



---

The Relationship between Cartoon Trade Character Recognition and Attitude toward Product Category in Young Children

Author(s): Richard Mizerski

Source: *Journal of Marketing*, Vol. 59, No. 4 (Oct., 1995), pp. 58-70

Published by: [American Marketing Association](#)

Stable URL: <http://www.jstor.org/stable/1252328>

Accessed: 08-09-2015 02:09 UTC

## REFERENCES

Linked references are available on JSTOR for this article:

[http://www.jstor.org/stable/1252328?seq=1&cid=pdf-reference#references\\_tab\\_contents](http://www.jstor.org/stable/1252328?seq=1&cid=pdf-reference#references_tab_contents)

You may need to log in to JSTOR to access the linked references.

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



American Marketing Association is collaborating with JSTOR to digitize, preserve and extend access to *Journal of Marketing*.

<http://www.jstor.org>

# The Relationship Between Cartoon Trade Character Recognition and Attitude Toward Product Category in Young Children

The author reviews and tests the effect of cartoon trade characters on product recognition and attitude on a sample of children three to six years of age. High levels of product and trade character recognition were found, including that of Joe Camel and the Marlboro Man with cigarettes. The recognition of select trade characters tended to increase with the age of the child. The level of recognition and favorable attitude toward the product were positively associated with age except for cigarettes. The attitude for cigarettes and matches were negatively associated with age. Because the possibility of demand artifacts cannot be ruled out, these findings must be interpreted with caution.

**T**he effect of advertising for adults-only products on children has had limited experiment-based study (Gorn and Florsheim 1985; Robertson, Rossiter, and Gleason 1979). Most work reports on survey responses or anecdotal accounts of how children would respond. Nonetheless, many would agree with McNeal (1987, p. 85) who claims "advertisers have the ability to convince children to like and desire practically any product." This alleged ability is of particular concern when the products may pose health risks (e.g., tobacco, alcohol, nonprescription drugs), and questions of unfairness and manipulation may be applicable to all advertising that targets children (Macklin 1985; McNeal 1987).

There may be an added threat to children with the resurgence in the use of cartoons for television and film entertainment, as well as an increase in their use as trade characters (Fitzgerald 1990) for both adult and youth markets. Numerous advertising critics (e.g., Fischer et al. 1991; Garfield 1991; Ogilvy 1983; Wilson 1990) seem to view this element of the creative arsenal as particularly effective in forming young peoples' preferences toward product categories. Many (e.g., Fischer et al. 1991) advocate a ban on cartoon trade character use in several categories to keep children from being affected by them.

---

Richard Mizerski is Professor of Marketing, Griffith University, Australia. The author thanks Katherine Straughn, Jack Feldman, Ray Pifer, Jeff Walters, The Florida State University Marketing Department, and anonymous *JM* reviewers for their assistance. This research was funded by the R.J. Reynolds Tobacco Company.

Editor's Note: *JM's* publication of this article based on a research study funded by the R.J. Reynolds Tobacco Company should neither be construed as an endorsement of consumption of tobacco-based products nor as support for the tobacco industry.

---

I investigate the degree to which children correctly associate select product categories with frequently used trade characters. In addition, I explore the relationship between product trade character association and attitude toward products. Both recognition (Fischer et al. 1991) and attitude toward a product (McNeal 1987) have been viewed as predictors of future product use. Therefore, I adopt both a marketing and public policy perspective on the issue of trade character recognition by young children.

## Advertising and Children's Responses

McNeal's (1987) review concluded that advertising is capable of producing three types of behavior among children: purchases, purchase requests, and antisocial behavior (e.g., requests leading to parent-child conflicts). He and others (e.g., Moschis and Moore 1979; Ward 1978) argue that the purchase may not be immediate, because the child may develop and store in his or her memory many of the orientations and norms reflected in advertising until a purchase opportunity occurs. Apparently, these effects can result from advertising aimed at adults, even if youths are not specifically targeted. Gorn and Florsheim (1985) discuss several studies and provide experimental evidence suggesting that children develop strong stereotypes of owners of adult products. They further report that advertising can influence how children view and obtain appropriate models for the adult world, including concepts of appropriate products to use now and in the future (cf. Belk, Mayer, and Driscoll 1984).

However, exposure to advertising does not automatically affect behavior or translate into changes in the way the child makes decisions about products. The influence of advertising may be significantly affected by the child's age and

agents of socialization, such as parents, peers, and teachers, as well as government and private programs.

### **Age and Advertising Effects**

For children under seven years of age, their age appears to be the most dominant factor in affecting responses to advertising. Piaget (1970) proposes that children go through stages of cognitive development in which they exhibit differences in the way they process information in their environment. It has been suggested that children between two and eleven years of age (the pre-operational and concrete operations stages) are the most vulnerable to advertising, because their cognitive structures are beginning to form and they are most sensitive to external influences (Raju and Lonial 1990). Stutts and Hunnicutt (1987) suggest focusing on children two to seven years of age. During this period, they become increasingly controlled by images and symbolic processes, including those from advertising, and begin to make judgments about products they might use in the future.

Many researchers disagree with the validity of discrete stages, because the measures used (e.g., the more age sensitive verbal measures or the nonverbal measures) can significantly affect the age at which children can be seen to manifest cognitive capabilities (e.g., Donohue, Meyer, and Henke 1978; Macklin 1985). Others such as Roedder (1981) suggest that the age-related differences are due to changes in the child's ability to store and retrieve information. Nonetheless, a large body of evidence has shown that (1) age is related to a child's response to advertising stimuli and (2) children between the ages of two and seven are, arguably, most at risk.

### **Age and Information Processing**

A young child's age tends to be associated with his or her capability to perform a wide range of information processing activities that should affect the impact of advertising. For example, attention to advertising is generally reported to decline with age (Ward 1972), whereas a child's ability to discriminate between a program and the commercials on television increases with age. Comprehending advertising content, such as the attributes of the product, is also positively associated with age (Ward, Wackman, and Wartella 1977).

Closer to the issue of trade character influence is research concerning whether children understand if the characters used in advertising are real. Numerous studies have shown that a child's age is positively associated with his or her ability to discriminate humans from animated (Quarforth 1979; Van Anken and Lonial 1985) or cartoon characters (Reeves and Greenberg 1977). Raju and Lonial (1990) review this literature and warn that children under five years of age may be confused and have difficulty differentiating between humans and characters.

### **Age and Memory**

If there is an equal knowledge base for a topic, age has weak effects on many memory tasks. However, a child's natural knowledge base is positively related to age (Brucks, Goldberg, and Armstrong 1985). Several researchers have sug-

gested that this knowledge base can be developed through the sheer repetition or mere exposure of advertising, whether or not children are the targeted consumer group (e.g., Fischer et al. 1991). Such research suggests the subsequent hypothesis.

H: A young child's correct matching (or recognition) of trade characters with their appropriate product pictures will exceed chance, and will be positively associated with the age of the child.

### **Age and Attitude Formation**

Age has been found to be the most important dispositional factor for a child's attitude toward an advertised brand of product (toys and games). For example, first- and third-grade children were found to be more affected by advertising than children in the fifth grade (Robertson and Rossiter 1974). Age is also positively associated with making attitude consistent choices (Roedder, Sternthal, and Calder 1983). However, all these studies used advertising specifically targeted to children. Few studies have looked at age effects in processing advertising for adult products (e.g., DiFranza et al. 1991; Fischer et al. 1991).

### **The Effects of Repeated Exposure**

Research has long documented that repeated exposure to advertising can enhance its effectiveness. Both memory and attitude toward the product advertised usually bear a positive association to repetition (Naples 1979) and each other. Thorson (1990, p. 223) concludes her review of advertising's influence on consumers, asserting that much of its impact "may come from the long-term accumulation of input from the hundreds and perhaps thousands of ads to which we are exposed." For children, this knowledge base becomes larger as they grow older and contains information from socialization agents, as well. However, some research suggests that frequency effects become weaker as the knowledge base develops (Raju and Lonial 1990).

Zajonc (1968, p. 1) introduced the mere exposure phenomenon, which he defined as occurring when "mere repeated exposure of an individual to a stimulus is a sufficient condition for enhancement of his attitude toward it." In other words, familiarity leads to liking (i.e., a positive or favorable affect). This phenomenon appears to be robust and reliable (Bornstein 1989), though its rationale has been the subject of some criticism. For example, there is no single accepted theory explaining the process, and it is not clear under what specific conditions mere exposure effects will occur (see Gordon and Holyoak 1983).

