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The effect of ethnicity and acculturation on African-American food purchases

Abstract

All consumers have multiple sources of identity, some related to the roles they play, some related to their ethnic heritage, and some related to where they live and grow up. Successful marketing and advertising strategies generally meet the economic and cultural needs of buyers, while also identifying with the set of values that is significant to that specific targeted consumer segment. The authors focus on ethnic groups, and more specifically, the African-American community. This research looks at the effects of two components of culture, ethnic identity and acculturation, on purchase behavior, as well as other, “intermediate” marketing measures (e.g., attitude toward an ad).

Although research on marketing to ethnic groups has made great strides in the last 30 years, the variance within ethnic groups has not been extensively studied. We run a 2⁴ factorial-design experiment with several dependent measures to address the effects of the level of ethnic identity and acculturation of African-Americans, as well as various interaction effects.

Keywords: African-American, acculturation, ethnic identity, marketing.

Introduction

This paper studies the African-American market in the United States, and considers the impact of acculturation and ethnic identity (and their interaction) on buying behavior and other related marketing measures. Our study includes African-Americans consumers with multiple income levels and analyzes the heterogeneity of this consumer group along the dimensions of ethnic identity and acculturation.

A key issue is that most ethnic groups, and surely the African-American ethnic group, are heterogeneous in their attitudes and purchase behavior. While many studies have identified differences *among* ethnic groups, many fewer have considered, as this research does, differences *within* an ethnic group.

The term, ethnic identity, has sometimes been used synonymously with acculturation, but the two terms should be distinguished. The concept of acculturation deals broadly with changes in cultural attitudes, values and behaviors that result from contact between two or more distinct cultures. The focus is on how a minority group relates to the dominant, host, or majority society group. Ethnic identity, on the other hand, may be thought of as how individuals relate to their own culture as a subgroup of the whole society. These two concepts are not totally uncorrelated but a consumer, who is highly acculturated, can have a high level of ethnic identity or a low level of ethnic identity. Indeed, if looked upon as two 2-level factors (“low” and “high”), all four combinations can and do occur in the African-American community.

The importance of the African-American market. The African-American market is an attractive one because it is large, young, easily accessible and

active. This population segment is expected to grow nearly twice as fast as the rest of the population over the next fifty years. And, contrary to stereotypical beliefs, African-American households actually have disproportionately higher disposable income than generally is assumed, and are more willing to spend it. Overall, in 2000 (the most recent decennial census), the median household income among African-Americans was \$19,000, 30% lower than the \$27,000 median income for the general population. However, the gap, in terms of the percentage of income, that is disposable between Caucasian and African-American family expenditures, is almost non-existent, as African-American household expenditures amount to 78% of their total household income compared to the general market household expenditures accounting for 80% of total household income (2000 U.S. census – Bureau of labor statistics). In addition, research conducted by the National Minorities Business Council in 2004, 48% of all African-Americans.

In the next Section, we review relevant literature on ethnic identity and acculturation, and specifically that associated with the African-American market. Then, we describe our hypotheses, followed by a discussion of our methodology and analysis. Next we detail our results. We conclude with a discussion of our results, limitations of our study, and directions for future research.

1. Literature review

1.1. Ethnic identity. Ethnicity is a group classification of individuals, who share a unique social and cultural heritage (i.e., customs, language, religion, etc.) that has passed from generation to generation. Ethnic identity can be defined as a person’s affiliation with an ethnic group and refers to the ethnic group with which an individual identifies, as well as the strength of the identification. Jeffries and Har (1979) define ethnic identity (ethnicity) as “the extent to which members of an ethnic group consider their in-

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group as an essential part of their self-identifying". When individuals identify as members of a particular ethnic group, they typically practice and retain the customs, habits, language, and social views of that particular group. Membership in an ethnic group is something that is subjectively meaningful to the person concerned. A person may attach emotional significance to membership in the group, and strong ethnic-identifiers generally display attitudes and customs that are consistent with the core cultural values of their ethnic group. In contrast, weak ethnic-identifiers generally display attitudes and behaviors that are less consistent with those traditional values and closer to those of the dominant culture. In essence, strength of ethnic identification is an enduring association between people's sense of self and their ethnicity.

How does ethnicity affect consumer behavior? Hirschman (1981), and Bauer, Cunningham and Wortzel (1965) have suggested that perceptions of product-attribute importance may be culturally bound. Different cultures and subcultures may place different degrees of importance on various product/brand characteristics. Given these differences in importance, different cultures may evaluate a product differently. For example, Chattararam and Lennor (2008) found that the ethnic identity of African-Americans affects their purchases of fashion apparel. In addition, even within a culture, different consumers are exposed to unique cultural experiences and, as a result, may hold divergent views about attribute importance. Helms (1990) found a nonlinear relationship between social class and ethnic identity, with middle class African-Americans appearing more likely to demonstrate attitudes consistent with a higher level of African-American ethnic identity, while lower and upper class African-Americans demonstrated a more Euro-centric view (and, correspondingly, a lower level of African-American ethnic identity).

The person with a higher level of ethnic identity is looking for that additional cue to help him/her make a product or brand choice. Watson et al. (2010), in a study concerning African-Americans evaluating ads with African-American spokespersons of different skin colors, found that affective attitude toward an ad was affected by the skin color (lighter skin color engendered a more positive attitude toward the ad), and that this effect was moderated by the responder's ethnic identity. Wang and Arpan (2008) found, to no surprise, that African-Americans had a preference for African-American spokespersons in ads, but the authors expressed surprise that this effect was not moderated by the (African-American) person's level of ethnic identity. Their setting was evaluation of an ad that was serving as a public-service announcement about human immunodeficiency virus (HIV), and the authors believed that the moderating effect of

the person's level of ethnic identity was masked by the issue of perceived expertise of the speaker.

1.2. Acculturation. Acculturation has been defined as the process of learning and adapting to cultural traits different from the ones with which the person was originally reared (Ownbey and Horridge, 1997). It is the process of acquiring the customs of an alternative society. Acculturation loosely refers to the extent to which ethnic/cultural minorities participate in the cultural traditions, values, beliefs, and practices of their own culture versus those of the dominant society. In general, the term encompasses intercultural interaction and adaptation, and includes assimilation of a new culture, maintenance of the old culture, and/or resistance to both new and old cultures (Penaloza and Gilly, 1999). Consumer acculturation is the intercultural contact and the resulting change for consumers in contact with a new culture. Acculturation may include learning a language and adjusting to different lifestyles and mannerisms (e.g., as in shopping behavior). Berry (1990) interpreted acculturation as the cultural transmission, experienced by an individual due to his or her direct contact with another culture. The individual must reach some level of accommodation to the ways of the new culture, what is acceptable and what is not.

