

Can culture affect prices? A cross-cultural study of shopping and retail prices

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Abstract

This study examines whether there are differences in consumers' shopping behavior and product prices in grocery stores due to cultural orientation. The study uses a field setting in Southern California, comparing samples of American and Chinese culture on two occasions, each five years apart. Theory suggests that price sensitivity and the importance of the status of buyers differ substantially between Chinese and American cultures. Consistent with these differences, the study finds that these two cultural groups have dramatically different shopping practices. Chinese use multiple senses when examining unpackaged food, and do so far more than American shoppers. They also inspect many more items and take much more time to shop.

The differences in shopping behavior correspond to clear differences in prices between grocery stores serving the two cultural groups. Chinese supermarkets have substantially lower prices across a range of food products than mainstream American supermarkets. These differences ranged from 37% for packaged goods of the same brand and size to more than 100% for meats and seafood of the same type and description. These differences are similar across a span of five years. We argue that differences in culture provide the most likely explanation for the differences in prices between the two types of super markets. © 2001 by New York University. All rights reserved.

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1. Introduction

The marketing literature differs in its findings about cross-cultural differences in behavior. One stream of research finds differences that are relevant to marketers. For example, Graham et al. (1988) and Graham (1983) find that Japanese, Chinese, Koreans and Americans differ in their business negotiating strategies. They also find that these cross-cultural differences in strategy affect the process and outcomes of negotiations. In a similar vein, Clark (1990) and others suggest that national characteristics of behavior are unique and consistent over time. These unique characteristics are due to shared norms, values and learned behaviors that relate to culture within national boundaries.

However, other studies find no cross-cultural differences among consumers. For example, Anderson and Engledow's (1977) survey of German and American shoppers finds no significant differences in attitudes toward the purchase process. Douglas and Craig's (1992) review of international marketing finds similarity in the cognitive processes of consumers. Dawar and Parker (1994) find that the relative importance of 'brand name', 'price', 'physical appearance' and 'retailer reputation' as signals of quality for consumer products do not change across cultures. Even studies that find differences in consumer behavior across national boundaries explain those differences by factors other than culture. For example, Tse (1989) attributes differences in the content of advertising across national boundaries to economic and political development. Douglas (1976) attributes differences in consumer attitudes to the working status of women. Gatignon et al. (1989) attribute differences in diffusion rates of innovations across nations to the sociological and demographic composition of the nations.

These findings have implications for marketers. For example, Dawar and Parker (1994) conclude that "cultural segmentation based on signal-use levels may not be justified." (p. 91). Douglas and Craig (1992) echo these sentiments when they state that "the increasing mobility of consumers across national boundaries together with increased exposure to international communications suggests a need to pay greater attention to examining the impact of such trends on consumer values, attitudes, preferences and purchasing patterns." Levitt (1983) goes a step further. He assumes that differences across cultures and languages are small enough as to justify mass strategies such as standardized brand names, packaging, advertising and promotions across countries.

Why has this second set of studies not found cross-cultural differences in behavior? Many factors may be responsible. First, cultural norms or values are not easily measured and quantified. Since they are difficult to quantify for study, their effects may be ignored or attributed to structural factors. Second, some authors seek universals and in so doing, they may bypass important cross-cultural differences. Third, some past studies have focused on modern industrial products, which have not been established long enough in a particular society to have stimulated unique cultural meaning and use. Yet, cultural values and norms can have a profound influence on consumer behavior.

The current study tries to avoid these limitations and makes several contributions. First, the study posits major differences in shopping behavior across cultures. In particular, it suggests that Chinese, raised in a collectivist society that values price consciousness and sophistication in money-handling, differ from Americans raised in an individualistic society

that traditionally does not have the same values. Second, the study suggests that retailing strategy may vary in response to cultural differences. As a result pricing tactics may differ in response to or to attract consumers of different cultural orientation. Third, the findings of this study support the use of observation as an important tool for cross-cultural marketing research. The differences in shopping behavior observed between Chinese and American shoppers were large and immediately clear. Lastly, this study indicates that the above cross-cultural differences and retailer reactions are consistent across a span of five years. Thus, they are not easily explained by short-term trends or economic cycles.

We focus on Chinese and American cultures for several reasons. First, they are highly dissimilar. The Chinese have a rich cultural heritage that is distinct in origin and development from American culture. Second, Chinese and Americans live in the most populous and the most economically advanced nations of the world, respectively. These nations have had and will continue to have major impact on world culture and economy. Third, economic and political changes in the last few decades have brought these two cultural systems in direct contact, and often in conflict, in the states bordering the Pacific Ocean. Thus a study of their differential impact on shopping and retailing may be timely and revealing.

The rest of the article is organized into three sections. The first section discusses the impact of cultural orientation on shopping behavior, specifically its effect on price consciousness and the status of buyers. The second section describes two empirical studies. Study 1 observes measurable differences in shopping behaviors between “Chinese” and “American” consumers. Study 2 looks for systematic differences in pricing between supermarkets serving different groups that may be due not to structural factors, but to shopping behavior. The final section discusses the implications of the study.

2. Cultural orientation and shopping behavior

For purposes of this study, we focus on the culturally based norms (appropriate behavior in a situation) and values (desirable behavior across situations) that would lead to differences in shopping behavior between Chinese and Americans. These values and norms are passed on from the community to an individual as he or she is socialized within the community. Consumers learn values and norms about the acquisition, consumption and disposal of products through socialization in their communities (Moschis, 1987). Thus cultural values and norms become a primary explanation of similarities in behavior of individuals within the community, and differences in the behavior of individuals across communities.

A community’s social behavior is heavily influenced by language, through which a culture’s values and norms are communicated (Lamal, 1991). Language, which is the principal means of communication, evolves closely with the culture of a community, and is a key means of cultural expression. Communication has been found to be a major determinant of cultural orientation among immigrants (O’Guinn & Faber, 1985; Kim, 1977).

This cross-cultural focus suggests two surrogate measures for it: primary language spoken at home and country of birth. Since language is closely related to and is an expression of the culture of an individual, the primary language spoken at home would indicate the cultural allegiance of that individual. Further, since an individual imbibes a community’s culture

during the early years of socialization, the country of one's birth would also indicate the individual's culture.