A strict interpretation of the effect of mere exposure implies that repeated exposure to a novel stimulus such as the Ronald McDonald trade character leads the audience to increase their positive affect toward Ronald McDonald. However, marketers generally want to sell the brand of product using the trade character, not sell the trade character itself. The ability to increase favorable affect toward a stimulus through repetition appears to readily generalize to other stimuli associated with that stimulus (Goldberg, Gorn, and Gibson 1978; Gordon and Holyoak 1983). For example, increased affect toward the Ronald McDonald character could

also increase affect toward the McDonald product line with which it is usually associated in advertising and sales promotions (Aaker 1991; Thorson 1990).

The vast majority of experimental evidence for the mere exposure effect is based on neutral stimuli, such as numbers, Turkish words, or Chinese ideographs (Bornstein 1989). Trade characters, designed to be memorable and present a persona that can favorably accent the manufacturer's message, could produce substantially greater favorable effects on attitude and product identity formation. Ogilvy (1983, p. 108) notes that trade characters can become the living symbol of the brand and tend to be particularly effective with children in developing preference.

*Experimentally induced mere exposure effects on children.* There is substantial evidence to show that repeated exposure of product advertising aimed at children can increase preference for the product advertised (Raju and Lonial 1990), and relatively few exposures appear to be necessary (Bornstein 1989) to generate affect toward a stimulus. Goldberg, Gorn, and Gibson (1978) repeatedly exposed first-grade students to television advertisements for sugared products (snacks and cereals) and Public Service Announcements (PSAs) advocating pronutrition foods (e.g., fruits, vegetables). Both messages increased behavioral preference for their respective categories when compared to control groups. In addition, an anti-sugared/"junk" food program significantly reduced the students' choice of sugared foods. Goldberg, Gorn, and Gibson argue that their findings reflect the effects of mere exposure and reinforce earlier conclusions that the context in which the stimulus is viewed (e.g., positive advertisements and PSAs, negative anti-junk food programs) is important. Thus, mere exposure could also reduce positive affect (or increase the level of negative attitudes). However, their study developed "brand" and product affect for categories for which the child respondents were users. Adults-only products were not used in the experiment.

Goldberg and Gorn (1978) also tested the influence of repeated exposure to advertising on children's preferences for material objects (e.g., a toy) over more socially-oriented alternatives (e.g., friends). According to Goldberg and Gorn, these findings support the theory that (1) advertising favorably alters preferences in a product category in which viewers are present users and (2) the influence of noncommercial sources of socialization (e.g., parents) significantly negates advertising's effect.

Gorn and Florsheim (1985) found only mixed support for the potential effect of adult-product promotion on young girls. The advertisement for a product most girls in a pretest thought they would use (e.g., lipstick) influenced their attitudes and intended preferences. However, the advertisement for a product they did not see in their future consumption (e.g., a diet drink) failed to influence product or brand preference on two of three attitudinal responses.

*Reports of media use as a surrogate for mere exposure effects.* Self-reports of media use are often used to gauge the potential exposure and influence of adult-product advertising on children. For example, several studies have investigated whether potential exposure to proprietary drug advertising (e.g., medicines for headache, cold, cough, stomach,

sleeping) was positively associated with children's perceptions, attitudes, and intentions to use these drugs. Robertson, Rossiter, and Gleason (1979) reviewed many of these studies and found inconsistent and weak effects of reported advertisement exposure on young children's responses to non-prescription drug products. The results from their own survey of third-, fourth-, and seventh-graders show large age differences on many measures. In an attempt to establish the unique contribution of (assumed) exposure to medicine advertising, they applied a multiple regression analysis including several independent variables (e.g., illness experience, in-home inventory) in addition to advertisement exposure. They concluded (p. 254) that "there is only limited evidence of a link between proprietary medicine advertising and children's medicine conceptions and requests ... [and] no evidence for the proposed direct relationship between medicine advertising and media usage." It should be noted that the products studied were often used by children with and without adult supervision. These products also have general societal acceptance and use.

### **Memory as an Indicator of Future Behavior**

Advertising copy tests often gauge recall (e.g., Burke DAR) or recognition (e.g., Starch Readership) to ascertain the audience's memory level of advertising. Although the specific relationship of memory to decision making is far from settled, memory of advertising or brand names has long been viewed as causally associated with favorable attitudes toward, intention to purchase, and actual purchase of the brand advertised (Thorson 1990). Perhaps because of this evidence, many researchers (e.g., Fischer et al. 1991) have used measures of memory as an indicator for potential behavior. The validity of this interpretation is compromised by evidence that neither recall nor recognition is necessary or sufficient for affect formation, which is often a critical component in making decisions (Bornstein 1989; Chattopadhyay and Alba 1989; Hoffman 1986). Therefore, high recognition of a product, a trade character, or a trade character and product association may not imply anything about the direction of future affect or behavior toward a product.

Negative affect toward a product or trade character can also be developed by repeatedly exposing those stimuli in a negative context, such as the anti-junk food PSAs (Goldberg, Gorn, and Gibson 1978). Furthermore, if a product is initially viewed unfavorably, repeated exposure can lead to increased negative affect (Schindler, Holbrook, and Greenleaf 1989). One reason for this finding was first investigated by Tesser (1978) in his experiments on *mere thought*, and has been referred to as the *polarization effect*. Eagly and Chaiken (1993, pp. 604-605) note that merely thinking about attitude toward an entity often makes it more extreme, and the more a person thinks about the entity, the greater the probability of a more extreme or polarized affect. Simply sighting the attitude object can prompt mere thought (Fazio 1986).

These findings suggest that frequent exposure to a product, with or without a trade character, could prompt either a positive or negative affect toward that product. Furthermore, the number of exposures necessary for this process to occur



can be quite small, and relatively more exposure (up to some asymptote) tends to further polarize a person's level of either negative or positive affect (for a review, see Bornstein 1989).

### **Accessibility of Affect and Behavior**

The source of the stimulus evaluation is of critical importance in determining whether affect will guide such future behaviors as sampling and purchasing. An attitude object such as a product may not be as strongly associated with an attitude "following an indirect experience as compared with a direct experience" (Fazio 1986, p. 221). Attitudes based on behavior or other direct experience are (1) more readily attributable to internal dispositions, (2) appear to involve a stronger object-evaluation bond, and (3) may, therefore, be more readily accessed from memory to guide future preference judgments and behaviors toward a product. Although mere exposure and mere thought, driven by frequent indirect stimulus exposures, such as advertising, can increase access to the relevant evaluations that may prompt response to the product, actual experience with a product prompts more readily accessible attitudes. These experiences may be negative as well as positive. Presumably, a trade character can act as a cue to prompt retrieval of either positive or negative evaluations. For example, a recent study of corporate and brand trademark logos reports that adults' opinions of companies can actually be damaged by their logos (Levin 1993).

### **Trade Characters and Children's Decision Making**

There is some anecdotal evidence about the effectiveness of trade characters on adult consumers (e.g., Aaker 1991; Jensen 1993). The explanations for their influence tend to focus on the power of mythology (Randazzo 1992), literary devices (Stern 1993), or source effects (Callcott and Alvey 1991).

Early research on characters and children looking at the effects of *host-selling*, that is, using cartoon characters in a program as spokespersons, is equivocal regarding its effectiveness. However, most of the recent coverage has discussed the danger these cartoon trademarks pose to young children (e.g., Dagnoli 1991; Lipman 1991; Schorow 1992). Only recently has empirical research reported evidence and attempted to provide an explanation for how trade characters influence the young (DiFranza et al. 1991; Fischer et al. 1991; Pierce et al. 1991).

*Trade character recognition.* Fischer and colleagues (1991) studied three- to six-year-old children attending Kinder-Care Learning Centers in Atlanta and Augusta, Georgia. The children completed a matching task in which they were asked to place pictures of select trademarks (i.e., logos and trade characters) and one cigarette warning on the correct picture of a product that represented the brand using that trademark (or warning). This matching procedure was labeled recognition, though a requirement of previous exposure is usually made when using this term. Apparently, the authors felt that the broadly promoted nature of the twenty-three brands justified this assumption.