Acculturation is a progressive learning process, where values change as contact with a new or dominant culture increases. The more acculturated a person or group is, the greater is the progression toward the norms of the host or dominant culture. Acculturation can be a long or short process, depending on the circumstances. This progressive learning process (Kim, 1979) is sometimes referred to as cultural assimilation. This process asserts that individuals acquire new values and behaviors in an additive manner; as interaction with a new culture increases, new values and behaviors are adopted. The greater the exchange between the host/dominant society and the minority group or person, the greater the latter's progression toward the values of the host society.

More traditional (i.e., less acculturated) people are those who remain immersed in many of the beliefs, practices, and values of their own culture. In the middle are "moderately acculturated" people, who have retained the beliefs and practices of their culture or origin, but have also assimilated, to, at least, a moderate extent, the beliefs and practices of the dominant society. At the other end of the continuum are the highly acculturated people who have, to, at least, some extent, rejected the beliefs and practices of their own culture in favor of those of the dominant society, or who perhaps never learned their own culture's traditions in the first place. A key consideration in determining the degree of acculturation is that, unlike determining the degree of assimilation, it is not a "zero-sum-game", whereby adopting more

tenets of the dominant culture automatically means rejecting a like amount of the minority culture.

A few studies in the area of consumer acculturation have shown that immigrants, who come to the United States, are not homogeneous. Their consumption patterns vary within the immigrant group, depending upon the degree of acculturation (Faber, O'Guinn and McCarty, 1987; Kara and Kara, 1996). Identifying levels of acculturation becomes more complex when we look at sub-group differences within a culture, such as those that may exist among African-American consumers. Two or more cultures often reside in close proximity to one another with sub-cultures (sub-segments) existing within each culture.

1.3. Acculturation relative to African-Americans.

Until recently, the concept of acculturation had not been applied to African-Americans. African-Americans were seen as having little or no collective culture as a race of people, but rather, as a cultural or ethnic group with minor degrees of heterogeneity. General models of acculturation (of which there are several) ignore African-Americans (as well as mature immigrants, such as those of Jewish descent), and focus primarily on new immigrants.

For African-Americans, acculturation is, ultimately, a function of social comparison (Landrine & Konoldff, 1996). In this process, people compare themselves to others, in order to evaluate the extent to which their behaviors and responses are acceptable. African-Americans, then, are seen as acculturated when they, in fact, compare themselves to the dominant group in a dominant local environment for the purpose of assessing the extent to which their behavior repertoire is acceptable within that dominant local environment. This includes both behaviors and stimuli-specific reactions to the dominant group, such as product purchase behavior and usage behavior.

This would suggest that African-Americans with a low level of acculturation should be more effectively reached by advertisements, showing African-American families in settings depicting cultural themes, rather than ads, showing mainstream American culture. African-Americans with a high level of acculturation should be more effectively reached by mainstream American ads, rather than ads depicting African-American culture. And, as is well-known, the greater the preference for the ad, the more likely an individual is to purchase and use the advertised product/brand.

1.4. African-American heterogeneity and diversity. African-Americans, in general, wish to be both accepted and represented (Elliot, 1995). Focus groups show that African-Americans want to be portrayed as healthy people in integrated settings, and accepted by mainstream society, and not singled

out. Advertising campaigns that present African-Americans in a harmonious community environment, in authentic family-oriented or socially-oriented groups, in up-scale environments, and with products intended for African-American consumers, tend to be more readily accepted (Williams, 1988; Robinson and Roa, 1986; Reid, Stagmaier and Reid, 1986). Experiments designed to capture the diversity within the African-Americans consumer segment have received little attention. In addition to determining the cultural differences within the African-Americans market, it is also important and necessary to identify attributes/criteria that can separate this market into identifiable sub-groups.

A few authors have found that there are differences among ethnic sub-groups along the dimensions of acculturation and ethnic identification (e.g., Deshpande, Hoyer and Donthu, 1986; Faber, O'Guinn and McCarty, 1987; Williams and Qualls, 1989; Ownbey and Horridge, 1997). Only the Williams and Qualls (1989) article dealt with African-Americans, others dealt with Hispanic-Americans or Asian-Americans. Segmentation, based on acculturation and/or ethnic identification, has obvious implications for advertisers as it provides a more definable method of influencing African-Americans consumers. Cultural values have a significant impact on the development of attitudes. Cultural values, for example, might influence what product-attributes consumer-group members believe are important. People from different cultures have different experiences and value structures, which may cause them to view individuals and products differently. In addition, social pressures may influence group members to conform to those values of the culture. As individuals become acculturated, they may change the composition of their immediate reference group(s) from only members of their ethnic minority to now including those of the dominant society (O'Guinn and Faber, 1986).

Middle class African-Americans are often caught in a dual identity crisis – to participate in mainstream America or to remain African-American – with the result that they may not belong wholly to either group. Dubois called this the “double consciousness” of being an American and being African-Americans (Dubois, 1907), leading to perpetual conflict between the two social roles. African-American consumers, who have moved up the socioeconomic ladder, may have consumption patterns much like those of their Caucasian counterparts, but this does not necessarily mean that they have lost strong ethnic identity (Williams and Qualls, 1989). Many African-Americans also maintain a relationship with the “old neighborhood,” since many of the services and traditional needs that they require are available in a larger number there. This leads to a cultural bifurcation of their lives in which they display more Caucasian values, when in a Cauca-

sian context, and more African-American values, when at home and in other African-American contexts. Past research on the consumer behavior of African-Americans (as well as other ethnic minorities) has not delved deeply enough into cultural multi-dimensionality to properly assess purchasing behavior differences *within* African-American subgroups. The marketer of today is faced with developing appropriate marketing strategies to reach various subsegments of the African-American consumer segment. This is a marked deviation from the approach of earlier marketers, who believed in African-American cultural homogeneity and who viewed culture as an either/or proposition rather than as a continuum of influence.

1.5. Hypotheses. The following framework (Figure 1) integrates acculturation and ethnic identity (Williams, 1988). Williams developed this framework to explain how African and European value systems have merged to form a hybrid value-system that imparts consumer behavior in African-Americans. It is this figure that presents the complexity of African-American consumer behavior from the concept of multiculturalism. The column indicates the extent to which the consumer is acculturated into the dominant culture, while the row indicates the intensity of ethnic identity (how strongly the individual identifies with being African-American). This results in four quadrants, or market segments.