Based on these principles, the term “**Americans**” refers to those individuals who were born in the United States and whose primary language is English. Note, that this term includes Chinese Americans who were born in the United States and whose primary language is English. The term “**Chinese**” refers to those individuals who were born in the People's Republic of China, Hong Kong or Taiwan and whose primary language is written Chinese and any spoken dialect of Chinese, the native language in their original country of affiliation. Initially, we grouped “Chinese” by country of origin, People's Republic of China, Hong Kong and Taiwan, following Tse et al. (1989). The respondents from the People's Republic of China were dropped from the study due to their small numbers in the sample. Preliminary results indicated no significant differences in either the survey or the observation between subjects from Hong Kong and Taiwan on the measured variables, so the two groups were merged into one “Chinese” category.¹ The rest of the paper uses the terms “Chinese” and “Americans” to imply the specific meanings in the definitions above, and not the meaning of citizens of China and the USA, respectively, that these terms normally have.

Note that the definition of “Chinese” excludes individuals who emigrated from China but whose primary language is not Chinese, and individuals who were born in the US and whose primary language is Chinese. The definitions also exclude some bilingual individuals. Such individuals share more than one culture, but are not clear representatives of either one. Also, based on our explanation of culture above, we should have measured country of upbringing rather than that of birth, although we do not think our sample or results would have changed much.

Ethnicity is a demographic characteristic that describes the national or geographic origin of an individual. Thus people within the US may be ethnic Chinese or Armenian, if they or their ancestors came from China or Armenia respectively. Studies often measure ethnicity by surname (Stayman & Deshpande, 1989; Saegert et al., 1985). As with nationality, ethnicity alone may not be a good measure of cultural groups. The reason is that individuals of different ethnic groups can share the same culture through assimilation. For example, fourth generation descendants of German and English immigrants in the US are often culturally indistinguishable. Also, individuals who are part of the same ethnic group can have different cultures through dispersions. For example, fourth generation Chinese immigrants into Malaysia and the US are culturally distinct from each other and from Chinese in Mainland China.

2.1. Chinese immigrants in Southern California

Southern California is a good laboratory for studying cultural differences. Large segments of first generation immigrants from the same country live together in a city. They form spatially separate communities, immersing members in media, social life, shopping and language from their culture of origin. To preserve their cultural roots, they send their children to Chinese school on Saturdays, in addition to regular school on weekdays. The large Chinese speaking community in Southern California especially is more affluent, diverse in educational background and type of business operated than in other parts of the country. In

large part, they do not live in deteriorating inner-core urban centers but in multicenter, middle-class suburban communities (Tseng, 1994). The majority of this population has been in the United States less than 10 years and retains strong connections with their place of origin. As Horton (1995) points out, the Chinese immigrants in this area have enough human capital and economic resources to avoid the traditional routes of assimilation. On the other hand, these immigrants share the same infrastructure, government and resources with surrounding communities. Thus with care, one can identify groups of individuals that have the same socio-economic status but differ by the norms and values of their respective cultures.

We recognize that there will be some degree of acculturation. The “Chinese” in Southern California will be more exposed to American culture than individuals in China. Also, because Southern California has so many Chinese-speaking residents, the “Americans” in Southern California are more likely to be exposed to Chinese culture than those in other parts of the country. These factors favor the null hypothesis of no differences in consumer behavior between the two groups. *Any observed differences in behavior between these two groups suggest that such differences may be even more pronounced between better representatives of their cultures.*

2.2. Distinction from research on subcultures and shopping

Some earlier studies looked at attitudes toward shopping and store pricing among ethnic groups in Southern California. They found differences between those groups in brand and store preferences as well as in the types of information sources used by consumers (Darymple et al., 1970). Results also indicate that the prices paid by non-Anglo consumers were higher than those paid by Anglo consumers regardless of the ethnicity of the merchant (Sturdivant, 1969; Sturdivant & Wilhelm, 1968).

Our study differs from those studies in three important aspects. First, the two groups we compare (“Chinese” and “Americans”) do not really constitute subcultures. In general, the “Chinese” as we defined them are members of a large and recent immigrant group that still speak their native language at home. As such, they are considered distinct from ethnic subcultures because they do not yet have enough contact with the mainstream culture (Miller et al., 1998; Penaloza, 1994). For example, Penaloza (1994) found that although there was adaptation by Mexican immigrants to new circumstances, in some areas such as food shopping, consumer patterns were very similar to that which they experienced in Mexico. They lived in close proximity to but were distinct from the Mexican American subculture. Similarly, the Chinese immigrant community in Southern California lives close to but is distinct from the English-speaking Asian American subculture.

Second, subjects in the “American” group could be part of any ethnic category, including Chinese American or Japanese American, as long as the country-of-birth is the United States and the sole language used at home is English. Similarly, subjects in the “Chinese” group only include only first generation immigrants whose primary language is Chinese. Ethnic differences become less pronounced after successive generations of residence in the country. Groups such as the Japanese Americans were quite well assimilated at the time of study (Darymple et al., 1970). However, cultural (as we define

the term) differences are likely to be more evident, and more important in an age of increasing internationalization.

Third, we use a triangulation of methods to examine cultural influences on shopping behavior, including a survey, interviews and observation of shopping behavior and of store prices. Self-report methods alone, such as survey and interviews, may be imprecise methods for studying cultural differences, because the methods involve culturally based modes of communication.

2.3. Cross-cultural differences in shopping behavior

There is an extensive literature examining the influence of cross-cultural differences in consumption (Jacobs et al., 1991; Belk, Wallendorf & Sherry, 1989; Wallendorf & Arnould, 1988; Belk, 1988; Belk, Wallendorf, Sherry, Holbrook & Roberts, 1988; Gilly, 1988; Levy, 1959). Cultural orientation may have an effect not just on product meaning after acquisition, but on the actual process of shopping.

Shopping activity is a social event whose meaning is likely to be even more closely tied to culture than the meaning of the product. Although some early research does examine mundane consumer shopping using ethnographic methods (Wells & LoScioto, 1966), recent interest in the area has grown (e.g., Miller, 1998; Miller et al., 1998; McGrath & Otnes, 1995; Otnes et al., 1995). Miller et al. (1998) found that shopping as an activity was not just about product acquisition but was very much a part of social relationships. Miller et al. (1998) document how the shopping place can provide identity for its participants, especially for groups that might be gradually losing their distinctive identity.

Shopping does not have to be just for the functional purpose of product purchase. For example, Sherry (1990) examines the role of shopping in the flea market. He suggests that people are not just led to the flea market for the utilitarian function of the purchase, but also for the satisfaction they derive from the shopping environment itself, so that the shopping activity becomes more important than the purchase of products. Lehtonen and Maenpaa (1997) outline the differences between shopping as pleasure and task. They suggest that shopping for pleasure can be an end in and of itself. Some societies also place a high social value on the spending out of money while shopping. Miller (1997) finds that in some circumstances, for Trinidadians spending of money as quickly as possible while shopping demonstrates allegiance to friends and family.

