

3-1987

The Impact of Cultural Patterns on Cognition and Intention in Singapore

Chin Tiong TAN

Singapore Management University, cttan@smu.edu.sg

John U. Farley

Follow this and additional works at: http://ink.library.smu.edu.sg/lkcsb_research



Part of the [Asian Studies Commons](#), [Marketing Commons](#), and the [Race and Ethnicity Commons](#)

Citation

TAN, Chin Tiong and Farley, John U.. The Impact of Cultural Patterns on Cognition and Intention in Singapore. (1987). *Journal of Consumer Research*. 13, (4), 540-544. Research Collection Lee Kong Chian School Of Business.

Available at: http://ink.library.smu.edu.sg/lkcsb_research/263

This Journal Article is brought to you for free and open access by the Lee Kong Chian School of Business at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection Lee Kong Chian School Of Business by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email libIR@smu.edu.sg.

The Impact of Cultural Patterns on Cognition and Intention in Singapore

CHIN TIONG TAN
JOHN U. FARLEY*

Ethnicity of models used in advertisements and the advertised product's country of origin are manipulated experimentally to study how attitudes toward advertising and products lead to behavioral intention. A sample of Singaporean students' traditional Eastern values about family and conformity are also examined. Patterns of results for three products are consistent with theoretical predictions of cognitive processes, and attitude-intention links appear stronger than do those in similar tests in the West. Culture has mixed effect.

This experimental study examines how cultural elements influence relationships between attitudes and intentions in a non-Western culture—Singapore. These relationships, probably the most extensively researched in consumer behavior, have been tested mainly in the United States using models and methods of Western origin (Farley, Lehmann, and Ryan 1981; Wilkie and Pessemier 1973). Even if general theories apply qualitatively, there may be culture-related empirical differences in measured response sensitivity to various stimuli.

Singapore, with a population that is three-fourths Chinese, is a relatively wealthy urban country on the increasingly important "Pacific Rim." Due to their colonial history and strategic location, Singaporeans have been influenced by Western culture, but Eastern culture and values are also strong. As Ban puts it (1982, p. 111), "A Singaporean is introverted. His dependence is inwards toward family, class and race instead of nation. . . . Emotions tend to be internalized rather than expressed outwards." Obedience and harmony are important, as are value of intense friendships and trust of family. Cultural factors have been shown to be mediators of attitude and behavior in Singapore (Tan and Chua 1986).

BACKGROUND

This study combines the ethnicity of models used in advertisements, the advertised product's country of or-

igin, and the cultural and demographic characteristics of subjects. The product's country of origin, probably the most researched international aspect of consumer behavior, tends to influence product evaluations (Anderson and Cunningham 1972; Erickson, Johansson, and Chao 1984; Nagashima 1970; Rierison 1967; Schooler 1971). Respondents in smaller, developing countries generally prefer products from established foreign producers. This has been variously attributed to bias related to the degree of economic development (Krishnakumar 1974; Schooler 1971), to culture and political climate (Wang 1978), and to perceived similarity with the source country's belief system (Tongberg 1972). Evaluation of foreign products may vary with the demographics of respondents, including age (Schooler 1971; Tongberg 1972), sex (Schooler 1971), income (Wang 1978), and education (Anderson and Cunningham 1972; Wang 1978). People may prefer ads featuring models of their own ethnic background (Cagley and Cardozo 1970; Choudhury and Schmid 1974), although the evidence is mixed (Muse 1971; Orpen 1975). In Asian societies that are influenced by the cultural values and norms of Confucian philosophy such as Singapore, Hong Kong, Taiwan, and Japan, traditional family values and conformity are vital despite modernization (Hsu 1985).

The much-studied relationship between attitude and intention supports attitude's key mediating role between receipt of communication and intention (McGuire 1969). When attitudes toward product and advertisement are formed more or less simultaneously—as they are in the study reported here—there may be a concurrent reaction between them (Mitchell and Olson 1981; Wright 1972).