In Fischer and colleagues' (1991) results, the level of correct trademark-product matching for several adult products exceeded that for many child-oriented products. Most

of the trademarks were logos of brand names such as Ford Motor Co., IBM, and Coca Cola. Only two trade characters, Joe Camel and the Marlboro Cowboy, were included. Not only did the Joe Camel trade character get the third highest recognition for an adult brand (51.1%—slightly less than Chevrolet at 54.1% and Ford at 52.8%), but the level of matching Joe Camel to a cigarette was not significantly different from the Disney Channel/Mickey Mouse match for the six-year-old portion of the sample (91% for Joe Camel, 95% for Mickey). Fischer and colleagues interpreted this finding as showing that the promotion of adults-only products could produce high levels of product recognition in an audience that was neither legally capable of using nor fully able to understand the potential risks associated with the product's use.

There have been a number of articles (e.g., Krumske 1993; Mizerski, Sonner, and Straughn 1993) that question the methodology used in Fischer and colleagues' (1991) study. First, pretests for this research found that most children under five years of age were unable to identify many of the products pictured and found it difficult to match the large number of different logos and trade characters to the correct product pictures. Second, there was no attempt to address order effects on the product board, with Mickey Mouse and the cigarette always placed in the top and bottom center of a four-by-three picture grid. Third, the interviewers were aware of the hypotheses and several potential outcomes. Interviewers "blind" to the purpose of the study should have been used, because young children are sensitive to even unintended interviewer influence (cf. Garbarino et al. 1989).

These factors may have influenced the rate at which the children were counted as matching the Joe Camel trade character to the cigarette. Nonetheless, rates at any significant level may still be bothersome to public policymakers, parents, and educators if this form of recognition translates into later trial and use of this potentially harmful adults-only product.

*Recognition and affect toward the product.* Fischer and colleagues (1991, p. 3147) argue "that brand awareness created in childhood can be the basis for product preference later in life." They admit that it is impossible to predict the effect of this advertising-induced recognition on future behavior, but cite the mere exposure research (Goldberg and Gorn 1974; Gorn and Florsheim 1985) as the basis for a link. In addition to DiFranza and colleagues (1991), Fischer and colleagues propose that frequent exposure of a trade character would cause high recognition of the trade character and product, lead to favorable attitudes toward the product, and influence the child to use the product later in life.

However, previous literature (e.g., Gorn and Florsheim 1985) has not supported the ability of advertisement exposure to prompt favorable attitudes in children toward products they do not intend to consume in the future. Nor does the previous research (cf. Eagly and Chaiken 1993; Schindler, Holbrook, and Greenleaf 1989) support an inevitable association between advertisement repetition, advertisement recognition, and positive attitude toward the product advertised.

Frequent repetition of the advertisements could lead to favorable attitudes through the mere exposure effect (Goldberg, Gorn, and Gibson 1978). Therefore, as the child ages, his or her knowledge base and favorable attitude toward the products advertised should increase. However, there is some question as to whether trade character/product recognition and a favorable attitude toward the product are always positively associated with each other and age. The directly expressed wishes of socialization agents, such as parents, has been shown to negate the attitudinal effects of repeated advertisement exposures (Goldberg, Gorn, and Gibson 1978). Also, if the young audience does not view the advertised product as acceptable for later use, repeated advertising does not appear effective in generating favorable attitudes toward the product (Goldberg and Gorn 1974; Robertson, Rossiter, and Gleason 1979).

There are cases in which a negative relationship between trade character/product recognition and attitude toward the product may be expected. Repeatedly exposing the product in a negative context (Goldberg, Gorn, and Gibson 1978) or repeated exposure to a stimulus initially viewed as negative (Schindler, Holbrook, and Greenleaf 1989) have been shown to prompt increased negative affect toward it over time. The positive association of age and recognition and the negative association of recognition and affect could be explained by the process of mere thought (Eagly and Chaiken 1993). Therefore, there does not appear to be only one relationship possible between age of the child, recognition of a trade character, and affect toward the product. Because of the equivocal nature of theoretical perspectives and prior findings addressing the relationship between age, exposure to advertising, and affect formation, rather than presenting a formal hypothesis relating to age, trade character recognition, and attitude toward the product, it is treated as an empirical issue.

## Methodology

### *Measuring Trade Character Recognition*

The product picture board format has long been used (e.g., Kobasigawa 1977) to establish recognition in young children. Using this approach also provides researchers with the ability to compare the trade character/product recognition rates obtained in this study to the recognition rates for trademark logos and select trade characters first reported by Fischer and colleagues (1991). However, some modifications to this procedure were necessary to reduce the previously discussed potential biases and limitations of Fischer and colleagues' stimulus and task.

*Trade characters used.* Because the matching of trade characters to products was a primary interest, only product categories with a brand currently featuring a trade character were used. In addition, trade characters that could be associated with many different products (e.g., Teenage Mutant Ninja Turtles represent cereals, toys, television programs and movies) were eliminated from the study.

The final product set consisted of five product options and one no-match blank (or picture of nothing) option (Fig-

ure 1a). The product pictures of a cigarette held in a hand and a lit match represent adults-only products that young children normally would be taught to dislike and not use. A bowl of cereal, Mickey Mouse, and a hamburger were products pictured that would be viewed as acceptable for children and adult use. Children in the pretests found pictures of these five products to be the most recognizable of those examined. Except for the lit match, these products also had unambiguous, currently used trade character matches. Unlike cigarettes, no brand of matches has a recognized trade character, nor do firms typically advertise matches to end-consumers. All trade characters were extensively used in brand advertising. Fischer and colleagues' (1991) study also used pictures of a hand held cigarette, a bowl of cereal, Mickey Mouse, and a hamburger.

The arrangement of the five color product pictures on the game board and the order of presenting the color trade character pictures were randomized for each respondent. The trade characters associated with a brand in each mixed market product category are Disney Channel with Mickey Mouse, Captain Crunch and Tony the Tiger with cereal, and Ronald McDonald with a hamburger. Both Joe Camel and the Marlboro Cowboy are trade characters for the adults-only product of cigarettes (see Figure 1b).

A picture of the Charley Tuna trade character was also provided to the children. However, no picture of packaged tuna was included on the product board. The children should have matched the picture of nothing/blank picture to Charley Tuna, because this picture option was provided for trade characters for which the children could not find an appropriate product match.

*Product game board.* Pretests revealed that many young subjects could reliably respond to no more than six different product pictures. The size of the board on which the product pictures and blank were placed (see Figure 1a) was determined on the basis of numerous pretests and was very similar in size to the product picture game board used by Fischer and colleagues (1991). All modifications made the stimuli easier to view for the respondents.

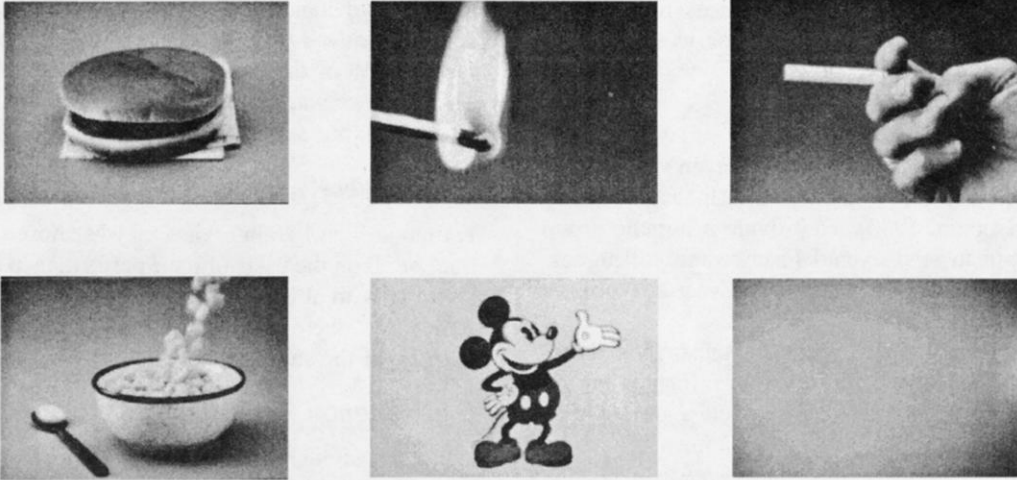
### *Affect/Attitude Judgment*

The use of an attitude/affect measure provided a means for investigating the potential behavioral implications of repeated exposure to trade characters, where the sum of exposures should increase with age. Norman and Tedeschi (1989) have reported a significant correlation ( $r = .51$ ) between affect and intention to smoke in the future for fifth- through eighth-grade children, though there appears to be no similar findings for other product categories. There is also a long history of using affect (like/dislike) measures in investigating the possible impact of advertising on children (e.g., Goldberg and Gorn 1974; Gorn and Florsheim 1985; Oei and Burton 1990; Wells 1965).

