1993).

In the context of condom use, evaluative ambivalence might help to explain why some studies show that negative evaluations of condom users still persist, while other studies show that such evaluations have become more positive. Rather than being uniformly positive or uniformly negative about the use of condoms, the ambivalence explanation suggests that many people may maintain both positive and negative beliefs simultaneously. According to Helweg-Larsen and Collins (1994, p. 225), it may be that condom use evokes both “negative stigmas” and “positive halos.” Such ambivalence is also likely to lead to relatively unstable global evaluations of condom use since ambivalent evaluations are influenced easily by factors that make relatively positive versus relatively negative beliefs more salient in the judgment context (Eagly & Chaiken, 1993). The notion of ambivalence also might provide further insight into the question of why attitudes toward condoms are not always predictive of actual behavior.

We used the ideas concerning condom use as the basis for making predictions concerning attitudes and perceptions for the purchase of condoms. In general, we predict that attitudes toward condom purchase will be somewhat ambivalent in the sense that conflict will exist in the underlying beliefs relating to condom purchase. In order to test these ideas, we conducted two studies in which participants read a brief scenario and were asked to formulate evaluations of someone purchasing condoms. Our first study tested for ambivalence regarding condom purchase at the level of specific positive and negative beliefs related to condom purchase, and examined whether these beliefs would have competing effects on more global evaluations. This study also examined the implications that an ambivalent attitude structure might have for actual condom use. The second study sought to confirm that attitudes toward condom purchase were ambivalent relative to attitudes toward other types of purchases using standardized measures of attitudinal ambivalence.

Study 1

Our first study examines a number of specific positive and negative beliefs that seem likely to serve as a source of ambivalence for evaluations of condom purchase. Based on previous research concerning perceptions of condom use, we predict that condom purchase will be viewed positively in the sense that it should convey an image of personal confidence (consistent with modern communication messages), but at the same time this behavior also might convey the negative stigma of a sexually promiscuous lifestyle. In addition, standard attitude measures are included as well as open-response evaluations in order to examine
the effects that conflicting beliefs about condom purchase have on more global evaluations of condom purchase. Finally, a behavioral measure of condom use is used to examine whether global evaluations or specific beliefs will be better predictors of behavior.

Method

Mason Haire shopping-list technique. When designing our experiments, we considered a number of methodological issues relating to past studies that have investigated attitudes toward condoms. For instance, many intervention studies have used within-subject, before–after research designs. Furthermore, most studies overtly ask participants about their views of condoms. However, these procedures are potentially vulnerable to a social responsibility bias that may cause people to exaggerate their approval of condoms (Dahl, Gorn, & Weinberg, 1997; Raghubir & Menon, 1996). Because of this concern, we used a less obtrusive method of getting participants to make evaluations about condom purchase known as the Mason Haire shopping-list technique (Haire, 1950).

The Mason Haire technique was developed originally in the early 1950s to investigate negative perceptions of housewives who purchased instant coffee (Haire, 1950; see also Webster & Von Pechmann, 1970). The basic procedure involves giving participants a shopping list that contains the target item (in addition to a number of other products) and then asking them to develop impressions of the person who owns the list. The advantage is that participants may be more likely to express their true thoughts and evaluations using this relatively subtle procedure, compared to when they are asked directly about such perceptions. Furthermore, responses using the Mason Haire technique also have been shown to predict the respondents’ own purchase behavior (Haire, 1950).

Participants and design. Participants were 290 university students (135 male, 155 female) who received course credit for their participation. Each person read a brief scenario describing a shopping trip, which was varied according to a 3 × 2 between-subjects experimental design. The two experimental factors were the content of a shopping list described in the scenario (control vs. condom vs. cigarette) and the gender of the person said to own the shopping list. The cigarette condition was included so that there would be a comparison group in which both specific and global perceptions were likely to be uniformly negative. The gender variable was included because some studies have suggested that this is important in determining perceptions of condom use (Hillier et al., 1998; Loxley, 1996; Sacco et al., 1993). These studies have provided evidence that women feel more disadvantaged and uncomfortable when purchasing condoms (Hillier et al., 1998). Both specific attributional measures as well as more global evaluations of the shopping-list owner were used as the main dependent variables.
Procedure. Participants read a scenario in which they were told to imagine they had found a shopping list on the ground in a local retail mall. Gender was varied by directly telling participants that the owner of the shopping list was either male or female. The content of the shopping list described in the scenario was also manipulated. In the control condition, items on the shopping list consisted of pens, gum, socks, milk, and a magazine. Additional items were added in order to create a shopping list that also included condoms, and another list that included cigarettes (but not condoms). Thus, the control shopping list had five items, whereas the condom and cigarette lists had six items each. The scenario concluded by asking participants to take a few minutes to think about the personality traits, values, and lifestyles that might best describe the owner of the shopping list.