Shopping behavior can be learned behavior from school or parents (Carlson & Grossbart, 1988; Wackman et al., 1977), but it can also be social behavior that is adopted from societal norms that define what is desirable (Cialdini et al., 1990). Shopping behavior like any other behavior is open to influence by the norms of the social group with which one identifies. One compares oneself and adjusts one's behaviors more with similar others than with dissimilar others (Miller et al., 1988). If one's social group values shopping in second hand thrift stores on Saturdays, one may then engage in that activity with a much greater intensity than those outside of the social or cultural groups.

2.4. High price sensitivity: the frugal shopper

Chinese differ substantially in their attitude and behavior to public and private consumption goods. For public consumption goods and especially gifts, Chinese shoppers are status conscious and not frugal (Yau, 1994). Collectivist and individualist societies provide different motives for luxury consumption (Ahuvia & Wong, 1998; Hofstede, 1980). In a collectivist culture such as China, the symbolic meanings of public goods are more important than in an individualist culture. Social recognition is more important when social relations are stronger (Schutte, 1998). Social norms of reciprocity in gift giving in China also contribute to the importance of the symbolic meaning of public consumption goods. Status goods and high prices symbolize the importance of the relationship to the giver.

On the other hand, for private consumption goods Chinese are probably quite price conscious and pragmatic shoppers (Li & Gallup, 1995). The description of Chinese as price conscious shoppers has not only been applied to developing Mainland China (Frankenstein, 1986; Pye, 1982), but also to Chinese in other countries, including Taiwan (Roo, 1989) and the affluent mercantile societies of overseas Chinese (Seagrave, 1995).

Collectivism may be an important factor leading to frugality in private consumption (Schutte, 1998). Chinese attach a higher value to personal relationships, but a lower value to material goods than consumers in more individualistic societies. This valuation leads to greater pragmatism in purchases of products for private consumption. This explanation is supported by recent surveys that indicate Chinese consumers place a low priority on spending for private consumption (Scarry, 1996).

A social norm of frugality among Chinese also contributes to price consciousness (Weidenbaum, 1996; Redding, 1990). This norm may stem from a lack of external sources of social welfare outside of the family in traditional Chinese society (Fang, 1999). Chinese obtain security primarily through accumulation of wealth within the family, leading to frugality on purchases of goods for personal use. Note also that Chinese in China, Taiwan and Singapore (Cao, Fan & Woo, 1997; Leppert, 1990) presently have among the very highest household savings rates in the world.

There is a norm of sophistication with money handling that has long existed, especially in South China and the mercantile overseas Chinese communities (Redding, 1990; Freedman, 1979). These Chinese did not hoard money, but neither did they waste it. Rather they invested money to attain the highest return. Freedman (1979) suggests that this norm evolved from the respectability of accumulating wealth, the relative infrequency with which this wealth was confiscated and the high degree of financial dealings among friends and family in Chinese society.

Price consciousness may contribute to such shopping behavior as widespread haggling (Fang, 1999). For example, Jacobs et al. (1984) report that more than 50% of all stores they sampled in Hong Kong, Taiwan and Singapore were retailers that allowed bargaining. This proportion is several times higher than the that of 10% in Latin America and 3% in South Africa. Of specific interest to this study, Hong Kong, Taiwan and Singapore had the highest percentage of food and drug stores that allowed price bargaining.

The high price sensitivity of Chinese buyers should result in shopping differences between “Chinese” and “Americans.” In particular, Kolodonsky (1990) and Doti and

Sharir (1980) use shopping time as an indicator of price search behavior. Others suggest that savings on a purchase is a benefit consumers derive from expending time on search (Urbany et al., 1996; Dickson and Sawyer, 1990). We apply this reasoning to shopping behavior within a retail market. We posit that price conscious shoppers would take more time and search through more items before purchasing the best for the money than other shoppers. Since the “Chinese” have grown up in a culture that values price consciousness we hypothesize that there will be more of this type of extensive in-store search by shoppers. Thus,

H_1 : When shopping, “Chinese” take more time to search per item purchased than “Americans” do.

H_2 : “Chinese” examine more items per product purchased than “Americans” do.

2.5. *Impact of shopping behavior on retail prices*

Could these differences in shopping behavior influence store pricing? The Chinese come from a society in which the “buyer is king.” Chinese business culture places a high degree of importance upon status (Fang, 1999). Due to the higher status of buyers, sellers more readily defer to their interests (Graham et al., 1994; Graham et al., 1988). Graham (1983) found that this status difference allowed buyers to do better than sellers relative to their counterparts in societies where status of buyers is not as important such as the United States.

If sellers yield more to buyers in business negotiations, we can expect them to do the same in retail settings. Studies on negotiation behavior have traditionally looked at buyers and sellers within the context of business-to-business negotiations (Graham et al., 1994; Graham et al., 1988; Schurr & Ozanne, 1985; Clopton, 1984). These findings can explain how consumer-shopping differences across cultures may affect prices and quality offered by retailers. Grocery retailing, especially in Southern California, is highly competitive with small margins and daily changes in prices. Thus profit maximization based on such consumer behaviors is likely to be not only normal but also necessary.

The economics of information suggests that differences in consumers’ search for prices can affect the prices that firms offer (Salop & Stiglitz, 1977; Varian, 1980). Cultural differences in the shopping behaviors of the consumers may affect their search for prices and thus the pricing strategy of firms. So, if H_1 and H_2 were true, then “Chinese” would be much more selective in the products they purchase than “Americans.” Customers who are informed and shop carefully for food prompt retailers to supply lower priced products. Similarly, for food products which have tangible or searchable attributes, quality conscious buyers would engage in a more extensive attribute search, and would be better able to determine whether levels of attributes match levels of prices (Rao, 1992). So if H_1 and H_2 were true, retailers would likely offer lower prices for comparable quality to “Chinese,” than to “Americans.” In contrast, in markets where consumers are less motivated to search for information, retailers would offer higher priced or lower quality products (Tellis & Wernerfelt, 1987).

Could lower costs *alone* drive lower prices? Not necessarily. Just because firms have

lower costs, does not mean that they will have lower prices. In the absence of consumer sensitivity to low prices, a profit-maximizing retailer with low costs may still keep prices high to retain profits. Further, the force of demand can affect the way firms manage their costs. Demand for low prices can motivate retailers to improve quality or lower costs to meet demand adequately. Conversely, when demand is less sensitive to price, retailers may be less motivated to lower costs or increase quality, leading to the existence of inefficient firms (Salop & Stiglitz, 1977; Tellis & Wernerfelt, 1987). Thus demand can be more of an influence than supply in motivating firms to lower prices and improve quality. This line of reasoning suggests that:

H_{3A} : Prices in Chinese supermarkets are lower than those in mainstream American supermarkets for comparable products.