In Figure 2, we propose that both ethnicity and acculturation influence the African-American con-

sumer’s development of a multicultural orientation. In addition, the specifics of this influence will depend on (i.e., be moderated by) the situation (e.g., the people with whom the consumer is interacting).

We base three hypotheses on the behavior, described in Figure 1, and the model, depicted in Figure 2. The Figure 1 quadrants identify specific behaviors corresponding to values, represented in products and services. Consider first the effect of ethnic identity. Prior research indicates that African-Americans respond more favorably to advertising with African-American spokespeople; let us refer to this “factor” as “race of the spokesperson” with two levels, Caucasian and African-American. However, we postulate that the level of ethnic identity of the (African-American) responder will moderate this “preference”. African-American consumers, who have a higher level of ethnic identity, will be more sensitive to the racial composition of an advertisement than African-Americans consumers, who have a lower level of ethnic identity.

The implications are that African-American individuals may or may not replace their ethnic value systems with that of the mainstream culture and may exhibit passive or active ethnic identity, dependent on various attributes and situations. African-American consumers, expressing very strong ethnic identification, may or may not be high on acculturation. Either way, specifically, the following is hypothesized:

		<u>Acculturation</u>	
		High	Low
<u>Ethnic identity</u>	High	<u>Multicultural members:</u> adhere to both ethnically based values and dominant culture values.	<u>Ethnically-bound members:</u> adhere to ethnically based values and reject dominant-culture values.
	Low	<u>Acculturated members:</u> give up ethnically based values and accept dominant-culture values.	<u>Transitional members:</u> give up ethnically based values but do not accept dominant-culture values.

Fig. 1. African-American consumer multiculturalism

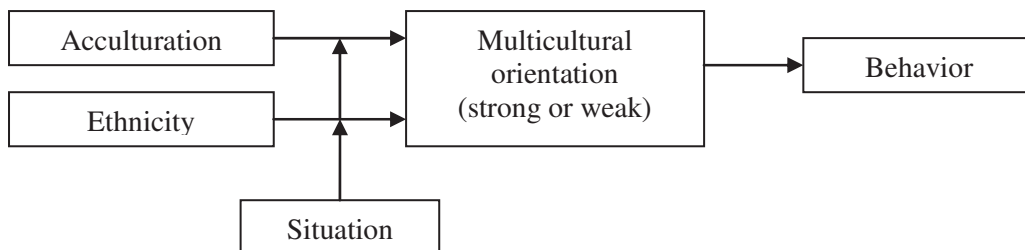


Fig. 2. Influence of ethnicity and acculturation combined

H1: African-American consumers' level of ethnic identity will affect their reactions to advertising such that: African-American consumers with higher ethnic identity will have more positive attitudes toward the ad (affective and cognitive) and higher purchase intentions for products advertised with an African-American spokesperson than for the same products advertised with a Caucasian spokesperson, to a degree higher than those for African-Americans with a lower ethnic identity.

H2: African-American consumers' level of acculturation will have no affect on attitude toward the ad (affective and cognitive) and purchase intentions (since attitudes and purchase intent concern private behavior).

In essence, H1 states that there will be an interaction effect, in the described direction, between level of ethnic identity and race of spokesperson on attitudes toward the ad and on purchase intent for the product or service. H2 is a straightforward statement about the main effect of acculturation.

Next, we consider the relationship between acculturation and the composition of the social gathering in which one is to consume a product. Ownbey and Horridge (1977) found in their study of acculturation levels of Asian-Americans that there is a relationship between the level of acculturation and both product relatedness and ad likeability. We postulated in H2 that acculturation will not affect attitudes toward the advertisement. However, we postulate in H3 that in *different social settings* both level of ethnic identity and level of acculturation will affect product usage. Specifically, using the labels of Figure 1, the African-American multicultural consumer (high ethnic identity, high acculturation) will prefer a traditional product in a family setting (about 90% African-Americans), but a more mainstream product in a situation that includes both several African-Americans and several Caucasians. In contrast, an African-American ethnically-bound consumer (high ethnic identity, low acculturation) will prefer a traditional product regardless of the social setting. Also, an African-American acculturated consumer (low ethnic identity, high acculturation) and an African-American transitional consumer (low ethnic identity, low acculturation) – i.e., a consumer with low ethnic identity, irrespective of acculturation – will prefer a mainstream product regardless of the social setting.

H3: There will be an interaction between acculturation and ethnic identity and the composition of a social gathering on the preferences for product usage, as described above.

2. Methodology

An experiment, consisting of a 2⁴ factorial design, was used to test the hypotheses. There were two levels of acculturation: low and high, two levels of eth-

nic identity: low and high; two levels of the race of the advertising spokesperson: Caucasian and African-American; and two usage situations: family gathering vs. work gathering. The family, get together, was classified as usage in an African-American setting and the work situation in a primarily Caucasian (or mixed Caucasian/African-American) setting (verified by a manipulation check, later described.)

Each subject was classified into low or high acculturation, and was classified into low or high ethnic identity (instruments discussed in the next section). Each subject was given a packet of information that used either an African-American spokesperson or a Caucasian spokesperson in an ad for the sweetener, equal. These three factors of the design were between-subject factors. The other factor, usage situation, was a within-subject factor. Essentially, this means that each subject was classified as either low or high on acculturation and either low or high on ethnic identity. The subject received the advertising packet with either the Caucasian or African-American spokesperson; he/she was then asked about the ad, product, and appropriateness to bring different foods/recipes to each of the two social settings (usage situations).

Data were collected during scheduled social gatherings of African-Americans (e.g., registered voters at a library, a church bible group, book club) in St. Louis, MO (area population of about 2.5 million, with approximately 18% African-American). One hundred seventy-five individuals participated in this experiment. The respondents were asked to review the advertising instrument and asked to complete two documents, which we shall refer to as the “questionnaire” and “survey”. One hundred and sixty-seven respondents completed both documents satisfactorily. There were 105 females and 62 males among the 167 respondents. The age distribution did not differ significantly from what would be expected based on census data. Number-of-years-employed ranged from less than 6 months to over 20 years, with (coincidentally) about 12% in the less-than-6-months category and about 12% in the over-20-years category.