METHOD

The experimental design contains 12 cells, each involving product origin (local or foreign), model (Asian

*Chin Tiong Tan is Associate Professor and Head of the School of Management, National University of Singapore, Singapore 0511. John U. Farley is Executive Director, Marketing Science Institute, Cambridge, MA 02138, and R. C. Kopf Professor of International Marketing, Graduate School of Business, Columbia University, New York, NY 10027. The authors wish to thank Wallace Tsui for performing the data collection and Jeannie Teoh for performing the analysis.

or Caucasian), and one of three products (men's clothing, women's clothing, and face cream). These products were used because subjects might buy them for themselves or as gifts. Fictitious brand names (VIVA face cream, AVANI men's clothing, and BIANCA women's clothing) were seen in a pretest as attractive and easy to remember but not as reflecting a specific country of origin. Each cell was randomly assigned 108 subjects, male and female. Each respondent completed a questionnaire that contained one ad for one product and the relevant questions. Subjects, grouped into sessions for administration, were told that this was a pilot study for an advertising agency to judge attractiveness of advertising.

Subjects were university students attending business courses; 59 percent were female and 92 percent were Chinese. All students spoke Chinese fluently. While students are generally more exposed to Western values than their parents were, there is pressure to retain traditional values as well. Living with an extended family is common in Singapore, and the government encourages this in housing allocation. Confucian ethics and values are taught in all schools. Intensive intrafamily communication and Confucian beliefs have been found to discourage adolescents' materialistic attitudes (Lee 1984).

Experimental Controls

Country of Origin. Respondents were told that the product was made by a leading manufacturer, either locally or abroad. As residents of a major import-export center noted for trade in quality products from all over the world, respondents presume that foreign-made products are of excellent quality. While products manufactured in Singapore also have an excellent reputation for quality, we hypothesize that foreign products will be preferred.

Model Ethnicity. An advertising agency created two versions of each ad—one with an Asian, the other with a Caucasian model. Ads were the same size, and identifiable personalities were not used. The two variations for each product had the identical scene, layout, message, and brand name. The agency selected professional models with identifiable facial characteristics, with the sex of the model appropriate for the product. Subjects evaluated the models as equally attractive. Based on our discussion of the literature, we expect that, on average, Western models will be preferred.

Covariates

Cultural Variables. We used two cultural variables in this study. Family orientation was measured by summing four seven-point scales: (1) affection for family, (2) interaction with family members, (3) parental influence on thought, and (4) tendency to compromise sub-

ject needs with family needs. Conformity was defined as the sum of two scales: behaving according to what others expect and giving up personal desires to conform to social norms. Cronbach's alpha is 0.85 for family orientation and 0.93 for conformity. The items used to measure the variables were chosen using factor analysis of a large inventory of life style/value items compiled to reflect traditional Chinese value orientation (Hsu 1981; Levy 1949; applied in Ellis et al. 1985; McCullough, Tan, and Wong 1986; Tan and McCullough 1985).

Based on our earlier discussion, we expect measured family orientation to be negatively related to attitudes toward both product and advertising. We also expect conformity to be negatively related to product attitudes.

Economic Status. Most students live with their parents, many with grandparents as well. The majority of Singaporeans live in relatively inexpensive government-subsidized housing, which we use as a surrogate for income and economic status. By hypothesis, living in subsidized housing is negatively related to intention.

Sex of respondent. We anticipate females to have more favorable attitudes toward product and advertising for face cream and women's clothing, and males to be more favorable toward men's clothing.

Attitude and Intention

There are three jointly dependent (endogenous) variables—attitudes toward both product and advertising (which were formed together under the experimental conditions), and intention to purchase. Attitudes were operationalized by summing measurements on attributes weighted by importance. All measurements were on seven-point scales centered at zero.