In contrast to the above argument based on cultural orientation and the economics of information, traditional economic theory suggests a rival hypothesis based on economies of scale. The large chain supermarket can have lower costs because of its ability to buy in large quantities, or negotiate lower prices from suppliers (Lusch & Dunne, 1990; Porter, 1985; Berman, 1979). In addition, the large chain supermarket is better able to spread the fixed costs of building, inventory, and administration over a large base of sales. In the absence of differences in demand across “Chinese” and “Americans,” these economies of scale could translate into lower prices at large chain stores relative to nonchain or small chain stores (Mason et al., 1993). Now most Mainstream American supermarkets tend to be larger than Chinese supermarkets. Hence, a hypothesis based on traditional economic theory and parallel to the one we proposed in H_{3A} is:

H_{3B} : Prices in mainstream American supermarkets are higher than those in Chinese supermarkets for comparable products.

3. Empirical research

We conducted two studies to test these hypotheses. Study 1 tests hypotheses H_1 and H_2 through an observation of the behavior of “Chinese” and “Americans.” Study 2 tests the rival hypotheses H_{3A} and H_{3B} by observation of the differences in the retail prices in stores frequented by the two groups. We first discuss the data collection and sampling for the studies, and then proceed to describe each study.

3.1. Data collection

The primary method of data collection in this paper is direct observation of both shopping behavior and actual prices. The survey has several advantages over observation. It is faster, more convenient, less costly, and can access unobservable mental processes as well as past phenomena. However, observation has some critical advantages over survey especially for cross-cultural research.

First, Wells and Lo Sciuto (1966) point out that direct observation tells us “what people

do, not what they say.” The former is much more revealing of cultural differences than the latter. Second, people are not always aware of why they act in a certain way. A learned behavior is often a habitual rather than a conscious act. Common everyday behaviors, such as shopping behaviors, are especially likely to follow this pattern. They are repetitive activities that are best described by observation. Third, surveys suffer from self-report bias since respondents tend to answer in socially desirable ways. Such response can become a problem especially when an immigrant group is immersed in a dominant culture (Fisher, 1993). Finally, if performed correctly, observation can yield rich data about aspects of the phenomena under study that were unknown before (Hirschman, 1986; Hudson & Ozanne, 1988).

Observation has limitations as well. In many contexts it cannot stand alone for cross-cultural research. Other research tools that allow us to interpret the complexity of behaviors are helpful. Although we felt it was better just to describe the habitual behaviors involved in the process of choosing produce, we conducted interviews to ascertain cultural differences in the overall perception of food shopping.

3.2. Research design

This study adopts a quasi-experimental approach, using cities and supermarkets in Los Angeles County to represent the two cultures under study. We use the term **quasi-experimental** because the two conditions (cities and supermarkets) we sampled differ naturally on culture, rather than because of our treatment. For each study, we chose to take two samples five years apart to see if the patterns of cross-cultural differences in behaviors were consistent across time. Perhaps cultural differences could be attributed to rapidly changing fads or economic cycles. In the present sample, the Southern California economy is robust and the East Asian economies are faltering. Five years ago, the situation was the reverse. Southern California was in a deep recession and the economies of China, Taiwan and Hong Kong were booming.

In particular, we select two cities in the county, Rowland Heights and Brea. Within these cities, as within many parts of Southern California, Chinese supermarkets have emerged to cater to the growing Chinese speaking population. These supermarkets are similar in scale and scope to the mainstream American supermarkets with three exceptions. First, the product mix is more favorable to Chinese tastes, carrying for example, preferred fish, vegetables, fruits and cereals. Second, the supermarkets are more likely to be owned by Chinese than would many of the leading mainstream supermarkets. Third, employees in these supermarkets are more likely to be Chinese.

Although Chinese immigrants constitute only 21% of the population, Rowland Heights (US Bureau of the Census, 1994) and neighboring communities have a high concentration of Chinese immigrant-owned retail stores and light industry. We chose Rowland Heights because it is the location for three Chinese supermarkets even though the customer base of these supermarkets is drawn from an area that extends beyond Rowland Heights. The sample of “Chinese” is drawn from the Chinese supermarkets. We initially thought of also drawing shoppers for the “American” sample from supermarkets in Rowland Heights, but the results of a presurvey revealed that the shoppers at these supermarkets were less educated and had

Table 1
Findings of shopping behavior in supermarkets

	English speaking consumers	Chinese speaking consumers	Test of differences
1A. Sample characteristics			
Sample size	120	120	
Household income (\$1000)	45–60	45–60	$t(120) = 1.26, p = .21$
Education level (years)	15	15	$t(120) = 1.58, p = .12$
Household size (members)	3	3.3	$t(120) = 2.45, p < .05$
Commercial lease rates (Average \$ per square foot)	1.10	1.60	
Burglary rates (Average per 1000 people)	8	14	
Ratio: working to non-working	67:33	73:27	$t(120) = 3.33, p < .01$
1B. Observations of shopping (<i>Selection of Bananas</i>)			
No. of bunches touched per selection:			Culture \times Gender:
Male	2.1	4.6	$F(1,239) = 12.63, p < .01$
Female	1.4	7.4	
Time per selection:			Culture \times Gender:
Male	13.9	38.8	$F(1,239) = 15.45, p < .01$
Female	7.7	54.2	
1C. Observations of other shopping activities*			
No. of shoppers smelling fruit	0	13	
No. of shoppers digging for fruit	2	40	
No. of shoppers scratching and tapping skin of fruit	1	17	
1D. Observations of prices**			
Vegetable prices	\$1.00	\$0.45	$F(1,29) = 19.93, p < .01$
Meats/seafood prices	\$6.64	\$2.98	$F(1,29) = 17.37, p < .01$
Packaged foods prices	\$1.86	\$1.35	$F(1,29) = 23.56, p < .01$
Average prices	\$3.23	\$1.63	$F(1,89) = 32.06, p < .01$
1E. Observation of shopping in same store			
No. of fruit touched per selection:	1.7	6.4	$t(29) = 3.02, p < .01$
Time per selection:	7.5	18.9	$t(29) = 3.76, p < .01$

* Numbers too small to test.