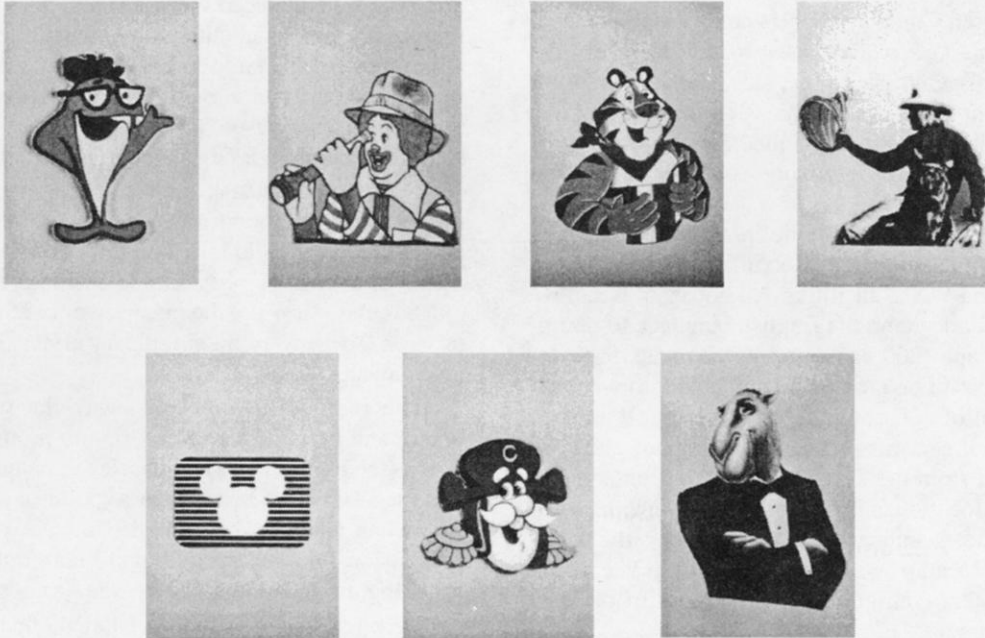
Several other responses, such as intent to use, good or bad for you, and perceived risk and harm associated with product use, which may influence future behavior toward a product, were also tested. These were ultimately discarded because many of the children had difficulty with them.

**FIGURE 1**  
**Experimental Stimuli**

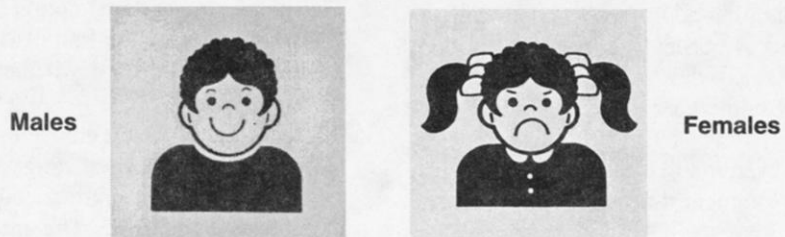
**a. Product Options**



**b. Trade Characters Studied**



**c. Like/Dislike Scale**





A variant of the "smiling face scale" that provides a measure of affect and preference (Wells 1965) was used. Pretests showed that children three to six years of age had difficulty with scales that had choices intervening between a simple happy and sad face (e.g., neutral face). Separate visual scales with happy and frowning faces were used for boys and girls (see Figure 1c).

### **Sample**

As was noted previously, children two to seven years of age have been viewed as most at risk to the influence of advertising (Raju and Lonial 1990). To provide a suitable group on which to replicate and extend Fischer and colleagues' (1991) study, a final sample of three- to six-year-old subjects was used.

The regional marketing activities of the brands represented by trade characters could exert an influence on the children's recognition of those trade characters and their affect toward the products. However, only information concerning Camel cigarette marketing activities was available. Nonetheless, the potential association of the Camel marketing effort with these dependent measures may be the most salient because of the extensive coverage of these portions of Fischer and colleagues' (1991) findings (e.g., see Will 1992).

Ten A.C. Nielsen Company (1991) county markets were sampled. These markets were chosen to provide a diverse sample in terms of geographic area, size, Camel's index of brand development (BDI) (i.e., Camel dollar share in the market/Camel dollar share in the United States), and Camel spending-per-person for advertising (outdoor and print media).

Randomly generated telephone probability samples were developed for each market. Recruiting was done from two central location WATS facilities. All households and respondents had to understand the English language to participate. Quotas for age (200 each), sex (50% male, 50% female), and race (based on area racial composition) were established. A target of 800 completed interviews of children three to six years of age was set. A final sample of 790 children was obtained from the 87,902 households contacted.<sup>1</sup>

Both central location and in-home interviewing were pretested. These tests indicated that conducting the interview in a central location was a better approach because it provided a consistent configuration and control of the data collection environment.

### **Presence of a Parent or Adult Caretaker**

Previous work with young children (e.g., Baxter 1992), as well as pretests for this study, revealed the importance of having a parent or other familiar adult present when collecting this type of data. This is particularly true for children three to four years of age, who were not attending a preschool or other out-of-home care (42.7% and 32%, respectively).

It was important, however, not to have the parent in such close proximity to the respondent that he or she interfered

with and potentially biased the interview. Placing the adult in a chair to the rear of the respondent appeared to provide adequate comfort for the child and generally precluded parental observation of the recognition task and affect judgment. The distance of the accompanying adult from the respondent ranged from 14 inches (3.7% of the sample) to five feet (54.2% of the sample, 77% were 46 inches or more). This distance was not associated with trade character recognition or expressed affect toward the products.

### **Interviewers**

A final group of 20 interviewers was chosen from the initial pool of 30 on the basis of their performance in pretesting interviews with at least two children three to six years of age. At no time were the interviewers informed about the true purpose of the study or the identity of the funding source.

### **Experimental Procedures**

When the adult and child arrived for the interview, they were seated in a waiting room. The interviewer then led them into the interview room, and the parent was seated behind and out of the child's sight. The interviewer and respondent sat on the floor on identical mats with a two-foot area between them in which the product game board and like/dislike picture board were placed when needed. All interviewers were thoroughly briefed about and had a list of reasons (e.g., unwillingness of the child to cooperate, parental interference) to terminate the interview. Terminations were highest for the three- and four-year-old children. A total of 24% of the 1040 central location interviews were terminated.

The recognition task and concept of a no match (i.e., picture of nothing) option were introduced in a warm-up exercise. Even if the child failed on three trials to make a correct match of the Mr. Kool-Aid trade character to a glass of beverage in the warm-up, the interviewer continued with the interview. There were no significant effects of deleting these few subjects in any analyses.

The interviewer then put away the warm-up product board, and brought out the six-option product picture game board (see Figure 1a). The interviewer named the six options and then asked the respondent to point to each product picture when named. This provided a basic measure of comprehension for each product and blank option that permits checking the reliability of each age group's responses.

Each respondent was then handed one picture of a trade character at a time according to a randomization sequence provided, and asked: "Point to the picture on the board that this goes with. And remember, if it doesn't go with any of the ones on the board, you point to the picture of nothing." The picture of nothing option was mentioned only in the warm-up and with the first card. The interviewer's only response to each match, whether correct or incorrect, was "okay."

After all the trade character pictures were given to the respondent and the matching task was completed, the affect/attitude task was introduced. The respondent was asked what food they liked. The interviewer then asked: "If I showed you a picture of (food the respondent said they liked), would you point to the picture that meant that you

<sup>1</sup>A complete discussion of the methodology is available from the author.



liked it or the picture that meant you did not like it?" Even if the child failed to point to the correct picture after three attempts, the interviewer continued with the interview. There were no significant effects in any analyses if these few respondents had been deleted. The child was then asked for the name of a food he or she did not like. Citing that food, the interviewer went through the same discussion about pointing to the appropriate (i.e., frowning) picture. Anchoring affect with a food example was based on previous research with four- to six-year-old subjects and the pretests for this investigation, which showed that young children's conceptions of the product categories, including smoking, tended to be oral and taste-oriented. The children's discussion about their judgments in pretests showed that they were able to generalize the affect concept beyond food to the Mickey Mouse "product" and the lit match.