Attitude toward advertising involved 11 attributes: attention arousal, honesty, attractiveness, readability, persuasiveness, believability, provision of information, sophistication, creativity, ease of understanding, and entertainment value. Attitudes toward the product used eight attributes that varied over products. For example, attributes for men's clothing were: reasonable price, quality, cutting, comfort, style, brand reputation, attractiveness, and prestige. Behavioral intention was measured on a single seven-point scale. Attitude toward a product and toward its advertising should have positive reciprocal relationships. Behavioral intention should be positively related to attitude toward a product.

RESULTS

Each of the three dependent (endogenous) variables is related by hypotheses to a subset of the experimental variables, covariates, and other endogenous variables. The 11 hypotheses are spelled out in the Exhibit—two experimental, six involving covariates, and three in-

EXHIBIT

ESTIMATED REGRESSION COEFFICIENTS (LIML) IN THREE HYPOTHESIZED JOINT RELATIONSHIPS LINKING ATTITUDE TOWARD ADVERTISING, ATTITUDE TOWARD PRODUCT, AND BEHAVIORAL INTENTION

Dependent variables	Explanatory variables				
	Experimental		Covariate	Endogenous	
Attitude toward advertising	Model is Asian		Family orientation	Subject is male	Attitude toward product
Hypothesized sign of explanatory variable	- an Asian model is associated with lower attitudes toward advertising		- higher traditional family values makes advertising less attractive	+ for men's clothing, which males prefer - for the other products, which women prefer	+ more favorable attitude to product is related to more favorable attitude toward advertising
Face cream	-8.65 ^a		-1.98 ^b	-12.04 ^a	1.04 ^b
Women's clothing	-15.02 ^b		-3.64	-11.09 ^b	3.18 ^a
Men's clothing	28.52		-1.30	11.88	2.37 ^b
Attitude toward product	Product is local	Family orientation	Conformity	Subject is male	Attitude toward advertising
Hypothesized sign of explanatory variable	- local origin is associated with lower attitudes toward products	- higher traditional family values make products less attractive	- higher value of conformity makes new products less attractive	+ for men's clothing, which males prefer - for the other products, which women prefer	+ more favorable attitude to advertising is related to more favorable product attitude
Face cream	-4.23 ^b	1.21 ^b	0.244	6.41 ^a	0.23 ^b
Women's clothing	-2.28	1.87	1.359	0.07	0.02
Men's clothing	-3.20 ^b	0.04	-2.638 ^a	1.61	0.93 ^a
Behavioral intention		Lives in subsidized housing			Attitude toward product
Hypothesized sign of explanatory variable		- lower socioeconomic groups have lower intentions			+ more favorable attitude is related to greater intention to buy
Face cream		0.05			0.23 ^a
Women's clothing		0.11 ^b			0.03 ^a
Men's clothing		0.11 ^b			0.02 ^b

^a Significant at $\alpha = 0.01$.

^b Significant at $\alpha = 0.05$.

volving attitudes and intention. Because different, randomly assigned subjects responded to each of the 12 experimental conditions, each product provides a separate test of the 11 hypotheses.

The hypotheses were tested using unstandardized regression coefficients estimated simultaneously in a limited information maximum likelihood procedure (LIML), which was chosen for reasons of efficiency (Takeuchi and Morimune 1985).

Experimental Cultural Effects Hypotheses: Qualified Confirmation

In all cases, attitudes toward products of local origin were lower than attitudes toward imports, in two cases significantly so. For two products, attitudes toward advertisements using the Asian model were significantly

lower than attitudes toward ads using the Western model. In one case (men's clothing), attitude toward advertising using the Asian model was higher, indicating the possibility of a product-specific effect that could be of practical significance.

Cultural and Covariate Hypotheses: Mixed Results

As expected, attitudes toward advertising corresponded to product interest, with men higher on men's clothing and women higher on face cream and women's clothing. However, males seemed more interested in all of the products than expected. Also contrary to expectation are the generally higher intentions of those living in subsidized housing. Family orientation and conformity show mixed results. Family orientation has the

expected negative relationship with attitude toward advertising in three cases (one significant). However, the positive relationships (one significant) with attitude toward products indicate that basic interest in the products may overwhelm the effect of tradition. Conformity has mixed relationships. Perhaps the sample did not produce the necessary contrast on these scales to get sharp cultural profiles.