Measures. After reading the scenario, participants completed a questionnaire containing the dependent measures. They first wrote their overall impressions of the shopping-list owner by describing what the person would be like in a general sense. Two judges classified these verbal impressions into positive (e.g., “well liked,” “the type of guy who is popular”), negative (e.g., “I wouldn’t like her,” “poor impression”), or other categories (e.g., “she is probably in her 20s”). Inter-rater reliability was over 90%, with disagreements resolved through discussion with the first author.

Of the 612 valenced impressions, 65.5% were positive and 34.5% were negative in valence. The number of negative statements made by each person was subtracted from the positive statements to create an overall verbal impression score. Participants next rated a battery of items that served as the main measure of global attitude toward the shopping-list owner, including: likable, nice, cold, and bad person. Each item was rated using a 6-point scale ranging from -3 (disagree) to +3 (agree). To facilitate interpretation, each rating was rescaled from 1 to 6, and negative items were reverse scored. The scores were averaged to form an overall attitude index ($\alpha = .70$).

Participants then completed a second battery of items concerning more specific beliefs. These focused largely on perceptions of confidence and promiscuity, since the literature often has associated these perceptions with condom use. Specifically, participants rated the likelihood that the owner of the shopping list was confident, reckless, insecure, immoral, uptight, and promiscuous. Ratings for each attribute were made on a 6-point scale ranging from -3 (very unlikely) to +3 (very likely). These responses were also rescaled from 1 to 6. A factor analysis indicates that these items were related to two underlying dimensions. Items that loaded onto the first dimension (promiscuous, reckless, and immoral) were averaged to construct an index of negative lifestyle attributions ($\alpha = .73$). Items loading onto the second dimension were averaged to form an index labeled confidence attributions ($\alpha = .66$), which included confident, uptight (reverse scored), and insecure (reverse scored) ratings. Finally, participants indicated whether they actually used condoms (Yes or No).
Results and Discussion

Specific beliefs. An ANOVA was computed for the belief indexes, with list content and gender of the owner as the two independent factors. The ANOVA for beliefs about confidence shows a significant main effect for the content factor, $F(2, 284) = 17.87, p < .001$; as well as a significant Content × Gender interaction, $F(2, 284) = 4.23, p < .05$. Means are provided in Table 1. Interestingly, the owner of the condom shopping list was rated as more confident ($M = 4.58$) than were the owners of either the cigarette shopping list ($M = 3.84$), $F(1, 288) = 33.64, p < .001$; or the control shopping list ($M = 4.04$), $F(1, 288) = 18.40, p < .001$. There were no differences in confidence attributions between the control and cigarette conditions, $F(1, 288) = 2.46, ns$. The interaction with gender shows that females who purchased cigarettes were rated significantly lower in confidence ($M = 3.60$) than were males with the cigarette list ($M = 4.10$), $F(1, 288) = 6.45, p < .05$. While this interaction suggests that gender is relevant to perceptions of cigarettes, there were no significant gender effects for condom (or control) purchases.

The ANOVA for negative lifestyle beliefs produced only a significant main effect of list content, $F(2, 284) = 17.69, p < .001$. Further comparisons show that