After all the product pictures (excluding the blank/picture of nothing) had been judged as liked or disliked by the child, the adult accompanying the child respondent was asked the child's name and age, whether the child was attending any type of school or daycare program, and what level of school the adult had completed. Finally, the adult was asked whether someone in the household used any of the products featured on the product picture board. The child and adult were then thanked for their assistance and escorted out of the interview room. The interviewer then paid the adult \$30.

## Results

### *Final Sample Composition*

Although the incidence levels for three-, four-, five-, and six-year-old children are similar, three-year-old respondents were substantially more difficult to keep until the completion of the interview. Therefore, the final sample had fewer three-year-old respondents ( $n = 143$ ) than was originally planned, and was slightly over quota for four- ( $n = 219$ ), five- ( $n = 224$ ), and six-year-old ( $n = 204$ ) children.

### *Recognition of the Product*

The children easily identified the product pictures at the beginning of the recognition task, with between 99.2% (hamburger) and 96.8% (blank/picture of nothing) of the children pointing to the correct picture when asked by the interviewer.

### *Trade Character Recognition*

*Matching by chance.* The hypothesis proposed that (1) the respondents would correctly match trade characters to product pictures at a rate beyond chance and (2) this rate would be positively associated with the child's age. Table 1 provides the observed rates for correct matching of trade characters with their appropriate product picture. The rates of matching were higher than expected by chance (one of six, or 16.7%, per match) for all ages, which supports the first part of the hypothesis.

*Age and recognition of trade characters.* Also as hypothesized, the ability to make the correct match was signif-

icantly different by age ( $\chi^2_6 = 1372.38$ ,  $p = .0001$ ) and increased with the age of the respondent. The relationship of the matching and recognition rate to age was tested with a weighted least squares analysis. All trade character recognitions (matches with the correct product), except for the Marlboro Cowboy, were significantly ( $p < .05$ ) associated with age in a positive way (see Table 1). These findings are similar to those reported by Fischer and colleagues (1991) and support the suggestion of increased learning and memory through both increased exposure and more developed cognitive and information processing abilities.

The Marlboro Cowboy was the only trade character that did not show a significant relationship with age. Because Fischer and colleagues' (1991) original study did not report these data in an unaggregated form, it is not clear if the particular trade character rendition used was a factor. The specific character shown in Marlboro cigarette advertising has not been consistent unlike the unique and consistent figures representing the other products featured in this study. Also, as a child ages, he or she sees a cowboy in many non-Marlboro settings, which could increasingly dilute the strength of a cowboy association with cigarettes.

*Effect of product and trade character.* Any conclusions about the influence of product and trade character on the recognition levels must be tentative because of the small sample of seven trade character/product matches studied. Cigarettes and cereal had two examples each. The hamburger, Mickey Mouse, and the picture of nothing option each had one appropriate trade character. Nonetheless, looking at their relation to one another may help researchers gain some insight into the relative levels at which young children can correctly relate a brand's trademark to the appropriate product category.

Across the total sample, the Disney Channel/Mickey Mouse match displayed the highest level of recognition (86%). This was followed by the two cereal trade characters (Captain Crunch, 72%; Tony the Tiger, 60%), Joe Camel with the cigarette (52%), Charlie Tuna with the no product option (52%), Ronald McDonald with the hamburger (51%), and the Marlboro Cowboy with the cigarette (24%). If the lit match was also counted as a correct association with Joe Camel, the total recognition rate of this trade character would rise to 60.7%. This increase has little effect on its rank or later analyses or conclusions. If the lit match was also counted as a correct match for the Marlboro Cowboy, the total recognition rate for this character would increase to 37% of the children. Even with the addition of this additional possible match, this trade character would still have the lowest recognition. Applying a Bonferroni family error rate and using preplanned comparisons, Joe Camel was not significantly more ( $p > .05$ ) recognized than Ronald McDonald ( $\chi^2_1 = .36$ ) or Charlie Tuna ( $\chi^2_1 = .22$ ), but was significantly ( $p < .05$ ) less recognized than Captain Crunch ( $\chi^2_1 = 101.2$ ), Tony the Tiger ( $\chi^2_1 = 13.14$ ), and the Disney Channel ( $\chi^2_1 = 348.1$ ).

There were no clear environmental factors that showed influence. For example, the recognition of Joe Camel was not significantly associated with cigarette use in the household (56% in cigarette households, 50% in noncigarette

households;  $\chi^2_1 = 2.49, p = .11$ ) or the respondent's household subscription to newspapers or magazines ( $\chi^2_3 = 5.08, p = .17$ ). Camel sales relative to all brands (BDI) did not significantly predict ( $F_{1,777} = 2.35, p = .13$ ) Joe Camel recognition rates—nor did the relative level of Camel advertising expenditures in outdoor and print media (52% high versus 57% low;  $F_{1,777} = .95, p = .33$ ).

### Affect/Attitude Toward Products

Table 2 shows the respondents' rates of liking for each of the five product pictures. The difference between the adults-only products (a cigarette and the lit match) and the other products is striking for several reasons. First, both the cigarette and the lit match had significantly lower rates of liking than the other products studied. Across the total sample, 85% of the children did not like cigarettes, which was slightly more negative than the affect toward matches (82.5% dislike). Second, except for the lit match, the children at each age disliked cigarettes significantly more than all the other products rated (e.g., compared to hamburgers,  $\chi^2_1 = 945.41, p = .0001$ ). Third, none of the demographic, environmental, or marketing factors studied had a significant effect on liking cigarettes.

*Age and affect.* The liking for cigarettes and the lit match decreases with increased age of the respondent, whereas the

liking for cereal, hamburgers, and Mickey Mouse increases with increased age. The rate of liking for cigarettes drops significantly for children ( $\chi^2_3 = 119.29, p = .0001$ ) from three years of age (40.6%) to four (20.5%), five (4.5%), and six years of age (3.4%). The five- and six-year-old respondents do not differ ( $\chi^2_1 = .99, p = .32$ ) from one another.

The relationship of liking to respondents' age was also tested with a weighted least squares analysis (Table 2). For both cigarettes and the lit match, liking had a negative association with age. All of the other products had strong positive associations of liking with age.

### Recognizing Joe Camel and Liking Cigarettes

In both Fischer and colleagues' (1991) study and my investigation, the adult-only product trade character Joe Camel had relatively high recognition compared to several other trade characters. Recognition was particularly high among the older children. If high trade character recognition alone could prompt positive affect toward a product, this trade character would appear to provide a good test. However, because of the extensive and long-term implementation of anti-smoking campaigns, it is possible that frequent exposure to cigarettes in this negative context could prompt negative affect toward that product. This could happen with or without

**TABLE 1**  
**Analysis of Recognition Rates**

| Number of Respondents                          | Rates of Recognition |                        |                       |                       |                      |
|--|----------------------|------------------------|-----------------------|-----------------------|----------------------|
|  | Total<br>790         | Three-years-old<br>143 | Four-years-old<br>219 | Five-years-old<br>224 | Six-years-old<br>204 |
| <b>Children and Adult Products</b>             |                      |                        |                       |                       |                      |
| Disney Channel<br>with Mickey <sup>1</sup>     | .858                 | .692                   | .799                  | .929                  | .961                 |
| Captain Crunch<br>with cereal <sup>1</sup>     | .719                 | .448                   | .662                  | .825                  | .843                 |
| Tony the Tiger<br>with cereal <sup>1</sup>     | .596                 | .378                   | .534                  | .688                  | .716                 |
| Ronald McDonald<br>with hamburger <sup>1</sup> | .510                 | .259                   | .443                  | .634                  | .623                 |
| Charlie Tuna<br>with blank <sup>2</sup>        | .516                 | .469                   | .457                  | .531                  | .598                 |
| <b>Adults-Only Products</b>                    |                      |                        |                       |                       |                      |
| Joe Camel<br>with cigarette <sup>2</sup>       | .523                 | .252                   | .411                  | .629                  | .716                 |
| with lit match                                 | .084                 | .084                   | .119                  | .081                  | .049                 |
| Marlboro Cowboy<br>with cigarette              | .235                 | .245                   | .274                  | .237                  | .186                 |
| with lit match                                 | .135                 | .007                   | .164                  | .152                  | .059                 |

<sup>1</sup>Significant quadratic relationship of recognition to age:

Disney Channel: Intercept ( $\chi^2_1 = .09, p = .77$ ), Age ( $\chi^2_1 = 8.94, p = .003$ ), Age<sup>2</sup> ( $\chi^2_1 = 5.13, p = .02$ ) and residual ( $\chi^2_1 = 1.32, p = .25$ ).