2.1. Instruments and measures. The questionnaire consisted of items, measuring attitudes toward selected ads (cognitive and affective); see Appendix. In addition, the subjects were asked to rate the likelihood that they would purchase a certain product and the appropriateness of taking certain food dishes (the full recipes were included) to the different social occasions. The survey consisted of 83 items measuring acculturation, ethnic identity, and demographics. Acculturation was measured using a forty-seven-item African-American acculturation scale (AAAS) (Landrine and Klonoff, 1996). Racial identification was measured through a twenty-nine-item African-American multidimensional

racial identification scale (MRIS) (Sanders Thompson, 1995). In addition, seven questions, designed to gather demographic information from the respondent, were included at the end of the survey.

Both the AAAS and MRIS were scored in the following manner. A subject's score on each item is the number she/he circled for that item. The range of these scores is 1 to 7, with 1 indicating a "total disagreement/not true at all" response to the statement and 7 indicating "total agreement/absolutely true" response to the statement. Typical items in the AAAS are: "I currently live in a mostly Black neighborhood" and "Most of the music I listen to is by Black artists". Typical items in the MRIS are: "I feel a commitment to the African-American community" and "It is important to keep up with issues important to Black people". When (on rare occasions) the subject omitted an item: (a) the scores were summed for the items completed; (b) the total of the scores, divided by the number of items completed (i.e., the mean), was calculated; (c) then, the individual subscale mean was listed as the subject's score on the missing item. After the total scores (of the 47 and the 29 items, respectively) were determined, high was identified as being at or above the median and low as being below the median.

2.1.1. Independent variables. The AAAS measures African-American acculturation along the four dimensions of traditional family structures and practices, preferences for African things, preparation and consumption of traditional foods, and traditional African-American socializing (Landrine and Klonoff, 1996), and it has been used in many studies (e.g., Webb, 2008). It reflects the extent to which an individual is immersed in African-American culture (the person's culture of origin) or the dominant culture (European/Caucasian culture). Higher scores (high agreement with the item) indicate a more traditional African-American cultural orientation, and the lower scores (lower agreement with the item) indicate a more acculturated (less traditional) African-American cultural orientation (more European/Caucasian).

The four dimensions of the AAAS were assessed for internal consistency, reliability and validity with a sample of 185 adults (Landrine and Klonoff, 1996). The total scale internal consistency reliability coefficient was .93. The four subscales were highly reliable, coefficient alphas ranged from .71 to .90. The items in each subscale measure the same construct in a consistent, reliable manner. An analysis was conducted to evaluate the extent to which African-Americans differed from non-African-Americans on the subscales prescribed. Each had a p -value $< .0001$. Each subscale had a significant correlation with the total score.

The twenty-nine-item MRIS was used to assess the orientation of participants on four parameters (physical, cultural, sociopolitical, and psychological) of racial identification (Sanders Thompson, 1991, 1992, 1995). The four parameters, proposed by Sanders-Thompson's (1991; 1992), are similar to those proposed by Hillard (1985), who suggested that African-American identification was not a unitary phenomenon, but, instead, a composite of four parameters. Higher scores indicate higher ethnic identity; lower scores indicate lower ethnic identity.

The four dimensions of the MRIS detailed above were assessed for internal consistency and reliability with a sample of 150 adults by Sanders-Thompson (1995). The total scale internal consistency reliability coefficient was .89. The four subscales were highly reliable, with alphas ranging from .62 to .86. Test-retest reliability was as follows: total scale .96; physical racial identity scale, .89; cultural racial identity, .92 sociopolitical racial identity scale, .89 and psychological racial identity scale, .90. Myers and Sanders-Thompson (1994) had previously established the existence of the four factors and the validity of this instrument.

2.2. Experimental procedure. First, the survey (measures of acculturation, ethnicity, and demographics) was distributed and collected. Then, subjects viewed a short newspaper ad pamphlet which contained a filler newspaper article about Missouri state parks, a filler ad for a well-known automobile (a Corvette) and the test ad for equal sweetener. In one version of the ad, the spokespeople (a family) were African-American; in the other version, the spokespeople (a family) were Caucasian. After subjects read the pamphlet, it was collected to eliminate the possibility of its use as a reference when answering the questionnaire. Next, the subjects were given the questionnaire that asked them for their reactions to the article about Missouri state parks, and to the Corvette and equal advertisements, as well as how they viewed the appropriateness of bringing certain dishes/recipes to specific social gatherings/occasions. The questionnaire presented the two social occasions randomly ordered, and four foods/recipes (rice pudding, sweet potato pie, barbecue pulled pork and Asian lemon chicken) randomly ordered.

To manipulate the test message, we followed the procedure established by Green (1999): one version of the advertisement for the test product featured African-American models, using the product, and the other version of the advertisement featured Caucasian models, using the product, and only one treatment was distributed to a respondent.

All subjects were asked about their willingness to take four different foods/recipes to two different

social situations. As noted earlier, the order of the social situations and the foods/recipes were randomized. One social situation was described as a potluck at a family member's home to celebrate a parent's birthday. To enhance realism and to ascertain whether we were creating a scenario that is highly ethnic, respondents were asked to write down information about who would be likely to attend, including their first name, their gender, their age, and their race. The other social situation was described as a potluck lunch at work to celebrate a co-worker's promotion. To enhance realism and to ascertain whether we were creating a scenario that had mixed ethnicity, respondents were again asked to write down information about who would be likely to attend the gathering, including their first name, their gender, their age, and their race. This manipulation is adapted from Stayman and Deshpande (1989).

2.3. Manipulation checks and dependent measures. To determine whether people noticed the race of the spokesperson in the ad, we asked people to indicate the race of the spokesperson after they filled out the questionnaire. This was indicated correctly by all subjects. To check if the manipulation concerning ethnic composition of the work-place group turned out as planned, we noted that the percentage of people, who were listed in the work place social situation, were African-American and Caucasian. The mix was roughly as anticipated, about half African-American (58%) and about half Caucasian (38%) and the rest "other". To check on the manipulation of the race composition of the family social situation, we noted that nearly 90% were African-American. To check if the four different food items varied with respect to "ethnic implications", the subjects were asked to indicate their agreement or disagreement on a seven-point scale for each of the four foods, with statements such as: "Tamales is something people of my ethnic background often eat". Both sweet potato pie and barbecued pulled pork were rated similarly and significantly higher than rice pudding and Asian lemon chicken ($p < .001$).