Table 1

<table>
<thead>
<tr>
<th>Experimental condition</th>
<th>Coded verbal impressions</th>
<th>General impression ratings</th>
<th>Confidence ratings</th>
<th>Negative lifestyle ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control total</td>
<td>$M = 1.29, SD = 1.85$</td>
<td>$M = 4.72, SD = 0.57$</td>
<td>$M = 4.04, SD = 0.83$</td>
<td>$M = 2.81, SD = 1.02$</td>
</tr>
<tr>
<td>Male only</td>
<td>$M = 1.35, SD = 2.06$</td>
<td>$M = 4.77, SD = 0.56$</td>
<td>$M = 4.03, SD = 0.89$</td>
<td>$M = 2.93, SD = 1.06$</td>
</tr>
<tr>
<td>Female only</td>
<td>$M = 1.24, SD = 1.64$</td>
<td>$M = 4.67, SD = 0.58$</td>
<td>$M = 4.05, SD = 0.78$</td>
<td>$M = 2.70, SD = 0.96$</td>
</tr>
<tr>
<td>Condoms total</td>
<td>$M = 0.99, SD = 2.14$</td>
<td>$M = 4.54, SD = 0.71$</td>
<td>$M = 4.58, SD = 0.86$</td>
<td>$M = 3.20, SD = 0.93$</td>
</tr>
<tr>
<td>Male only</td>
<td>$M = 0.68, SD = 2.31$</td>
<td>$M = 4.44, SD = 0.75$</td>
<td>$M = 4.47, SD = 0.96$</td>
<td>$M = 3.25, SD = 0.92$</td>
</tr>
<tr>
<td>Female only</td>
<td>$M = 1.28, SD = 1.94$</td>
<td>$M = 4.64, SD = 0.67$</td>
<td>$M = 4.69, SD = 0.75$</td>
<td>$M = 3.16, SD = 0.95$</td>
</tr>
<tr>
<td>Cigarettes total</td>
<td>$M = -0.41, SD = 1.97$</td>
<td>$M = 4.16, SD = 0.81$</td>
<td>$M = 3.84, SD = 0.97$</td>
<td>$M = 3.64, SD = 0.92$</td>
</tr>
<tr>
<td>Male only</td>
<td>$M = -0.11, SD = 2.00$</td>
<td>$M = 4.31, SD = 0.62$</td>
<td>$M = 4.10, SD = 0.93$</td>
<td>$M = 3.61, SD = 0.82$</td>
</tr>
<tr>
<td>Female only</td>
<td>$M = -0.69, SD = 1.92$</td>
<td>$M = 4.02, SD = 0.94$</td>
<td>$M = 3.60, SD = 0.96$</td>
<td>$M = 3.67, SD = 1.01$</td>
</tr>
</tbody>
</table>
the condom list owner was rated significantly higher on the negative lifestyle index than was the control list owner, $F(1, 288) = 8.12, p < .01$. The cigarette shopping-list owner received higher scores on the negative lifestyle index ($M = 3.64$) than did the owners of either the condom list ($M = 3.20$), $F(1, 288) = 9.86, p < .01$; or the control list ($M = 2.81$), $F(1, 288) = 35.76, p < .001$.

Overall, these findings suggest that condom purchase led to the belief that the owner was both a confident person and engaged in a negative lifestyle (compared to controls). Further analyses were conducted in order to determine whether it was the same individuals who held these contradictory beliefs. A split using the median values of the confidence and negative lifestyle ratings in the control condition was used to divide participants into groups that were relatively high versus low on each of the belief measures. This enabled us to identify whether each participant simultaneously made both positive and negative attributions relating to confidence and promiscuity, which is consistent with the main notion of ambivalence. Table 2 provides frequency counts for each shopping-list condition. As expected, the proportion of participants who made both positive confidence attributions and negative lifestyle attributions was highest in the condom condition (45.4%), and significantly larger than the proportion found in the control.
(19.2%, $Z = 3.93, p < .001$) or cigarette conditions (28.7%, $Z = 2.37, p < .01$). In contrast, the majority of participants in the cigarette condition (57.4%) consistently made more negative attributions on both the confidence and lifestyle dimensions. Overall, these findings provide more direct evidence that beliefs about condom purchase were truly ambivalent (participants in the condom condition made both more positive and more negative attributions, compared to controls), whereas the beliefs concerning cigarette purchases were uniformly negative.

**Overall attitudes.** The overall attitude indexes also were investigated using an ANOVA, with list content and gender of the owner as the two independent factors (Table 1). The ANOVAs reveal a significant shopping-list main effect on both measures, $F(2, 284) = 15.87$ and 19.76, $ps < .001$, respectively. Further comparisons indicate that the control and condom lists were not significantly different, $F(1, 288) = 3.13, ns$; whereas the owner of the cigarette list was evaluated more negatively ($M = 4.15$) than were the owners of either the condom list ($M = 4.54$), $F(1, 288) = 14.29, p < .001$; or the control list ($M = 4.72$), $F(1, 288) = 31.02, p < .001$. The same pattern was observed for coded responses: Verbal impressions for the owners of the condom and control lists did not differ significantly, $F(1, 288) = 1.14, ns$; while the owner of the cigarette list ($M = -0.41$) was evaluated more negatively than were either the owner of the condom list ($M = 0.09$), $F(1, 288) = 23.81, p < .001$; or the owner of the control list ($M = 1.29$), $F(1, 288) = 35.64, p < .001$.4