** Test is nested within categories.

a lower income level than the “Chinese.” These differences do not reflect the situation elsewhere in the United States. So we chose the neighboring city of Brea for the “American” sample, because the demographics of the shoppers at the mainstream supermarkets in Brea were similar to those of the “Chinese” at Chinese supermarkets in Rowland Heights. The percentage of Chinese immigrants was insignificantly small in Brea and the percentage of monolingual English speakers is 83%. A prestudy survey confirmed that shoppers at the supermarkets in these two cities have similar socio-economic characteristics (Table 1A).² The differences between the “Chinese” and “American” sample is significant ($p < 0.05$) only for ‘household size’.

For the sample of Chinese supermarkets, we selected all three supermarkets in Rowland Heights. For the sample of Mainstream American supermarkets, we drew at random from a telephone directory three supermarkets in Brea. We selected supermarkets so that no two could be chosen from the same chain or ownership. Each of the two studies involves a comparison of key variables in these two types of supermarkets. Study 1 is an observation of the actual behavior of shoppers and Study 2 is a comparison of prices in these two types of supermarkets.

For Study 1, we observed 1 out of every 5 shoppers entering the produce section to select summer fruit. The observer held a clipboard, wore a typed nametag and appeared to be checking inventory. In a pretest sample of 10, subjects were asked at the checkout line if they noticed that they were being observed in the store and, if so, where. None of the respondents knew that they were being observed in the produce section. Respondents had to meet two qualifications to be included in the survey. In the Chinese supermarkets, for a respondent to qualify as a “Chinese”, his or her nation of birth had to be China, Taiwan or Hong Kong, *and* his or her primary language spoken at home had to be Chinese. In the mainstream supermarkets, for a respondent to qualify as a subject in the “American” sample, his or her nation of birth had to be the United States and his or her primary language spoken in the home had to be English.

We approached everybody, regardless of appearance. There were only ethnic Chinese in the Rowland Heights sample and Caucasians, two African Americans and one Chinese American (monolingual English-speaking, born in the United States). The subjects were intercepted for this information (in English for the “American” sample and Chinese for the “Chinese” sample) immediately after the observation was completed. The rejection rate was 4% at the mainstream American supermarkets and 10% at the Chinese supermarkets.

From the presurvey, we knew that the variables of income, education level and family size were approximately equal across the supermarkets for the two cultural groups. We tested age and marital status in a pilot observation for a sample of respondents; they were not correlated with behavior. The exception was for those respondents over 65 who showed different behavior than those under 65, but this difference may be due to other factors, such as the effect of free time in retirement, rather than to age itself.

For Study 2, we selected food products that are commonly used in both Chinese and American cultures. The food products were categorized into three clusters: vegetables, meat and fish, and packaged goods. Prices for each food product in every product category and supermarket were collected on two separate occasions four weeks apart.

4. Study 1: what people actually do when shopping

4.1. Method

This study used direct observation to examine shopping behavior. We examined two separate samples of consumers five years apart and for different products. A sample of 240 shoppers was observed choosing bananas. Five years previous to this data collection, 121 shoppers were observed choosing summer fruit. The data collectors were an American who

speaks Mandarin Chinese and a Chinese who speaks Cantonese. We observed the shopping behavior of these individuals and asked subjects demographic information outside the store after they finished shopping.

We chose to look at shopping for bananas and for summer fruit (peaches, plums and nectarines) for several reasons. First, the quality and characteristics of fruits vary from day to day and require careful inspection by consumers. Second, similar fruits are available at both types of supermarkets. Third, shoppers are familiar with these types of fruits in both cultures. The peach has long had its place in Chinese art and literature, and the plum is the national flower of Taiwan. These fruits are quite common in the United States as well. Lastly, these fruits are different enough (edible vs. inedible skin, flavor, etc.) that similar patterns of shopping behavior differences across the samples can be attributed not to the product but to behaviors consistent with the population.

The observers stationed themselves at the produce section inconspicuously recording the behavior of shoppers purchasing fruit. If there were a shopping party, only the individual physically doing the selection was observed. There was no case of two individuals selecting fruit at the same time in the same shopping party. The observers recorded the number of fruit that individuals physically inspected and the number they actually purchased as indicated by placement in individuals' shopping cart or bag. They also recorded the time of the shopping episode from the moment individuals' first physical inspected a fruit to the moment they placed the last item into their bag or cart. If there were any outside interference during this process, the observation was discarded.

Since shopping behavior is not restricted to sight and touch, the observer also recorded other senses that individuals used in shopping, such as the tasting, smelling, or sounding of fruit. Interviews were also conducted with a sample of shoppers. The interviews were conducted in Chinese for the "Chinese" sample and in English for the "American" sample. These interviews allowed us to probe further into the meaning of shopping as an activity in each group.

4.2. Results

The results of Study One were consistent across time. The results of the present sample are displayed in Table 1B. Subjects in the "Chinese" sample touched four times as many bunches of bananas as subjects in the "American" sample. The difference in fruits touched to those chosen (6.4 for "Chinese" vs. 1.6 for "Americans") is significantly different from 0. Similarly, subjects in the "Chinese" sample took more than four times as long to shop for bananas per bunch chosen as subjects in the "American" sample. The difference in shopping time per bunch chosen (48.3 s per item chosen for "Chinese" vs. 9.9 s for "Americans") is significantly different from 0.

Similar results, displayed in Table 3A, were found for the sample taken five years ago. "Chinese" subjects touched more than twice as many fruits as "American" subjects. The differences in means of fruits touched to those chosen (5.2 for "Chinese" vs. 2 for "Americans") are significant. "Chinese" subjects took almost three times as long to shop per fruit purchased as subjects in the "American" sample. This mean difference (19.7 s per item chosen for "Chinese" vs. 7.2 s for "Americans") was also significant.

We found large differences in results by gender (Fig. 1). The culture \times gender interaction was significant for both number of fruits touched ($F(1,239) = 12.63, p < .01$) and for time taken to select the fruit ($F(1,239) = 15.45, p < .01$). Men were choosier shoppers than women in the “American” sample. They took almost twice as long inspecting fruit, and inspected almost twice as many fruit as women. This result may be counter intuitive to some, as shopping for fruit may not appear to be a ‘manly’ activity by traditional American gender roles. In contrast to the “American” sample, women took longer and inspected more fruit than men in the “Chinese” sample. These differences may reflect who does the shopping and budgeting in the family in each of the cultures, as we explain in the discussion section. A similar culture \times gender interaction, displayed in Table 3A, was also found in the earlier sample.