To measure the affective attitude toward the ad, subjects responded to the following semantic differential items anchored with "very much so" and "not at all", where the question is "how did the equal ad make you feel?" There were 15 items: Insulted, good, angry, happy, cheerful, irritated, impatient, pleased, repulsed, amused, confused, stimulated, calm, shocked, soothed. Coefficient alpha for the affective (attitude toward the ad) was .68. Some items were reverse coded. To measure the cognitive attitude toward the ad, respondents responded to the following semantic differential items, following the question "Did you think the equal advertisement was": pleasant/unpleasant, refined/vulgar, likable/unlikable, interesting/boring, taste-

ful/tasteless, entertaining/uninteresting, artful/artless, familiar/novel, good/bad, insulting/non-insulting, believable/unbelievable, convincing/not convincing, informative/uninformative. The coefficient alpha for the cognitive (attitude toward the ad) questions was .94.

To measure purchase intentions, subjects responded to the question "what is the probability that you will purchase equal?" with the following three sets of possible choices: improbable/probable, unlikely/likely, impossible/possible, each on a scale of 1-7, with 1 being improbable/unlikely/impossible and with 7 being probable/likely/possible. The coefficient alpha for the purchase intention questions was .88.

To measure appropriateness of a food/recipe for a social situation, respondents were asked to answer to the following statement. In general, taking the recipe (sweet potato pie, rice pudding, pulled pork barbecue or Asian lemon chicken) to either a family or work gathering would be (4 items): inappropriate/appropriate, unsuitable/suitable, undesirable/desirable, and a bad idea/a good idea. For the 32 questions (4 foods x 2 social gatherings x 4 items), each scale was 1-7, with 1 being very unlikely and 7 being very likely. The coefficient alpha for the appropriateness scales were all at least .93.

To make sure that subjects did not systematically vary on important (control) variables, we measured involvement with Missouri state parks, with reading and preparing new recipes, and with reducing sugar consumption, where each involvement scale had three items. The coefficient alphas were all at least .91, and no significant differences between groups were found.

When asking the respondents what they thought the study was about, no one indicated the race of the family in the equal advertisement. In most instances, their responses centered on ad recall, reading and understanding print material, or about uncovering information about Missouri state parks, Corvettes or equal. Virtually all respondents were able to recall several aspects of the Missouri parks article, Corvette advertisement and Equal advertisement.

To be certain that the four groups did not differ on major demographic characteristics, age, gender, income, education, and years of work experience were compared across groups, using chi-squared tests. All differences were non-significant. Differences among the groups were also examined with respect to low vs. high acculturation and low vs. high ethnic identity; these differences were also non-significant.

3. Results

H1: African-American consumers' level of ethnic identity will affect their reactions to advertising such that African-American consumers with higher ethnic identity will have more positive attitudes to-

ward the ad (affective and cognitive) and higher purchase intentions for products advertised with an African-American spokesperson than for the same products advertised with a Caucasian spokesperson, to a degree higher than those for African-Americans with a lower ethnic identity.

To test H1, ANOVAs were conducted. The dependent variables are attitude toward the ad (affective), attitude toward the ad (cognitive), and purchase intent. As previously described, affective attitude toward the advertisement was calculated by taking the mean of the 15 items in the section “how did the Equal ad make you feel?” The cognitive attitude toward the advertisement was calculated by taking the mean of the 13 items in the section “did you think the Equal ad was...?” The variable, purchase intent, was calculated taking the mean of the 3 items in the section “what is the probability that you will purchase Equal?”

The independent variables are level of ethnicity (cate-

gorized as low or high), level of acculturation (categorized as low or high), and race of ad spokesperson (African-American or Caucasian). We included acculturation as a part of the model because we asserted (in discussing our second hypothesis) that level of acculturation would have no effect on the dependent variables.

Descriptive statistics (means and standard deviations) and the results from the ANOVAs are provided in Tables 1 and 2, respectively:

There is one significant effect (bolded), an interaction effect – that between ethnic identity and acculturation on attitude toward the ad (affective); see Figure 3.

This Figure suggests that the ethnic identity effect (going from low to high ethnic identity) on attitude toward the ad (affective) is significantly higher for people who score low on acculturation than for people with higher acculturation. Indeed, it is a crossover interaction, and it can be seen that the ethnic identity effect is negative for those with high acculturation.

Table 1. Means and standard deviations for the four groups: ethnicity, acculturation and spokesperson’s race

	Low E, low A		High E, low A		Low E, high A		High E, high A	
	AA	C	AA	C	AA	C	AA	C
Affective	3.24 (.65)	3.37 (.45)	3.63 (.51)	3.53 (.42)	3.51 (.63)	3.64 (.48)	3.37 (.64)	3.45 (.43)
Cognitive	4.76 (1.07)	4.59 (1.55)	4.70 (1.14)	4.63 (1.41)	5.13 (.84)	4.27 (1.44)	4.49 (1.42)	4.53 (1.05)
Purchase intentions	4.69 (1.60)	4.35 (1.63)	3.57 (2.07)	4.12 (2.15)	4.15 (1.56)	4.27 (2.11)	4.31 (2.29)	3.63 (2.58)

Notes: E – level of ethnic identity; A – level of acculturation; AA – African-American; C – Caucasian.

Table 2. ANOVA results

	Affective		Cognitive		Purchase intentions	
	F	p-value	F	p-value	F	p-value
Ethnic identity (E)	.314	.57	.244	.62	1.923	.17
Acculturation (A)	.327	.58	.102	.75	.077	.78
Spokesperson’s race (S)	.322	.73	.819	.44	.321	.73
E x A	5.629	.02	.197	.66	.437	.51
E x S	.613	.44	1.458	.23	.005	.94
A x S	.299	.59	.490	.49	.342	.56
E x A x S	.292	.59	.964	.33	1.649	.20

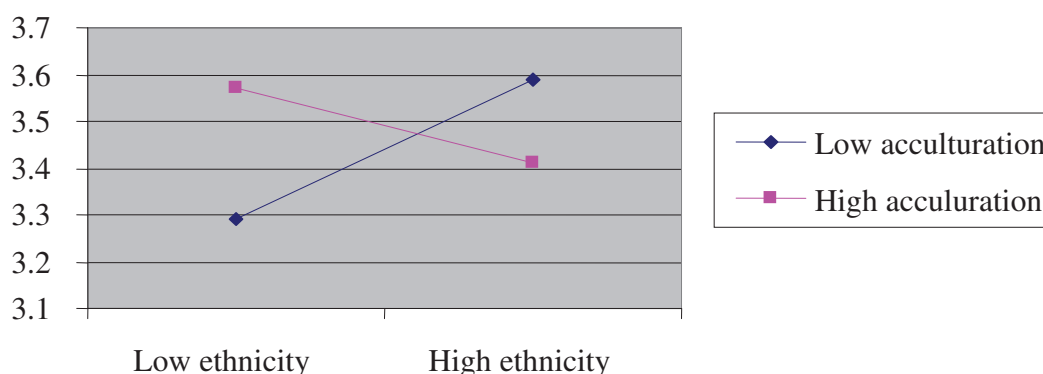


Fig. 3. The interaction effect of ethnicity and acculturation on affective attitude toward the ad

However, this was not the interaction effect postulated in hypothesis 1, and, thus, hypothesis 1 is not supported. Yet, if we combine the appropriate means in Table 1, it can be determined that the hypothesized interaction effect (labeled E x A in the ANOVA Table) was directionally correct for attitude toward the ad (affective) and for purchase intent, while (surprisingly) not being directionally correct for attitude toward the ad (cognitive).