Attitude and Intention Hypotheses: Confirmed

Propositions about attitude and intention from general consumer behavior theories seem to generalize to this population. Attitudes toward advertising and toward product are jointly related, although the sizes of the coefficients indicate that attitude toward advertising influences attitude toward product more than the reverse. Intention and attitude toward product are significantly related, and all three coefficients have about the same value. All nine coefficients of endogenous explanatory variables are positive, as expected, and eight are significant.

Quantitative Comparison of Results with Other Studies

A meta-analysis of 37 Fishbein models (Farley, Lehmann, and Ryan 1981) found an average of 0.45 for beta coefficients that link attitude with intention in studies using student subjects, and no differences were found across three countries in the strength of the attitude-intention relationship in consumer behavior models (Farley, Lehmann, and Ryan 1982). For this study, analogous beta coefficients, approximated by multiplying the regression coefficients linking attitude toward product and behavioral intention (Exhibit) by the ratio of standard deviations of attitude and intention, average 1.08. This value is significantly higher than the highest value in the 37 studies mentioned above, which indicates a stronger relationship in this study than in similar Western studies. Stronger aggregate response to advertising outside the U.S. was similarly reported in Assmus, Farley, and Lehmann (1984).

DISCUSSION

In Singapore, influenced by both traditional Eastern and modern Western cultures, our student sample preferred imported products to local products. Similarly, Western models were generally preferred in advertising, although there may be some product specificity. Eastern family orientation appears to affect evaluation of advertising, but conformity appears to play a small role. Predictions from general theories of consumer behavior are qualitatively confirmed in relationships between attitudes toward advertising and products, and between product attitudes and behavioral intention. The rela-

tionship linking attitude toward product with intention to buy is stronger than relationships reported in Western studies.

Because of Western cultural influence, Singapore provides only an initial test, and our student population may be even more Westernized than the overall population. Further, tests on other products with heavy cultural content (such as foods) would be useful. Replicating and comparing this research in settings that might give broader readings on the cultural scales is also desirable.

[Received October 1985. Revised July 1986.]

REFERENCES

- Anderson, T.W. and William Cunningham (1972), "Gauging Foreign Product Promotion," *Journal of Advertising Research*, 12 (February), 29-34.
- Assmus, Gert, John U. Farley, and Donald R. Lehmann (1984), "How Advertising Affects Sales: A Meta-Analysis of Econometric Results," *Journal of Marketing Research*, 21 (February), 65-74.
- Ban, Kah-Choon (1982), "A Letter to a Foreign Friend: Notes Towards Defining Singapore Culture." *Commentary*, August, 110-113.
- Cagley, James W. and Richard N. Cardozo (1970), "White Response to Integrated Advertising," *Journal of Advertising Research*, 10 (April), 35-39.
- Choudhury, Pravat K. and Lawrence S. Schmid (1974), "Black Models in Advertising to Blacks," *Journal of Advertising Research*, 14 (June), 19-22.
- Ellis, Seth, James McCullough, Melanie Wallendorf, and Chin Tiong Tan (1985), "Cultural Values and Behavior: Chineseness within Geographical Boundaries," in *Advances in Consumer Research*, Vol. 12, eds. Elizabeth C. Hirschman and Morris B. Holbrook, Provo, UT: Association for Consumer Research, 126-128.
- Erickson, Gary M., Johny K. Johansson, and Paul Chao (1984), "Image Variables in Multi-Attribute Product Evaluations: Country of Origin Effects," *Journal of Consumer Research*, 11 (September), 694-699.
- Farley, John U., Donald R. Lehmann, and Michael J. Ryan (1981), "Generalizing from 'Imperfect' Replication," *Journal of Business*, 54 (October), 597-610.
- , Donald R. Lehmann, and Michael J. Ryan (1982), "Patterns in Parameters of Buyer Behavior Models: Generalizing from Sparse Replication," *Marketing Science*, 1 (Spring), 181-140.
- Hsu, F. (1981), *American and Chinese: Passage to Differences*, Honolulu, HI: University of Hawaii Press.
- Hsu, Paul S.C. (1985), "The Influence of Family Structure and Values on Business Organizations in Oriental Cultures: A Comparison of China and Japan," working paper, School of Management, National University of Singapore, Singapore, 0511.
- Krishnakumar, Parameswar (1974), "An Exploratory Study of the Influence of Country of Origin on the Product Images of Persons from Selected Countries," unpublished dissertation, College of Business Administration, University of Florida, Gainesville, FL 32611.
- Lee, Jennifer (1984), "Adolescent Consumer Socialization,"