**Regression analyses.** Regression analyses were conducted to test the relationship between the specific confidence and negative lifestyle beliefs concerning condom purchase, as well as overall attitudes (Table 3). Both negative lifestyle and confidence scores should be significant predictors of overall attitudes in the condom condition, as conceptually one would expect these beliefs to drive more global evaluations. These regressions explained a significant amount of variance for both the verbal response measure ($R^2 = .24$), $F(2, 94) = 14.41, p < .001$; and the attitude ratings ($R^2 = .32$), $F(2, 94) = 22.17, p < .001$. In both instances, the negative lifestyle index had a significant negative influence on overall attitudes: ratings, $t(95) = -5.27, p < .001$; and verbal response, $t(95) = -4.89, p < .001$. The

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4 Verbal impressions also were coded for the specific beliefs of interest (i.e., negative or positive lifestyle attributions and confidence attributions). This coding indicates a relatively small number of specific beliefs. This is not surprising, given that the open-response question asked for general evaluations of the shopper, rather than specific beliefs. We note, however, that the condom shopping-list owner received significantly more negative lifestyle attributions ($M = -0.08$) than did the owner in both the control condition ($M = 0.03$), $F(1, 288) = 9.80, p < .01$; and the cigarette condition ($M = 0.00$), $F(1, 288) = 5.11, p < .05$. Marginal differences also were shown for confidence attributions: condom, $M = 0.12$; control $M = 0.04$; cigarette $M = 0.03$; condom versus control, $F(1, 288) = 2.25, p < .10$; condom versus cigarette, $F(1, 288) = 2.66, p < .10$. The
PROMISCUOUS OR CONFIDENT?

Table 3

Regression Analyses: Condom Shopping List

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall impression index</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifestyle index</td>
<td>-.35</td>
<td>-5.27</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Confidence index</td>
<td>.23</td>
<td>3.20</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Multiple $R^2 = .32$, $F(2, 94) = 22.17$, $p &lt; .001$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coded verbal impression index</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifestyle index</td>
<td>-.45</td>
<td>-4.89</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Confidence index</td>
<td>.13</td>
<td>1.44</td>
<td>.16</td>
</tr>
<tr>
<td>Multiple $R^2 = .24$, $F(2, 94) = 14.41$, $p &lt; .001$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Confidence index had a positive impact on attitudes: ratings, $t(95) = 3.20$, $p < .01$; and verbal responses, $t(95) = 1.44$, $p < .20$.

Condom use. Self-reports of current condom use by participants in the condom condition were dummy coded (0 = Yes, 1 = No); and point biserial correlations were computed between this measure, negative lifestyle attributions, confidence attributions, and global attitude ratings. Interestingly, the lifestyle attribution measure was a significant predictor of reported condom use ($r = .21$, $p < .05$). The stronger the negative lifestyle attributions made by participants, the less likely they were to report using condoms themselves. Confidence attributions, global attitude ratings, and verbal evaluations were not related significantly to condom use ($r_s = .03$, .15, and -.11, ns). Overall, only negative attributions toward condom purchase predicted actual condom use. More global evaluations of condom purchase were relatively poor predictors of behavior, presumably because of the ambivalence associated with these evaluations.

Summary

The results of our first study suggest that the overall impressions of condom purchase were relatively neutral compared to controls, and even somewhat positive relative to the purchase of cigarettes. In and of themselves, these findings

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5 For the impression ratings, regressions utilizing negative lifestyle and confidence ratings as predictor variables were shown to be significant for the control and cigarette conditions ($R^2 = .26$ and .11, respectively). In contrast, regressions involving verbal impressions as the dependent variable were not significant for the control and cigarette conditions ($R^2 = .06$ and .03, respectively).
seem encouraging, since they suggest that condom purchase may no longer be evaluated negatively as far as overall impressions are concerned. However, the specific beliefs that underlie these more general evaluations show that participants were not simply neutral about condom purchase, but rather there were indications of ambivalence toward condoms. As predicted, condom purchase was seen as both more positive and more negative (relative to controls) with respect to the specific beliefs evoked by this behavior. Furthermore, there was direct evidence to suggest that it was the same individuals who made both positive and negative attributions for condom purchase (again relative to controls). This means that while control and condom purchases were similar in terms of the global evaluations involved, the pattern of beliefs that underlie these evaluations was strikingly different. This study also specifically identified negative lifestyles and personal confidence as a source of conflict underlying ambivalence toward those who purchase condoms. Finally, specific beliefs about promiscuity were the best predictors of participants’ own behavior concerning the use of condoms, while general impressions were not good predictors of behavior.