H2: African-American consumers' level of acculturation will have no affect on attitude toward the ad (affective and cognitive) and purchase intentions.

As suggested, the main effect of acculturation is non-significant, verifying the observation that there would be no acculturation effect, and thus, H2 is supported.

H3: There will be an interaction between acculturation, ethnicity and the composition of a social gathering on the appropriateness of bringing certain food products such that:

1. African-Americans with low ethnic identity (regardless of the level of acculturation) will view mainstream foods as more appropriate than traditional African-American foods for both family and workplace social gatherings.
2. African-Americans consumers, who have highly ethnic identity and a low level of acculturation, will view traditional African-American foods as more appropriate than mainstream foods for both family and workplace social gatherings.
3. African-Americans consumers, who have highly ethnic identity and high level of acculturation will view as more appropriate: a) traditional African-Americans foods over more mainstream foods in a family social gathering; and b) mainstream foods over traditional African-American foods in a workplace social gathering.

As noted earlier, the dependent variable for this hypothesis was subjects' indication of how appropriate they thought rice pudding, sweet potato pie, barbecued pulled pork and Asian lemon chicken were to bring to two social settings: family (verified by manipulation test to be overwhelmingly African-Americans participants) and work (verified by manipulation checks to be a "not too far from 50/50" mixture of African-Americans and Caucasians). To test H3, four one-way ANOVAs were performed, one for each food/recipe. Recall that the dependent variable was determined by averaging the 4 questionnaire items noted in the previous Section. As a reminder: conventional wisdom (verified by a manipulation check yielding $p < .001$) suggested that sweet potato pie and barbecued pulled pork were viewed as more African-American-oriented, while rice pudding and Asian lemon chicken were viewed as more mainstream.

If H3 is completely supported, we would find for each food that there are 2-way interaction effects in the indicated directions between type of social gathering and ethnic identity, and between type of social gathering and acculturation level, and a 3-way interaction among type of social gathering, level of ethnic identity and acculturation level.

We found only partial support for H3. For rice pudding and Asian lemon chicken, the two "mainstream" foods, we found no significant (main or interaction) effects. Therefore, H3 (1) is not supported. For sweet potato pie, we found a marginally significant main effect of ethnic identity ($.10 < p < .15$), indicating that sweet potato pie was viewed as more appropriate overall for subjects with a high level of ethnic identity than for respondents with a low level of ethnic identity. For the other "African-American food", barbecued pulled pork, this effect was highly significant ($p < .01$). We also found for the same two foods, that the main effects of acculturation were marginally significant ($.10 < p < .20$ for sweet potato pie, and $.05 < p < .10$ for barbecued pulled pork). We also found for barbecued pulled pork that there is an (E x A) interaction in the direction indicated in H3 (2) and H3 (3) ($.05 < p < .10$); however, this interaction was not significant for sweet potato pie ($p > .20$). We did not find a 3-way interaction among type of social gathering, ethnic identity and acculturation for any food. Still, taken together, these results provide moderate support for H3 (2) and H3 (3,a), while not supporting H3 (3,b).

4. Discussion

In the recent past, ethnic minorities were seen as a conglomerate of similar individuals with the same tastes, wants and needs. While this might have been true to some extent, it goes without saying that there existed some variability, even then. The African-American consumer was largely ignored individually and treated with one mass marketing message, uniquely segmented for those buyers, but reached via a single strategy. The African-American consumer group has grown significantly in size, buying power and in the variability of its wants and desires. It is evident that African-Americans' purchasing habits are more heterogeneous than previously assumed. This research identifies just two possible contributors to that heterogeneity: ethnic identity and acculturation.

This research specifically focused on the attributes of ethnic identity (racial identity) and acculturation (adapting to the cultural traits of the majority) to measure perceptual differences among African-American consumers. Responses related to consumption, as predicted by the level of ethnic identity and the level of acculturation, were demonstrated. The study also examined whether the consumption of a

food product was moderated by the influence of strength of ethnic identity and acculturation. It is not surprising that consumer' attributions of emotions and meanings to culturally-related consumption would be present. It was also determined that consumption preferences are affected by level of ethnic identification and level of acculturation. This finding has important implications that are discussed in the next Section.

5. Managerial implications

Few studies have examined the attributional responses of African-American consumers. It cannot be assumed that all African-American consumers think alike. Instead, there are sub-segments within the groupings of African-American consumers that think and act differently. And, these sub-segments may be worthy of a separate strategic effort if significant enough in size and scope.

While our findings are specific to the African-American segment of the U.S. market, most markets around the world have groups that are minorities. Although the specific behavior of these minorities may differ from those of African-Americans in the U.S., our findings indicate a need for managers in other countries/cultures/settings to strive for better understanding the effects of variables, such as ethnicity and acculturation in their respective markets.

Further research is needed to examine the moderating influence of sense of ethnic identity. Future research could also benefit by investigating whether the consumption of a specific cultural product category can predict attributional responses in other cultural product categories. For example, does consumption of cultural music predict consumer attributions associated with the consumption ethnic foods or vice versa? Answers to these questions can help retailers in predicting consumer response toward new cultural products by using data on patterns of consumption for existing cultural products.