Captain Crunch: Intercept ( $\chi^2_1 = 9.41, p = .002$ ), Age ( $\chi^2_1 = 20.26, p = .0001$ ), Age<sup>2</sup> ( $\chi^2_1 = 13.38, p = .0003$ ) and residual ( $\chi^2_1 = 0.88, p = .35$ ).

Tony the Tiger: Intercept ( $\chi^2_1 = 2.93, p = .08$ ), Age ( $\chi^2_1 = 7.21, p = .007$ ), Age<sup>2</sup> ( $\chi^2_1 = 3.91, p = .05$ ) and residual ( $\chi^2_1 = .69, p = .41$ ).

Ronald McDonald: Intercept ( $\chi^2_1 = 9.60, p = .002$ ), Age ( $\chi^2_1 = 13.99, p = .0002$ ), Age<sup>2</sup> ( $\chi^2_1 = 8.61, p = .003$ ) and residual ( $\chi^2_1 = 1.99, p = .16$ ).

<sup>2</sup>Significant linear relationship of recognition to age:

Charlie Tuna: Intercept ( $\chi^2_1 = 13.18, p = .0003$ ), Age ( $\chi^2_1 = 8.81, p = .003$ ), and residual ( $\chi^2_1 = 1.51, p = .47$ ).

Joe Camel: Intercept ( $\chi^2_1 = 9.23, p = .002$ ), Age ( $\chi^2_1 = 112.24, p = .00001$ ), and residual ( $\chi^2_1 = 3.05, p = .22$ ).

**TABLE 2**  
**Analysis of Attitudes/Affect**

| Number of Respondents                     | Rates of Liking Products |                        |                       |                       |                      |
|---|--------------------------|------------------------|-----------------------|-----------------------|----------------------|
|   | Total<br>790             | Three-years-old<br>143 | Four-years-old<br>219 | Five-years-old<br>224 | Six-years-old<br>204 |
| <b>Children and Adult Products</b>        |                          |                        |                       |                       |                      |
| Attitude toward Mickey Mouse <sup>1</sup> | .871                     | .706                   | .840                  | .933                  | .951                 |
| Attitude toward cereal <sup>2</sup>       | .873                     | .769                   | .817                  | .915                  | .961                 |
| Attitude toward hamburgers <sup>2</sup>   | .808                     | .734                   | .758                  | .853                  | .863                 |
| <b>Adults-Only Products</b>               |                          |                        |                       |                       |                      |
| Attitude toward cigarettes <sup>1</sup>   | .152                     | .406                   | .205                  | .045                  | .034                 |
| Attitude toward matches <sup>1</sup>      | .175                     | .392                   | .233                  | .085                  | .059                 |

<sup>1</sup>Significant quadratic relationship of affect to age:

Mickey Mouse: Intercept ( $\chi^2_1 = .17, p = .68$ ), Age ( $\chi^2_1 = 11.05, p = .0009$ ), Age<sup>2</sup> ( $\chi^2_1 = 7.42, p = .006$ ) and residual ( $\chi^2_1 = .12, p = .73$ ).  
Cigarette: Intercept ( $\chi^2_1 = 54.54, p = .0001$ ), Age ( $\chi^2_1 = 37.78, p = .0001$ ), Age<sup>2</sup> ( $\chi^2_1 = 28.04, p = .001$ ) and residual ( $\chi^2_1 = 1.20, p = .27$ ).  
Matches: Intercept ( $\chi^2_1 = 28.31, p = .0001$ ), Age ( $\chi^2_1 = 15.80, p = .0001$ ), Age<sup>2</sup> ( $\chi^2_1 = 10.11, p = .002$ ) and residual ( $\chi^2_1 = 1.00, p = .32$ ).

<sup>2</sup>Significant linear relationship of affect to age:

Cereal: Intercept ( $\chi^2_1 = 111.16, p = .0001$ ), Age ( $\chi^2_1 = 41.23, p = .0001$ ) and residual ( $\chi^2_1 = 1.21, p = .55$ ).  
Hamburger: Intercept ( $\chi^2_1 = 80.67, p = .0001$ ), Age ( $\chi^2_1 = 13.06, p = .0003$ ) and residual ( $\chi^2_1 = 1.97, p = .37$ ).

trade character use and its high recognition; and high recognition of a trade character could intensify the neative affect.

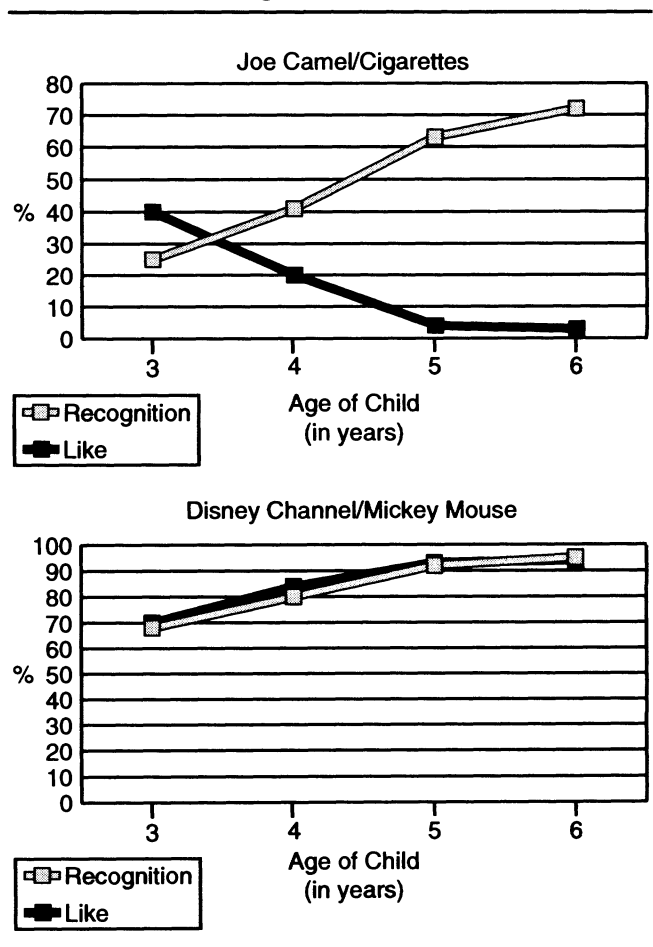
When viewed across all ages, liking cigarettes and recognizing Joe Camel was significantly and negatively related ( $\chi^2_1 = 24.1, p < .001$ ). The increasing recognition of the Joe Camel trade character tended to be associated with disliking, not liking, cigarettes. However, causality is not suggested nor could it be assessed adequately with this cross-sectional data. Recognition of the Marlboro Cowboy was not associated with liking cigarettes.

One last contrast should be of interest because of the reports (e.g., Belch and Belch 1995; Will 1992) of Fischer and colleagues' (1991) findings. Comparing the recognition of Joe Camel and the liking of cigarettes across each age group illuminates the strong negative relationship between the two (Figure 2). On the other hand, if recognition of the Disney Channel and liking of Mickey Mouse are plotted, a strong positive association is evident. In this latter case, a favorable context of affect formation for both the trade character (Disney Channel) and the product (Mickey Mouse) would be expected.

## Discussion and Conclusions

This study was developed to investigate the ability of young children to match cartoon-based trade characters to the product with which they are associated. The children's attitude toward those products was also measured. Previous research (e.g., DiFranza et al. 1991; Fischer et al. 1991) proposed that the ability of young children to recognize an association between a trade character and the product was a predictor of developing favorable attitudes toward the product, which would be expected to influence future behavior.

**FIGURE 2**  
**Percent Recognition and Like Product**





However, there appears to be little evidence that this happens when the children view the products as inappropriate to use (Gorn and Florsheim 1985). This has particular importance in the area of adults-only products and the possible influence their promotion may have on children's behavior toward these products before they are adults.

### **Limitations**

The select group of products, trade characters, and ages sampled limit the degree to which these findings can be generalized. Few children in this study would be expected to have a direct smoking experience with cigarettes. However, a sample of older children would provide some insight into how the memory of a trade character functions when direct product experience is encountered. The cross-sectional nature of this study further limits interpreting the effects of aging. A longitudinal study incorporating an older sample would be a better format, because peer pressure and the longer-term ambient level of product acceptance could be addressed. Changes in affect toward products could also be tracked.