Study 2

The second study was conducted in order to re-examine the difference between condom purchase and control purchase using more standardized measures of ambivalence. The dependent variables included in Study 1 were based on the kinds of measures that typically are used in the condom literature. This was necessary to show that the mixed conclusions in the existing literature for the valence of evaluations toward condoms may be explainable in terms of the level of measurement employed. The results of Study 1 suggest that some contradiction existed in the valence of responses measured at the level of specific beliefs about condom purchase, and that these beliefs had competing effects on more global evaluations. These results were interpreted to be consistent with an ambivalent attitude structure. However, it was desirable to get more direct evidence to validate this interpretation. Study 2 uses a number of standardized measures of attitudinal ambivalence in order to replicate conceptually the main findings in our initial study, and to verify further that attitudes toward condom purchase are in fact ambivalent.

Method

Participants and design. Participants were 69 university students (31 male, 38 female) who received course credit for their participation. The second study utilizes a 2 × 2 between-subjects experimental design in which the content of a shopping list described in the scenario (control vs. condom) and the gender of the person said to own the shopping list are the manipulated factors. The procedure utilized in the second study is identical to that employed in the first study. The
central difference in the second study is in the dependent measures employed; namely, direct measures of ambivalence (Priester & Petty, 2001; Thompson et al., 1995) for impressions of the shopping-list owner were used as the main dependent variables.

**Measures.** After reading the scenario, a questionnaire containing the dependent measures was completed. Participants were asked to indicate their reaction to the owner of the shopping list by completing two standard measures of attitudinal ambivalence. This measurement approach differs from the classic Mason Haire study, which used an open-response, thought-listing measure.

The first ambivalence measures we used followed the procedure of Thompson et al. (1995). Participants were asked first to rate the positive qualities of the shopping-list owner, while ignoring any negative qualities. Specifically, they rated how positive and favorable their impressions of the target person were, using 4-point scales ranging from 1 (not at all) to 4 (extremely; \(\alpha = .77\)). Participants were then instructed to ignore any positive qualities of the shopping-list owner, and complete a set of negative impression ratings. These included perceptions of how negative and unfavorable the target was, and these items were rated on a 4-point scale ranging from 1 (not at all) to 4 (extremely; \(\alpha = .77\)).

An index of implied ambivalence was calculated by computing the absolute difference between the positive and negative ratings and subtracting this from the average of the positive and negative ratings,

\[
\frac{(P + N)}{2} - |P - N|
\]

This formula accounts for the absolute magnitude of both the positive and negative ratings, as well as the level of consistency between these ratings (see Thompson et al., 1995, for a detailed description). Higher scores indicate greater ambivalence toward the target.

The second measure of ambivalence was taken from Priester and Petty (2001) and dealt with the level of subjective ambivalence experienced when forming impressions of the shopping-list owner. Specifically, participants were asked to rate whether they experienced no indecision versus maximum indecision; whether they experienced no conflict versus maximum conflict; and whether their reaction was completely one-sided versus completely mixed. These items were rated using 7-point scales ranging from -3 (no decision, no conflict, one sided) to +3 (maximum indecision, maximum conflict, completely mixed). Responses were averaged to construct an index of felt ambivalence (\(\alpha = .69\)) in which higher scores indicate greater ambivalence.

**Results and Discussion**

Both measures of ambivalence were investigated using a two-way ANOVA, with shopping-list content and gender of the owner as the independent factors.
The ANOVA for the implied ambivalence scores shows only a significant main effect for the content factor, $F(1, 65) = 11.97, p < .001$. Participants who rated the owner of the condom shopping list had higher ambivalence scores than did those who rated the owner of the control shopping list ($M = 1.68$ vs. 1.14). The felt ambivalence index also shows a significant main effect for the content factor, $F(1, 65) = 12.25, p < .001$. Participants who rated the owner of the condom list felt significantly more ambivalent about their evaluations ($M = 0.41$) than did participants who rated the owner of the control shopping list ($M = -0.44$). Finally, the two measures of ambivalence were significantly correlated with each other ($r = .32, p < .01$).