This study also offers managerial implications related to the symbolic function of ethnic food in an increasingly multicultural society. Consumers often sample foods from other countries and ethnic groups and mimic both preparation and taste to their own liking. This overlapping of cultural contexts illustrates the concept of "straddling the boundaries" between several cultures at once, and has great implications as the United States continues to "brown", and as other countries become more multi-cultural. Food consumption is one area, where it is acceptable to acquire a taste that is somewhat outside of the taste associated with one's culture. For example, the term "soul food" connotes a specific taste derived from a particularly unique style of preparation likened by African-Americans. "New Orleans cuisine" and "Southwestern style" food connotes, by its style of preparation, an array of unique

ingredients that, when combined, create a unique taste commonly associated with those regions of the United States. This concept also relates to many other countries, for example, in China, different provinces are well-known for their different food styles.

This work also contributes toward improving firms' targeting efforts, by looking at the complexity and variability of the underlying issues. For example, marketers may need to segment their markets and develop communication plans for consumers with varying levels of affiliation with their ethnic heritage and varying levels of assimilation (i.e., acculturation). High levels of ethnic identity may not necessarily lead to positive responses from the targeted consumers. People, who identify strongly with their ethnic heritage, may react more intensely to accommodation efforts, but their response may be either intensely positive or intensely negative. This has been the case with certain products ads in the past. Multiple-segmentation approaches and the inclusion of segmentation variables may be necessary to be successful. New ways to define and reach ethnic segments, whose characteristics are not identified in standard demographic counts, are also important.

Summary and limitations

This study adds to the limited amount of research on ethnicity and acculturation studied in combination, especially for African-Americans. Unlike most past research which treated the African-American and Caucasian markets as homogeneous, and asked consumers to evaluate African-American and Caucasian spokespersons, this research included *additional dimensions*, specifically, the level of ethnic identity and acculturation that particular respondents possessed. In addition, the respondents' disposition to the race-specific advertising was included explicitly, both as a main effect and in interaction effects. This research also looked at the racial mix of the situational surroundings (work or family), where a food item was to be served, and studied main effects, two-factor interactions, and a three-factor interaction concerning food usage. The respondents were African-Americans from a large metropolitan area with a diversity of gender, age, social class and education level.

Results suggest that level of acculturation and level of ethnic identity are important variables to consider when segmenting the African-American consumer market. Both affective attitudes toward an ad and product usage variables were affected by these variables. It was demonstrated that psychological and behavioral differences among African-Americans can be identified, operationalized, and understood. What stands out overall is that, indeed, the African-American market is heterogeneous, and can be marketed to more effectively if treated as heterogeneous.

We found that the level of both ethnic identity and acculturation affect the relationship between use of ethnic food and situational variables. In particular, highly acculturated African-Americans, who also have high ethnic identity, believe that it is more appropriate to bring ethnic foods than mainstream foods to family gatherings (predominantly African-American participants), while no such difference was found for a workplace setting (a near 50/50 mix of African-American and Caucasian participants). On the other hand, we found few acculturation or ethnic identity effects on how people

reacted to advertisements with spokespeople of different races. This could be because people already have pre-formed attitudes toward the equal product. Previous research has used fictional brands.

Future research should continue to examine the purchase behavior and product usage of the African-American consumer. Marketers need to understand environmental and situational variables that influence African-American consumer choices. Another area for further study would include the examination of multi-cultural aspects of other countries and corresponding market segments.

References

1. Bauer, Raymond A., Scott M. Cunningham and Lawrence H. Wortzel (1965). "The Marketing Dilemma of Negroes", *Journal of Marketing*, 29(July), 1-6.
2. Berry, Johan (1990). "Psychology of Acculturation in Cross-Cultural Perspectives", *Proceedings of the Nebraska Symposium on Motivation*, John I. Berman, ed., 1, 201-234.
3. Deshpande, Rohit, Wayne D. Hoyer and Naveen Donthu (1986). "The Intensity of Ethnic Affiliation: a Study of the Sociology of Hispanic Consumption", *Journal of Consumer Research*, 13(September), 214-220.
4. Dubois, W.E.B. (1907). *Souls of black folk*. Chicago: A.C. McLurg.
5. Elliot, Michael (1995). "Differences in the Portrayal of Blacks: a Content Analysis of General Media Versus Culturally-Targeted Commercials", *Journal of Current Issues and Research in Advertising*, 17 (1), 75-86.
6. Faber, Ronald J., Thomas C. O'Guinn and John A. McCarty (1987). "Ethnicity, Acculturation and the Importance of Product Attributes", *Psychology and Marketing*, 4 (Summer), 121-134.
7. Green, Corliss (1999). "Ethnic Evaluations of Advertising: Interaction Effects of Strength of Ethnic Identification, Media Placement, and Degree of Racial Composition", *Journal of Advertising*, 38 (1), 49-64.
8. Helms, Janet E. (1990). *Black and White Racial Identity*. Westport, CONN, Greenwood Press.
9. Hillard, A. (1985). "Parameters Affecting the African American Child", *Presented at the Black Psychology Seminar at Duke University*. Durham, NC.
10. Hirschman, Elizabeth C. (1981). "American Jewish Ethnicity: It's Relationship to Some Selected Aspects of Consumer Behavior", *Journal of Marketing*, 45 (Summer), 102-111.
11. Jeffries, Leo W. and K. Kyoong Har (1979). "White Ethnics and Their Media Images", *Journal of Communication*, 29(1), 116-22.
12. Kara, Ali, and Natasha R. Kara (1996). "A Study of Hispanic Decision Making Processes Across Different Acculturation Levels," *Journal of Applied Business Research*, 12(2), 122-134.
13. Kim, Young (1979). "Toward an Interactive Theory of Communication-Acculturation," In D. Nimmo (Ed.), *Communication Yearbook 3*. New Brunswick, NJ: Transaction Books.
14. Landrine, Hope A., and Elizabeth A. Klonoff (1996). *African-American Acculturation- Deconstructing Race and Reviving Culture*, Thousand Oaks, CA., Sage Publications, Inc.
15. Myers, Michell A. and Vetta L. Sanders-Thompson (1994). "Africentricity: An Analysis of Two Culture Specific Instruments," *Western Journal of Black Studies*, 18(4), 179-184.
16. National Minorities in Business Council (2004). New York, N.Y.
17. O'Guinn, Thomas C. and Ronald J. Faber (1986). "Advertising and Subculture: the Role of Ethnicity and Acculturation in Market Segmentation", *Current Issues & Research in Advertising*, 9 (1 and 2), 133-147.
18. O'Guinn, Thomas C., Giovanna Imperia, and Elizabeth MacAdams (1987). "Acculturation and Perceived Family Decision-Making Input Among Mexican American Wives", *Journal of Cross-Cultural Psychology*, 18 (1), 78-92.
19. Ownbey, Shiretta, and Patricia E. Horridge (1997). "Acculturation Levels and Shopping Orientations of Asian-American Consumers", *Psychology & Marketing*, 14 (January), 1-8.
20. Penalosa, Lisa and Mary C. Gilly (1999). "Marketer Acculturation: the Changer and the Changed", *Journal of Marketing*, 63 (July), 84-104.
21. Reid, I., J. Stagmaier, and C. Reid (1986). "Research Design Used to Describe and Explain Black Consumer Behavior", in R.E. Pitts (Ed.), *Cultural and Sub-Cultural Influences*, Chicago: American Marketing Association.
22. Robinson, Patricia and C.P. Rao (1986). "A Critical Review and Reassessment of Black Consumer Behavior Research", in Thomas D. Jensen, ed., *1986 Proceedings Southwestern Marketing Association Conference*, March, 9-13.
23. Sanders-Thompson, Vetta L. (1991). "A Multidimensional Approach to the Assessment of African-American Racial Identification," *Western Journal of Black Studies*, 15 (3), 154-158.
24. Sanders-Thompson, Vetta L. (1992). "A Multifaceted Approach to the Conceptualization of African-American Identification", *Journal of Black Studies*, 23 (1), 75-85.
25. Sanders-Thompson, Vetta (1995). "The Multidimensional Structure of Racial Identification", *Journal of Research in Personality*, 29 (2), 208-222.