Our observation of other shopping activities is also quite revealing (see Table 1C). Subjects in the “Chinese” sample used other senses besides touch, and also use other types of shopping actions much more than shoppers in the “American” sample did. Of these, smell may be the most important because it indicates the freshness and aroma of food. Human satisfaction from consuming food is more a product of smell than of taste; that is why aroma may be an important factor in selecting unpackaged edible goods. Many more “Chinese” smelled fruit before purchase than subjects in the “American” sample. Digging and shifting produce was very common shopping behavior among subjects in the “Chinese” sample. One third of the subjects in “Chinese” sample engaged in this behavior while only three in the “American” sample did so. Many “Chinese” also scratched or tapped the skin of the bananas, an action performed by only one of the “Americans.” However, subjects in neither sample tasted fruit before purchasing. This result may have to do with the nature of the product—tasting fruit, the size of a peach or nectarine is more akin to shoplifting than inspection.

5. Study 2: what prices people actually pay

5.1. Method

Study Two compares prices in the Chinese and mainstream American supermarkets. As in Study One, we collected two samples five years apart to determine if the results were consistent across time. We collected these data by observation at the same Chinese and mainstream American supermarkets as in Study One. The volume of sales, as observed by the recorded number of shoppers and number of items selected during equivalent time periods, was *not* significantly different for any of the supermarkets. We collected data by visiting all of the Chinese and mainstream supermarkets twice, on the same day of the week, four weeks apart. The data points within each group of stores are the prices of comparable products across stores.

An important question in comparing prices across supermarkets is the choice of appropriate food products. We selected food products that would be commonly used by both groups. We also selected three categories of food products: vegetables, meat and fish, and packaged foods. Within each category, we sampled five food products (Table 2).

We examined *nonpromotional and noncoupon prices*. We did not consider promotional

Table 2
Products in sample

Product category	Sampled products
Vegetables	Spinach, green onions, cilantro, eggplant and sweet potatoes.
Meats and fish	Boneless chicken thighs, whole chickens, pork chops, fresh shrimp (small) and scallops.
Packaged foods	Cookies (comparable flavors and sizes of packages), canned mixed vegetables, canned sweetened condensed milk, cooking oil (same size and type), and corn starch.

prices because stores adopt a great variety of promotional formats, which makes comparisons across stores difficult. For example, one store may offer coupons while another may offer a “free bag of rice for \$20 of purchases.” None of the supermarkets selected had an “every day low price” strategy.

We used a nested multifactor ANOVA to analyze the data. There are two factors of interest: Product Category and Cultural Group, each of which has other factors nested within them. Product is nested within Product Category since the same items do not appear in more than one category. Similarly, Store is nested within Cultural Group since the same store does not appear in more than one cultural group.

5.2. Results

The results of the present sample are in Table 1D. The table shows clear and significant differences in the mean prices of products by cultural group. Prices were significantly lower in Chinese supermarkets than in the mainstream supermarkets. These differences are not small. The average prices over fifteen food products were more than 20% higher at mainstream supermarkets than at Chinese supermarkets. Chinese stores also had significantly lower prices than mainstream markets within all three product categories, and for every individual food product ($X_{\text{Chinese Market}} = \1.63 , $X_{\text{Mainstream Market}} = \3.23). The mainstream supermarkets had the smallest difference in price relative to the Chinese supermarkets in the category of packaged foods. For packaged foods, food manufacturers may give bigger price breaks to large chains such as Vons or Ralphs than to the smaller Chinese supermarket chains. Yet, even in this product category, Chinese supermarkets had significantly lower prices than the mainstream supermarkets (\$1.35 to \$1.86). These results support hypothesis H_{3A} and not hypothesis H_{3B} .

Results of similar data collected five years previous to this study are consistent with present results (Table 3B). At this time, prices were consistently lower in the Chinese than in the mainstream supermarkets ($X_{\text{Chinese Market}} = \1.69 , $X_{\text{Mainstream Market}} = \2.12). This was true even for branded, packaged goods ($X_{\text{Chinese Market}} = \2.26 , $X_{\text{Mainstream Market}} = \2.42 , $F(29) = 4.23$).

Table 3
Observations of prices (5 years previous to present data)

	Chinese speaking consumers	English speaking consumers	Test of differences
3A. Observations of shopping			
<i>Selection of summer fruit</i>			
No. of fruit touched per selection:			Culture \times gender:
Male	2.5	4.5	F(1,120) = 14.08, $p < .01$
Female	1.5	5.9	
Time per selection:			Culture \times gender:
Male	9.6	17.5	F(1,120) = 15.78, $p < .01$
Female	4.8	22.8	
3B. Observations of prices			
Vegetable prices	\$0.80	\$0.55	F(1,29) = 50.56, $p < .01$
Meats/seafood prices	\$3.15	\$2.26	F(1,29) = 45.62, $p < .01$
Packaged foods prices	\$2.42	\$2.26	F(1,29) = 4.23, $p < .05$
Average prices	\$2.12	\$1.69	F(1,89) = 50.48, $p < .01$

6. Discussion

There has been much cross-cultural research in marketing. Some studies have tested the cross-cultural validity of models and theories (Griffin et al., 2000; Aaker, 1997; Dawar & Parker, 1994). Other research looks at cross-cultural differences in consumption (Zee, 1990; Arnould et al., 1989; Wallendorf & Arnould, 1988). Another stream of research provides ethnographic accounts of shopping in various cultures (Miller et al., 1998; Miller, 1997). Yet, few studies have examined cross-cultural differences in shopping behavior and its impact on retail strategy.

The findings of this paper suggest that cultural orientation can have an impact on the behavior of consumers and on firm behavior. Using observation, the current study found sharp differences in shopping behavior in supermarkets between “Chinese” and “American” customers. Customers in the “Chinese” sample engaged in a more extensive inspection of items when shopping for food than did “American” customers. They examined more products per item purchased and took more time to make the purchase. “Chinese” used other senses more extensively when purchasing food, such as touching and smelling. They also used taste and sound tests occasionally. For example, melons are not a part of the sample, but subjects in the “Chinese” sample often used melon thumping to test melons by sound.

Our observations also indicated other behavioral differences. At the produce section of mainstream supermarkets, social interactions between single adults were very common. Social behavior between adults who did not arrive together occurred 12 times in the “American” sample and did not occur at all in the “Chinese” sample. Marginally more single customers were in the “American” sample, but the difference was not enough to account for the large variation in results. Consistent with this observation, we found that in Chinese supermarkets shopping is much more of a family affair. Nineteen of the 60 shoppers in the “Chinese” sample were part of a family group that included children. (We discard data

involving shoppers who were distracted by anyone including family members). By contrast, only one subject in the “American” sample shopped with children.