These findings provide additional evidence for our prediction that evaluations of condom purchase are relatively ambivalent or mixed in valence. For both the implied and subjective measures, participants indicated significantly higher levels of ambivalence concerning their judgment of condom purchase compared to evaluations of a purchase that did not include condoms.

**General Discussion**

The results of the two studies are consistent with our main prediction that attitudes toward the purchase of condoms are relatively ambivalent. Study 1 showed that condom purchase tended to evoke a mixture of both positive and negative beliefs in the same individuals, which resulted in competing effects on more global evaluations. Further, this ambivalence was shown to have important implications for predicting the behavior of the participants themselves. Using standard measures of implied and subjective ambivalence, Study 2 provided additional evidence supporting this conclusion.

The current research may be helpful in understanding the somewhat contradictory findings that have been observed in recent condom research. As mentioned, many studies have suggested that attitudes toward condoms are relatively positive, while other studies have concluded that these attitudes are still largely negative. Our research showed a mixture in the valence of evaluations for condom purchases, depending on the level of measurement. For instance, condom purchase was viewed as moderate in valence when global evaluations were considered, somewhat positive in valence when specific beliefs about confidence were considered, and somewhat negative in valence when specific beliefs about promiscuity were considered. This was because such attitudes are relatively ambivalent, and therefore valence varied considerably depending on whether specific or general aspects of evaluation were examined.

Furthermore, the instability associated with ambivalent attitudes also may have played some part in producing the contradictions observed in past studies. Ambivalent attitudes are thought to be easily influenced by relatively subtle aspects of the judgment context, which can temporarily increase the salience of
either positive or negative beliefs about the attitude object (Bargh et al., 1992). Both the level of measurement issue and the instability associated with ambivalent evaluations may have contributed to the inconsistencies observed in past studies.

The ambivalence associated with attitude toward condoms was shown to have important implications for behavior. In particular, only specific beliefs relating to the promiscuity associated with condoms were predictive of whether participants reported actually using condoms. Positive beliefs and global evaluations were not significant predictors of behavior. This study examined one specific positive belief; that is, self-confidence. Further investigation of other positive specific beliefs (e.g., responsibility) may find a significant link to behavior. Nevertheless, the finding that global evaluations were unrelated to condom use is consistent with past suggestions that ambivalent attitudes are relatively poor predictors of behavior (Eagly & Chaiken, 1993; Moore, 1973, 1980).

These findings also provide an explanation as to why consumers often seem reluctant to purchase and use condoms. The fact that negative perceptions of promiscuity predicted condom use may mean that there is something about the purchase situation that tends to focus consumers on concerns about negative social evaluation. If so, the current findings suggest that evaluations or behavior might be altered by priming the salience of positive beliefs or by altering the environment so as to reduce any potential priming of negative social impressions. In the latter case, if paying a cashier for condoms in a store triggers an impression of a person who engages in promiscuous behavior, then the purchase environment might be altered to eliminate this trigger. Rather than paying for condoms at the cash register, the use of in-store vending machines (like stamp or candy machines) would help to avoid interaction with the cashier and might reduce the possibility that negative social impressions are primed. Alternately, encouraging purchase from professional pharmacists, who are more likely to view condom purchase as a positive behavior, might help prime more positive evaluations of condom purchase.

Additionally, rather than focusing specifically on the priming of beliefs, affective priming might be used also to subtly alter more global evaluations of condom purchase directly. Numerous studies have demonstrated that affective priming is capable of producing more positive attitudes in other contexts (Niedenthal, Rohmann, & Dalle, 2003). It is possible that affective primes included in advertising, or at the point of purchase, would have similar effects on evaluations of condom purchase. It also would be interesting to know whether ambivalent attitudes (i.e., evaluations of condom purchase) are particularly reactive to affective primes compared to less ambivalent attitudes (i.e., evaluations of cigarette purchase). Future research should examine these possibilities.

Finally, this research used a relatively subtle shopping-list technique to investigate the sensitive topic of condom purchase. This method seems useful in
situations in which consumers may feel reluctant to reveal directly their personal concerns about engaging in a particular behavior, or in which social desirability may bias responses positively. The advantages of the technique were demonstrated by the fact that perceptions concerning the owner of the shopping list were predictive of the participants’ own behavior. This technique may prove useful in investigating the purchase of other highly sensitive products and services (e.g., adult diapers, hemorrhoid cream, dandruff shampoo).

References