26. Stayman, Douglas and Rohit Deshpande (1989). "Situational Ethnicity and Consumer Behavior", *Journal of Consumer Research*, 16 (December), 61-371.
27. U.S. Bureau of Census (2000). "*Money Income of Households – Percent Distribution by Income*", Washington, D.C.
28. Wang, Xiao, and Laura Arpan (2008). "Effects of Race and Ethnic Identity on audience Evaluation of HIV Public Service Announcements", *Howard Journal of Communications*, 19 (1), 44-63.
29. Watson, Stevie, Corliss Thornton, and Brian Engellend (2010). "Skin Color Shades in Advertising to Ethnic Audiences", *Journal of Marketing Communications*, 16 (4), 185-201.
30. Webb, Monica (2008). "Does One size fit All Smokers? The Moderating Role of Acculturation on Culturally Specific Interventions", *Psychology of Addictive Behaviors*, 22 (4), 592-596.
31. Williams, Jerome (1988). "Black Consumer Segmentation and Ethnic Identification: a Critical Review and Pilot Study", David W. Schumann, ed., 1988 *Proceedings of the Society for Consumer Psychology*, August, 135-143.
32. Williams, Jerome and William Qualls (1989). "Middle-Class Black Consumers and Intensity of Ethnic Identification", *Psychology and Marketing*, 6 (4), 263-86.

Appendix

1. How did the Corvette ad make you feel? (Please circle a number).

The Corvette ad made you feel:

	Not at all						Very much so	
Insulted	1	2	3	4	5	6	7	
Good	1	2	3	4	5	6	7	
Angry	1	2	3	4	5	6	7	
Happy	1	2	3	4	5	6	7	
Cheerful	1	2	3	4	5	6	7	
Irritated	1	2	3	4	5	6	7	
Impatient	1	2	3	4	5	6	7	
Pleased	1	2	3	4	5	6	7	
Repulsed	1	2	3	4	5	6	7	
Amused	1	2	3	4	5	6	7	
Confused	1	2	3	4	5	6	7	
Stimulated	1	2	3	4	5	6	7	
Calm	1	2	3	4	5	6	7	
Shocked	1	2	3	4	5	6	7	
Soothed	1	2	3	4	5	6	7	

Did you think the Corvette ad was? (Please circle a number).

Unpleasant	1	2	3	4	5	6	7	Pleasant
Vulgar	1	2	3	4	5	6	7	Refined
Unlikable	1	2	3	4	5	6	7	Likable
Boring	1	2	3	4	5	6	7	Interesting
Tasteless	1	2	3	4	5	6	7	Tasteful
Uninteresting	1	2	3	4	5	6	7	Entertaining
Artless	1	2	3	4	5	6	7	Artful
Novel	1	2	3	4	5	6	7	Familiar
Bad	1	2	3	4	5	6	7	Good
Insulting	1	2	3	4	5	6	7	Non-insulting
Unbelievable	1	2	3	4	5	6	7	Believable
Not convincing	1	2	3	4	5	6	7	Convincing
Uninformative	1	2	3	4	5	6	7	Informative

What is the probability that you will purchase a Corvette? (Please circle the number).

Improbable	1	2	3	4	5	6	7	Probable
Unlikely	1	2	3	4	5	6	7	Likely
Impossible	1	2	3	4	5	6	7	Possible

2. Family Gathering. Imagine that you need to prepare a dish for a family potluck gathering at a family member’s home. List below those who will be attending (first name), their gender, and their approximate age and race.

3. Recipes (list of recipes shown). Please answer the following questions about the recipes you just read (You may refer back to them if you want).

In general, taking rice pudding to my family gathering would be:

Inappropriate	1	2	3	4	5	6	7	Appropriate
Unsuitable	1	2	3	4	5	6	7	Suitable
Undesirable	1	2	3	4	5	6	7	Desirable
A bad idea	1	2	3	4	5	6	7	A good idea

How likely would you be to take rice pudding to your family gathering?

Very unlikely	1	2	3	4	5	6	7	Very likely
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Note: The same set of questions repeated for each the four recipes

Here are some general questions about your perceptions and your life style.

We would like to know your interest /involvement in Missouri state parks. For each item, please circle a number which best reflects your opinion.

Missouri state parks:

Are unimportant to me	1	2	3	4	5	6	7	Are important to me
Are interesting to me	1	2	3	4	5	6	7	Are uninteresting to me
Are insignificant to me	1	2	3	4	5	6	7	Are significant to me

Please indicate your agreement or disagreement with the following statement:

Visiting Missouri state parks is something people of my ethnic background often do not do.

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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We would like to know your interest/involvement in **reading and preparing new recipes**. For each item, please circle the number which best reflects your opinion.

Reading and preparing new recipes:

Is unimportant to me	1	2	3	4	5	6	7	Is important to me
Is uninteresting to me	1	2	3	4	5	6	7	Is interesting to me
Is insignificant to me	1	2	3	4	5	6	7	Is significant to me

Please indicate your agreement or disagreement with the following statement:

Rice pudding is something people of my ethnic background often eat:

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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Note: The same question repeated for each of the four recipes.