- working paper, School of Management, National University of Singapore, Singapore 0511.
- Levy, Marion J. (1949), *The Family Revolution in Modern China*, Cambridge, MA: Harvard University Press.
- McCullough, James, Chin Tiong Tan, and John Wong (1986), "Effects of Stereotyping in Cross Cultural Research: Are the Chinese Really Chinese?" in *Advances in Consumer Research*, Vol. 13, ed. Richard Lutz, Provo, UT: Association for Consumer Research, 93-101.
- McGuire, William J. (1969), "The Nature of Attitudes and Attitude Change," in *The Handbook of Social Psychology*, Vol. 3, eds. G. Lindzey and E. Aronson, Reading, MA: Addison-Wesley, 132-161.
- Mitchell, Andrew A. and Jerry C. Olson (1981), "Are Product Attribute Beliefs the Only Mediator of Advertising Effects on Brand Attitude?" *Journal of Marketing Research*, 17 (August), 318-332.
- Muse, William V. (1971), "Product-Related Response to Use of Black Models in Advertising," *Journal of Marketing Research*, 7 (February), 107-109.
- Nagashima, Atkira (1970), "A Comparison of Japanese and U.S. Attitudes Towards Foreign Products," *Journal of Marketing*, 34 (July), 95-100.
- Orpen, Christopher (1975), "Reactions to Black and White Models," *Journal of Advertising Research*, 15, 75-90.
- Rierson, Curtis (1967), "Attitude Changes Towards Foreign Products," *Journal of Marketing Research*, 4 (November), 385-387.
- Schooler, Robert D. (1971), "Bias Phenomena Attendant to the Marketing of Foreign Goods in the U.S.," *Journal of International Business Studies*, Spring, 71-80.
- Takeuchi, Kei and Morimune Kimes (1985), "Third Order Efficiency of the External Maximum Likelihood Estimators in a Simultaneous Equation System," *Econometrica*, 53 (January), 528-539.
- Tan, Chin Tiong and James McCullough (1985), "Relating Ethnic Attitudes and Consumption in an Asian Context," in *Advances in Consumer Research*, Vol. 12, eds. Elizabeth C. Hirschman and Morris B. Holbrook, Provo, UT: Association for Consumer Research, 122-125.
- and Christina Chua (1986), "Intention, Attitude and Social Influence in Bank Selection—A Study in Oriental Culture," *International Journal of Bank Marketing*, 4 (June), 43-53.
- Tongberg, Richard C. (1972), "An Empirical Study of Relationships between Dogmatism and Consumer Attitudes Towards Foreign Products," unpublished dissertation, School of Business, The Pennsylvania State University, University Park, PA 16802.
- Wang, Chih-Kang (1978), "The Effect of Foreign Economic, Political and Cultural Environment on Consumers' Willingness to Buy Foreign Products," unpublished dissertation, School of Business, Texas A & M University, College Station, TX 77843.
- Wilkie, William L. and Edgar A. Pessemier (1973), "Issues in Marketing's Use of Multi-Attribute Attitude Models," *Journal of Marketing Research*, 10 (November), 428-441.
- Wright, Peter L. (1972), "Attitudinal Effects of Advertising: A Cognitive Response Model," Working Paper No. 45, College of Commerce and Business Administration, University of Illinois, Urbana, IL 61820.