To further explore this issue we conducted interviews with five “Chinese” and five “Americans” (three females and two males in each group). We asked individuals how they viewed their shopping behavior. At first, both the “Chinese” and the “Americans” were unaware of their own shopping behavior in choosing produce. It was only after they were cued with some of observations of shopping that they started to think about how they shopped.

The interviews revealed potential differences in the perception of shopping as an activity. Words such as ‘fun’ and ‘entertainment’ were commonly mentioned in interviews with “Chinese.” All of these shoppers worked at full time jobs and saw shopping as a leisure-time activity where they could buy the best for their money. In interviews with “American” shoppers, shopping was viewed more as a task to be performed. Sometimes the spouse shopped for the family and sometimes the spouse did the shopping, but the word enjoyment rarely entered the conversation. Finding the best value seemed far less important than saving time. To “Americans,” time spent shopping was time taken away from more important activities. Even affluent “Chinese” immigrants cared more about shopping and finding the best value for their money than did similar “Americans.” Our study of price differences among stores indicates that all Chinese stores had consistently lower prices than mainstream supermarkets for all categories that we studied and across five years of time. These differences ranged from 37% for packaged goods of the same brand and size to more than 100% for meats and seafood of the same type and description. Visual inspection suggests that the Chinese supermarkets have as good fresh produce, meats and seafood as the mainstream supermarkets.

Our analysis rules out food category, individual store policy or time of data collection as explanations of the effect. Economies of scale also cannot serve as an explanation because Chinese supermarkets tend to operate on a smaller scale than the mainstream supermarkets. The explanation we offer is that cultural differences among consumers lead to more price searching and price sensitivity among Chinese consumers, motivating the Chinese supermarkets they patronize to offer lower prices.

However, our approach raises a number of questions about potential alternate explanations for the results such as supermarket environment, managerial style, loyalty to ethnic group, gender differences, or superficial traits of the sample. To answer these questions, we carried out some supplementary research on these issues and discuss them below.

6.1. Cultural orientation versus supermarket environment

Could the observed differences between the “Chinese” and “American” sample result from differences in supermarkets shopped rather than to the cultural orientation of its shoppers? In support of this question, we noticed that fruit seemed of similar or better quality at the Chinese supermarkets. However, such a difference would encourage *less rather than more* inspection of fruit by “Chinese.” Even then, could the differences in environment between supermarkets explain the differences in shopping behavior better than culture? To

test this hypothesis, we repeated the study at *one* mainstream supermarket that served both “Chinese” and “American” clientele.

We observed the shopping behavior of 30 individuals in the *same* store, split equally among “Chinese” and “American” shoppers. Since both clientele populations shopped in the same store, the store environment was exactly the same for all individuals. The results (in Table 1E) are similar to those from the main study (in Table 1B). The same differences in patterns of shopping emerge between subjects in the “Chinese” and “American” samples in terms of the number of fruits touched and time taken for selection. The main effect for cultural orientation is significant for both the number of fruits touched and for the time taken for selection activities. The interaction effect of cultural orientation and gender is also significant for both. The results for the other shopping behaviors and gender differences are similar to the findings from Study 1. Thus the observed differences by cultural group are unlikely to be due to difference in store environment.

6.2. Cultural orientation versus managerial style

Are the differences in prices across Chinese and mainstream supermarkets due to differences in management style? Chinese stores could operate more efficiently at lower costs or enjoy economies of scale. They could also have managers that are willing to accept lower profits.

To explore the cost issue, we collected data on several factors that might affect costs across the supermarkets serving different the two groups. Starting per-person labor costs are lower for the Chinese supermarkets than for the mainstream American supermarkets. The average starting salaries at mainstream supermarkets were \$9.00 per hour where as they were only \$7.00 per hour at the Chinese supermarkets. For the most part, the mainstream supermarkets in the study used union labor that raised costs. The average tenure of individuals on the job was approximately the same (2.2 years in the mainstream American supermarkets, 2.2 years in the Chinese supermarkets). So the issue of seniority should not change the relative salary figures a great amount. Overall, costs at Chinese supermarkets are likely to be lower due to differences in salaries.

However, other cost figures suggest that costs for the mainstream supermarkets are lower than those for Chinese supermarkets. Chinese supermarkets seem to be, on the average, staffed more heavily than mainstream supermarkets. For example, the average number of checkout lines (checked at random intervals throughout the day) open at Chinese supermarkets was 7 where as at the mainstream supermarkets in the sample this figure was 5. Higher traffic is not an explanation for this difference, because Chinese supermarkets also have a fewer number of consumers waiting to be served at each checkout counter: the average number is 3 for the Chinese supermarkets and 4 for the mainstream supermarkets. Average lease rates in the area where the mainstream supermarkets are located are lower than those in the area where the Chinese supermarkets are located due to the influx of foreign capital (see Table 1A). Discussion with police departments in the two areas also indicated lower costs for the mainstream supermarkets from theft (Table 1A).

The two types of supermarkets differ marginally in physical size: the average store space is 14,000 square feet for the mainstream American supermarkets and 13,200 square feet for

the Chinese supermarkets. This difference could translate into a marginal cost advantage for the mainstream markets. Finally, the mainstream supermarkets belong to much larger chains. The 3 mainstream supermarkets used in this study belong to the biggest supermarket chains in Southern California, the largest of which has 270 stores. By contrast, the largest of the Chinese supermarket chains has only 7 stores. So mainstream supermarkets could enjoy economies of scale in purchasing, transportation, inventory and administration.

Thus, the cost analyses do not point unambiguously to lower costs for the Chinese stores. In fact, if they point any direction, they would suggest that the mainstream supermarkets in the sample have a cost advantage over the Chinese stores in the sample.

To explore differences in attitude to profit, we interviewed food brokers serving the two types of supermarkets. Food brokers serve as the middlemen between producers and retailers, and thus would have an uninvolved assessment of retail markets. The food brokers serving Chinese supermarkets felt that prices and profit margins on many items were lower at Chinese supermarkets than at mainstream American supermarkets. They repeatedly stated that 'low markups' on products were due to 'stiff competition'. They attributed this competition both to the demand of "Chinese" shoppers and to the aggressive reactions of other Chinese supermarkets. Food brokers serving the mainstream supermarkets also mentioned the heavy competition and low markups in the Chinese markets.

The brokers expressed some initial surprise at the results of the pricing study. However, 2 out of 3 respondents compared this result with the past failure of mainstream American supermarket chains to penetrate the Mexican American market with high-priced, specialty food stores. Brokers attributed lower prices in the Chinese supermarkets to attitude toward profits, "They (Chinese managers) don't mind lower profit margins."