To the extent a lit match may constitute a correct association for the cigarette trade characters, the recognition of Joe Camel and the Marlboro Cowboy would be higher (up 16.1% and 57.4%, respectively). Also, the common "mouse ears" visual in the Mickey Mouse/Disney Channel match is expected to have artificially increased the recognition of that trade character. Recognition of the Joe Camel character could then be considered much higher relative to the other trade characters studied.

It can be argued that Mickey Mouse, not the Disney Channel logo, is the more appropriate choice of a trade character. However, this choice, in addition to the visual portrayal of these two stimuli, was made to make a comparison with Fischer and colleagues' (1991) original study. Pretests for this study also showed that using the Disney Channel as a product prompted very different matches. Apparently, children see many trade characters in advertising on the Disney Channel. A unique correct match would have been difficult to establish.

The response capabilities of children from three to six years of age vary extensively. Using procedures and measures that a three-year-old child can master also limits the response capability of older children. Socially acceptable responses are a potential demand artifact that could have influenced the stated attitude toward the products, particularly the adult products. The presence of an adult parent or caretaker could heighten this possibility. Henke (1994) found that 96% of her sample of 83 three- to eight-year-old children reported they disliked cigarettes. Using only an interviewer and no parent or caretaker, she found no significant effect of age for that measure. Although there was a lack of a proximity effect for the parent or caretaker in this study, the presence of any adult, including the interviewer, could increase the tendency for children to give socially desirable responses. Other formats and measures should be tried in further research, perhaps to eliminate the need for the presence of an adult by using interactive technology.

Finally, though market share and level of advertising expenditures were not associated with recognition of Joe Camel and affect toward the cigarette, this does not rule out the possible impact of these factors at lower levels. The increasing use of nontraditional media and sales promotion by adults-only products (e.g., see Stewart and Rice 1994) were not accounted for and may provide alternative ways to induce product use. With these limitations, the findings reported must be interpreted with caution, particularly when inferring managerial and public policy implications. Nonetheless, some preliminary conclusions appear warranted.

### **Children's Recognition of Trade Characters**

The results support Fischer and colleagues' (1991) earlier work, which finds recognition, or the ability to match trade character and product, to be positively associated with the child's age. The lone exception was the Marlboro cowboy and cigarettes.

The level of product and trade character recognition was generally high, ranging from 86% for the Disney Channel/Mickey Mouse match to 24% for the Marlboro Cowboy and cigarette (37% if adding in the lit match). It is also clear and consistent with previous research that adults-only product trade characters are readily recognized by children as young as three years of age. Joe Camel, the other cigarette trade character, was matched by 25% of the three-year-old children, 52% of the total sample (60.7% if the lit match is added), and 72% of the six-year-old group.

Although these levels of recognition are lower than Fischer and colleagues' (1991) previous study of this age group, recent studies show that older children have an even higher recognition of Joe Camel. Henke (1994) reports Joe Camel recognition at 86% for a subsample of eight-year-old children. A 1993 Roper Starch survey for the R.J. Reynolds Tobacco Company showed that 95% of a national sample of 10- to 17-year-olds knew Joe Camel was associated with cigarettes. These findings would strike many as alarming if recognition necessarily leads to the formation of favorable attitudes toward and ultimate purchase of these products.

However, the process of mere thought, perhaps to some extent triggered by repeated exposure to a trade character, may prompt increased negative evaluations if the product is initially viewed in an unfavorable way. This reasoning is speculative because several explanatory factors beyond exposure level are associated with age. For example, the child's memory, information processing ability, and base of information from other socialization agents (e.g., parents, day care personnel) also usually increase with age. The specific model of how these factors affect one another needs further study to understand better the way children form preferences.

These findings reinforce prior research that showed frequent exposure to stimuli is likely to prompt more extreme or polarized affects (e.g., Fazio 1986; Tesser and Conlee 1975) rather than only favorable affects (DiFranza et al. 1991; Fischer et al. 1991; Zajonc 1968). The cereal, hamburger, and Mickey Mouse products showed a positive association of trade character recognition and attitude toward the

product. These products are expected to be usually viewed favorably; however, cigarettes are expected to be viewed unfavorably. Indirect, nonexperience-based (e.g., PSAs, posters, antismoking messages from parents and teachers) recognition of cigarettes increases as the child grows older, while favorable attitude toward cigarettes appears to decrease. Nonetheless, the older the child, the more likely he or she is aware of the socially acceptable response. Additional research is necessary to eliminate the possible influence of demand artifacts.

The product category of matches is an example of how this process may work without using a trade character. The favorable attitude toward matches decreased from those children three to six years of age. However, something must happen between this young age and adulthood without the aid of consumer-oriented advertising or trade characters, because few adults would be expected to have a negative affect toward matches.

Fazio (1986) has shown that experience-based information is much more influential than indirect-based information for developing attitudes and accessing those attitudes for later behavior. In the case of matches, children's early supervised and later unsupervised use in lighting such things as outdoor grills and piles of leaves may lead to more favorable attitudes over time. This continued experience-based exposure as they grow older can itself reinforce the formation of favorable attitudes through mere exposure and thought. This may ultimately help change the polarity of the attitudes toward the product from unfavorable to favorable.

Further research into this paradigm is needed to ascertain the relative influence of marketing stimuli, such as sales promotions (e.g., Stewart and Rice 1994), because advertised trade characters do not appear to have a strong impact. The activities of socialization agents appears to exert a very powerful influence on young children's attitude toward cigarettes and, probably, on their attitudes toward the other products tested, as well. As the findings regarding the lit match suggests, neither compelling cartoon trade characters nor sizable advertising budgets are significant factors in the process of developing affect toward an adults-only product.

## REFERENCES

- A.C. Nielsen Company (1991), *Glossary*. Northbrook, IL: A.C. Nielsen Company.
- Aaker, David (1991), *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. New York: The Free Press
- Baxter, Pamela J. (1992), "How Children Use Media and Influence Purchases," *Journal of Advertising Research*, 31 (December), RC-2-4.
- Belch, George and Michael Belch (1995), *Introduction to Advertising and Promotion: An Integrated Marketing Communications Perspective*, 3d ed. Chicago: Richard D. Irwin, Inc.
- Belk, Russell, Robert Mayer, and Amy Driscoll (1984), "Children's Recognition of Consumption Symbolism in Children's Products," *Journal of Consumer Research*, 10 (March), 386-97.
- Bornstein, Robert (1989), "Exposure and Affect: Overview and Meta-Analysis of Research, 1968-1987," *Psychological Bulletin*, 106 (2), 265-89.
- Brucks, Merrie, Marvin E. Goldberg, and Gert Armstrong (1985), "Children's Cognitive Responses to Advertising," in *Advances in Consumer Research*, Vol. 8, Richard J. Lutz, ed. Provo, UT: Association for Consumer Research, 650-54.
- Callcott, Margaret and Patricia Alvey (1991), "Toons Sell ... and Sometimes They Don't: An Advertising Spokes-Character Typology and Exploratory Study," in *Proceedings of the American Academy of Advertising*, Rebecca Holman, ed. San Antonio, TX: American Academy of Advertising, 43-52.
- Chattoopadhyay, Amitava and Joseph Alba (1989), "The Relationship Between Recall, Cognitive Responses, and Advertising Effectiveness: Effects of Delay and Context," Working Paper No. 89-103, Cambridge, MA: Marketing Science Institute.
- Dagnoli, Judann (1991), "Three Faces of Kool," *Advertising Age*, (October 9), 54.
- DiFranza, Joseph D., John W. Richards, Paul M. Freeman, Nancy Wolf-Gillespie, Christopher Fletcher, Robert D. Jaffe, and David Murray (1991), "RJR Nabisco's Cartoon Camel Promotes Camel Cigarettes to Children," *Journal of the American Medical Association*, 266 (22), 3149-53.
- Donohue, Thomas, Timothy P. Meyer, and Lucy L. Henke (1978), "Black and White Children: Perceptions of TV Commercials," *Journal of Marketing*, 42 (October), 34-40.
- Eagly, Alice and Shelly Chaiken (1993), *The Psychology of Attitudes*. New York: Harcourt Brace Jovanovich College Publishers.
- Fazio, Russell (1986), "How Do Attitudes Guide Behavior?" in *Handbook of Motivation and Cognition*, Richard Sorrentino and E. Higgins, eds. New York: The Guilford Press, 204-43.
- Fischer, Paul M., Meyer D. Schwartz, John W. Richards, Adam O. Goldstein, and Tina H. Rojas (1991), "Brand Logo Recognition by Children Aged 3 to 6 Years," *Journal of the American Medical Association*, 266 (22), 3145-48.
- Fitzgerald, K. (1990), "Adults Favor Classic 'Toons in Their Ads,'" *Advertising Age*, (September 17), 3.
- Garbarino, James, Frances M. Stott, and Faculty of the Erikson Institute (1989), *What Children Can Tell Us*. San Francisco, CA: Josey-Bass, Inc.
- Garfield, Bob (1991), "Occasional Sparkle Helps Brighten Lackluster Year," *Advertising Age*, (December 23), 30.
- Goldberg, Marvin E. and Gerald J. Gorn (1974), "Children's Reactions to Television Advertising: An Experimental Approach," *Journal of Consumer Research*, 1 (September), 69-75.
- and ——— (1978), "Some Unintended Consequences of TV Advertising to Children," *Journal of Consumer Research*, 5 (June), 22-29.
- , ———, and Wayne Gibson (1978), "TV Messages for Snack and Breakfast Foods: Do They Influence Children's Preferences," *Journal of Consumer Research*, 5 (September), 73-81.
- Gordon, P. and K. Holyoak (1983), "Implicit Learning and Generalization of the Mere Exposure Effect," *Journal of Personality and Social Psychology*, 45 (3), 492-500.
- Gorn, Gerald J. and Renee Florsheim (1985), "The Effects of Commercials for Adult Products on Children," *Journal of Consumer Research*, 11 (March), 962-67.
- Henke, Lucy (1994), "Young Children's Perceptions of Cigarette Brand Advertising Symbols: Awareness, Affect, and Target Market Identification," in *Proceedings of the 1994 American Academy of Advertising*, Karen Whitehill King, ed. Tucson, AZ: American Academy of Advertising, 59.
- Hoffman, Martin (1986), "Affect, Cognition and Motivation," in *Handbook of Motivation and Cognition*, Richard Sorrentino and E. Higgins, eds. New York: The Guilford Press, 244-80.
- Jensen, Jeff (1993), "Animation Renaissance Snares Kids," *Advertising Age*, (February 8), 5-20.
- Kobasigawa, Akira (1977), "Retrieval Strategies in the Development of Memory," in *Perspectives in the Development of Memory and Cognition*, R. V. Kail and J. W. Hagan, eds. Hillsdale, NJ: Lawrence Erlbaum Associates.