However, note that a greater willingness to accept lower profits is by itself not a sufficient condition for a store to offer lower prices. Managers must have a motivation to offer lower prices, such as shoppers who are sensitive to lower prices or managers' who are loyal to shoppers of the same ethnic group. For example, if consumers were not particularly sensitive to lower prices, then managers would have no reason to offer lower prices even if they were willing to accept lower margins. Indeed, brokers mentioned that the lower prices of Chinese supermarkets were at least partly demand-related: "Their (Chinese) shoppers wouldn't stand higher prices."

In sum, Chinese supermarkets do not seem to enjoy lower costs, but they may have managers who are willing to accept lower profits. This latter condition to be effective must be accompanied by a shoppers' demand for lower prices (which is consistent with our cultural explanation).

6.3. *Cultural orientation and gender*

Why is there a gender difference in the purchase behavior of subjects in the "Chinese" and "American" sample? We provide an explanation, but more research is needed to fully explore the issue. The gender difference may possibly be a result of the differences in the role of the family in the two cultures. In the United States, household money decisions are often joint decisions. Cunningham and Greene (1976) found an even split between couples in which the spouse handles the money and those in which the spouse handles the money. More recent

surveys (American Demographics, 1998) including our survey suggest this figure has not changed much.

By contrast, Chinese women traditionally handle the household budget. Mitchell (1972) found from a survey of both spouses that twice as many spouses as spouses handle the money. This is true throughout the Far East, where the spouse is often expected to hand over his paycheck to the spouse who then is responsible for most household purchases (Schutte, 1998). The person who handles the budget may be choosier with his/her purchases. If in the Chinese family, the spouse handles the budget then she may be choosier than the spouse. Thus, differences in management of the family budget in the two cultures provide a potential explanation for the observed gender differences.

These gender differences are probably not due to a lack of male experience in food shopping. The results indicate that there was no main effect of gender on either shopping time or number of items selected. If “American” males deliberated more than females because they were less experienced, then we should not see the opposite pattern in the Chinese-speaking sample.

6.4. Cultural orientation versus other traits of sample

Is the observed shopping behavior of “Chinese” something deeply embedded in the Chinese cultural orientation of the shoppers or is it due to some superficial trait such as demographics or available time? This question may be answered by considering other characteristics of our sample. The data in Table 1A indicate that the demographic characteristics of shoppers are not a source of major variation between the two samples of shoppers. The time of day, the day of the week and the ratio of working to nonworking shoppers are also similar between the two samples. So time would not be a major alternate cause of the differences in shopping. Observations of nonshopping behaviors as well as interviews with ten “Chinese” and “Americans” provide information that could enlighten this issue.

Perhaps the cross-cultural differences were actually due to a robust Southern California economy? The prices could be lower in Chinese supermarkets in reaction to economic distress in the Pacific Rim countries. If this is true, then we should find different results five years earlier when Southern California was in a deep recession and the Pacific Rim economies were still booming. In fact, the earlier versions of Studies One and Two found in Table 3 suggest that both shopping behaviors and price differences remained unchanged.

7. Conclusions

This study suggests that there are large cross-cultural differences in shopping behavior. We saw big differences between Chinese and Americans in the amount of time searching and the number of alternatives considered. Results also revealed differences in other shopping behaviors, such as scratching, smelling and digging, between the two cultures. The findings indicate that prices at Chinese supermarkets are consistently lower than those at Mainstream American supermarkets. These differences ranged from 37% for packaged goods of the same brand and size to more than 100% for meats and seafood of the same type and description.

These differences cannot be accounted for by categories sampled, time of shopping, supermarket costs or demographics of the shoppers. One plausible explanation is the greater willingness of managers in Chinese supermarkets to accept lower profits than their counterparts in mainstream supermarkets. However, this attitude-based factor cannot by itself account for differences in prices. It must be accompanied by some other motivation to offer lower prices, such as difficult economic times. Thus, the most plausible explanation for the price differences is dramatic cultural difference in shopping behavior between the Chinese immigrants and monolingual English-speaking shoppers born in the United States.

Why should retailers care about differences in shopping? Culture impacts not just the products consumers buy but also consumers' shopping and the response of retailers. This study suggests that differences in shopping influences the prices offered by retailers. Retail stores hoping to enter foreign markets or those that target domestic markets with a large proportion of ethnic or immigrant consumers can use these findings in developing strategy. In particular, they may have to offer a substantially different marketing mix to attract such customers.

Shopping behavior may also influence the type of retailer preferred by consumers. For example, fussy shoppers who take time to shop are not as likely to purchase food products over the Internet or at convenience stores. Note that the Chinese supermarkets in this study were large, but they were not one-stop shopping stores. The variety of nonfood related items was less than that of the mainstream supermarkets.

Widespread haggling is another aspect of Chinese shopping behavior that may be related to price consciousness (Fang, 1999). For example, Jacobs et al. (1984) report that more than 50% of all stores they sampled in Hong Kong, Taiwan and Singapore were retailers that allowed bargaining. This proportion is several times higher than that of 10% in Latin America and 3% in South Africa. Of specific interest to this study, Hong Kong, Taiwan and Singapore had the highest percentage of food and drug stores that allowed price bargaining. Mainstream retailers may want to emphasize bargains or special deals in promotions.

Assimilation no doubt has an impact on Chinese immigrant shopping patterns. Second and third generation Chinese Americans tend not to shop at the Chinese stores except when they want to prepare Chinese food. Their food tastes and perhaps shopping behavior belong to a growing Asian American subculture that would make an interesting topic for future research.

This study has several limitations that suggest avenues for future research. First, the study was limited to a few food products. Research could investigate whether differences in shopping behavior exist in other retail shopping contexts. The results regarding in-store search could be tested on between-store search to see if they are applicable to comparison-shopping. Also, the type of product may impact shopping behavior differences. Second, the study was limited to only two cultures. Research could extend the current approach to a comparison of multiple cultures of which adequate representatives are present in Southern California and other parts of the US. Third, while our comparison of prices across the two types of stores was quite robust, our comparison of costs and management style was exploratory. A more rigorous investigation of differences in clientele, costs and management style could determine the causes of differences in prices with greater confidence. In pursuing these areas, researchers may be helped by using multiple methods, especially including observation and experiment, in addition to survey and interviews.

Notes

1. Chinese from Hong Kong and Taiwan probably constitute two subcultures within the Chinese culture. However, their mutual differences are not as large as their common differences against the American culture on the dimensions measured.
2. Requirements for inclusion into the presurvey, language and country-of-birth, were the same as those of the first study. At the Chinese supermarkets, 12% of respondents failed to meet the requirements where as at American supermarkets the rate was 8%.

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