- Krumske, William (1993), "When Medical Doctors Conduct Marketing Research: JAMA and Old Joe, The Camel," in *AMA Winter Educators' Conference Proceedings: Marketing Theory & Applications*, Rajan Varadarajan, Bernard Jaworski, Peter J. Gordon, and Bert J. Kellerman, eds. Chicago: American Marketing Association, 405–10.
- Levin, Gary (1993), "Study: Some Logos Hurt Image," *Advertising Age*, (September 13), 40.
- Lipman, Joanne (1991), "Kools Penguin Draws Antismoking Ire," *Wall Street Journal*, (October 8).
- Macklin, M. Carole (1985), "Do Young Children Understand the Selling Intent of Commercials?" *The Journal of Consumer Affairs*, 19 (2), 293–304.
- McNeal, James (1987), *Children as Consumers: Insight and Implications*. Lexington, KY: Lexington Books.
- Mizerski, Richard, Brenda Sonner, and Katherine Straughn (1993), "A Re-Evaluation of the Reported Influence of the Joe Camel Trade Character on Cigarette Trial and Use by Minors," in *Proceedings of the 1993 American Academy of Advertising*, Esther Thorson, ed. Montreal, Canada: American Academy of Advertising.
- Moschis, George and R. Moore (1979), "Decision-Making Among the Young: A Socialization Perspective," *Journal of Consumer Research*, 6 (September), 101–12.
- Naples, Michael (1979), *Effective Frequency: The Relationship Between Frequency and Advertising Effectiveness*. New York: Association of National Advertisers, Inc.
- Norman, Nancy M. and James T. Tedeschi (1989), "Self-Presentation, Reasoned Action, and Adolescents' Decisions to Smoke Cigarettes," *Journal of Applied Social Psychology*, 19 (7), 543–58.
- Oei, Tian P. S. and Anthony Burton (1990), "Attitudes Toward Smoking in 7- to 9-Year-Old Children," *The International Journal of the Addictions*, 25 (1), 43–52.
- Ogilvy, David (1983), *Ogilvy on Advertising*. New York: Vintage Books.
- Piaget, Jean (1970), "The Stages of Intellectual Development of the Child," in *Readings in Child Development and Psychology*, P. H. Mussen, ed. New York: Harper and Row.
- Quarforth, Joanne M. (1979), "Children's Understanding of the Nature of Television Characters," *Journal of Communications*, (Summer), 210–18.
- Raju, P. S. and Subhash C. Lonial (1990), "Advertising to Children: Findings and Implications," in *Current Issues and Research in Advertising*, Vol. 12, James Leigh and Claude Martin, eds. Ann Arbor, MI: University of Michigan, 231–74.
- Randazzo, Sal (1992), "The Power of Mythology Helps Brands to Endure," *Marketing News*, (September 28), 16.
- Reeves, B. and Bradley S. Greenberg (1977), "Children's Perceptions of Television Characters," *Human Communication Research*, 3, 113–27.
- Robertson, Thomas and John Rossiter (1974), "Children and Commercial Persuasion: An Attribution Theory Analysis," *Journal of Consumer Research*, 1 (June), 12–20.
- , ———, and Terry Gleason (1979), "Children's Receptivity to Proprietary Medicine Advertising," *Journal of Consumer Research*, 6 (December), 247–25.
- Roedder, Deborah (1981), "Age Differences in Children's Responses to Television Advertising: An Information Processing Approach," *Journal of Consumer Research*, 8 (September), 144–53.
- , Brian Sternthal, and Bobby Calder (1983), "Attitude-Behavior Consistency in Children's Responses to Television Advertising," *Journal of Marketing Research*, 20 (November), 337–49.
- Schindler, Robert, Morris Holbrook, and Eric Greenleaf (1989), "Using Connoisseurs to Predict Mass Tastes," *Marketing Letters*, 1 (1), 47–54.
- Schorow, Stephanie (1992), "Television Activists Take Arms Against Cartoon Cat," *Associated Press*, (March 19).
- Stern, Barbara (1993), "The Art of Deception: Poetic License and Advertising Fiction," in *Proceedings of the American Academy of Advertising*, Esther Thorson, ed. Montreal, Canada: American Academy of Advertising.
- Stewart, David and Ronald Rice (1994), "Non-Traditional Media and Promotions in the Marketing of Alcoholic Beverages," working paper, School of Business, University of Southern California.
- Stutts, Mary Ann and G. Hunnicutt (1987), "Can Young Children Understand Disclaimers in Television Commercials?" *Journal of Advertising*, 16 (1), 41–46.
- Tesser, Abraham (1978), "Self-Generated Attitude Change," in *Advances in Experimental Social Psychology*, L. Berkowitz, ed. New York: Academic Press, 289–338.
- and Mary Conlee (1975), "Some Effects of Time and Thought on Attitude Polarization," *Journal of Personality and Social Psychology*, 31 (February), 262–70.
- Thorson, Esther (1990), "Consumer Processing of Advertising," in *Current Issues and Research in Advertising*, Vol. 12, James Leigh and Claude Martin, eds. Ann Arbor, MI: University of Michigan, 197–230.
- Van Anken, Stuart and Subhash Lonial (1985), "Children's Perceptions of Characters: Human Versus Animate Assessing Implications for Children's Advertising," *Journal of Advertising*, 14 (2), 13–22.
- Ward, Scott (1972), "Children's Reactions to Commercials," *Journal of Advertising Research*, 12 (April), 37–45.
- (1978), "Researchers Look at the 'Kid-Vid' Rule: Overview of Session," *Advances in Consumer Research*, 6 (October), 7–11.
- , D. Wackman, and E. Wartella (1977), *How Children Learn to Buy*. Beverly Hills, CA: Sage Publications, Inc.
- Wells, William D. (1965), "Communicating with Children," *Journal of Advertising Research*, 5 (2), 2–14.
- Will, George (1992), "Can't Be Too Tough on Tobacco," *Washington Post*, (January 19).
- Wilson, David (1990), "Tooned On: America Flips for Cartoons," *TV Guide*, (June 9), 22–27.
- Zajonc, Robert (1968), "Attitudinal Effects of Mere Exposure," *Journal of Personality and Social Psychology Monographs*, 9 (2), 1–27.