

Ethnic Differences in Tipping:  
Evidence, Explanations, and Implications

Michael Lynn\*

and

Clorice Thomas-Haysbert

\* Michael Lynn is an associate professor of marketing at the School of Hotel Administration, Cornell University, Ithaca, NY 14853-6902. Clorice Thomas-Haysbert is the Director of the Hospitality Management Program at Howard University. This work was supported by a grant from the Center for Hospitality Research at the Cornell Hotel School.

Ethnic Differences in Tipping:  
Evidence, Explanations, and Implications

ABSTRACT

Anecdotal evidence suggests that many waiters and waitresses deliver poor service to ethnic minorities because they believe that ethnic minorities are poor tippers. How managers should deal with this problem depends in part on whether or not ethnic minorities really do tip less than Whites and (if they do) on when and why this occurs. This paper reports on two studies that address these issues. The results indicate that Asians tip less than Whites in comparisons across (but not within) restaurants and that Blacks tip less than Whites in comparisons both across and within restaurants. Various explanations for these ethnic differences are tested and the managerial implications of the results are discussed.

## Ethnic Differences In Tipping: Evidence, Explanations, and Implications

On October 23, 1999, Charles Thompson and Theresa White went out for dinner at Thai Toni Restaurant in Miami Beach, Florida. When they got their bill, they found that a 15 percent gratuity had been added even though no similar charges were added to the bill of a nearby couple. Mr. Thompson asked the restaurants' owner/manager for an explanation and was told: "You black people don't tip well." These words, and the actions they were meant to explain, were widely reported in the nations' print and broadcast media (Anonymous 1999; Clary 1999). Public reaction to the news story was predictably negative. The NAACP organized a protest outside the restaurant; the Greater Miami Convention and Visitors Bureau removed the restaurant from its membership list; the Florida Attorney General charged the restaurant with violating the state's Deceptive and Unfair Trade Practices Act; and the general public labeled the restaurant owner as a racist (Anonymous 1999; Clary 1999).

The public outcry over the actions of the restaurant owner was clearly justified given our political and moral norms. In this country, it is illegal to discriminate in the provision of public accommodations based on the customer's color, race, national origin, or religion. Furthermore, such discrimination violates moral principles requiring people to treat one another with dignity and respect. What the restaurant owner did was illegal and wrong.

Unfortunately, the restaurant owner was vilified as much for his beliefs as for his actions. The idea that Blacks tip less than do Whites is considered unjustified and politically offensive by many people, so the restaurant owner's acceptance and voicing of this idea was perceived as evidence of racial prejudice (see Clary 1999). No one bothered (or dared) to publicly ask if the restaurant owners' belief might be correct. However, researchers have observed ethnic

differences in other consumer behaviors (see below), so it is possible that ethnic differences in tipping also exist. This possibility should be examined, because information about ethnic differences in tipping is critical to the management of service delivery to ethnic minority customers.

Many restaurant servers believe that ethnic minorities are poor tippers. For example, one survey of 51 servers in Houston, Texas found that ninety-four percent of the servers classified Blacks as poor tippers, seventy percent classified Hispanics as poor tippers, and twenty-seven percent classified Asians as poor tippers. In contrast, none of the servers classified Whites as poor tippers (Lynn 2000a). This belief poses two problems for the restaurant industry and its managers. First, this belief makes it difficult to recruit and retain service staff at restaurants with a large percentage of ethnic minority customers. Restaurants with many minority customers are perceived as offering lower income possibilities than those with mostly White customers, making the latter type of restaurants less popular places of employment. Second, the belief that ethnic minorities are poor tippers is likely to adversely affect the delivery of service to minority customers. At best, servers holding this belief will be less happy and enthusiastic to wait on ethnic minorities than to wait on Whites. At worst, servers holding this belief may all but ignore ethnic minorities in order to lavish their attention on the White customers they perceive to be better tippers.

How managers should address the above problems depends on whether or not ethnic minorities really do tip less than White customers and (if they do) on when and why they tip less. These issues are examined in the paragraphs and pages that follow. Specifically, this paper presents two studies comparing the tipping behaviors of ethnic minorities with that of Whites. The paper is divided into four major sections. The first section establishes a background for the

current investigation. Previous research on ethnic differences in consumer behavior is reviewed, several potential explanations for ethnic differences in tipping are identified, and existing studies of ethnic differences in tipping are critically evaluated. The second section describes the methods, results and conclusions of Study 1. The third section presents the methods, results and conclusions of Study 2. Finally, the fourth section discusses the theoretical and practical implications of the findings as well as the need for further research on this topic.

## LITERATURE REVIEW

### Ethnic Differences in Consumer Behavior

Consumer researchers have found ethnic differences in brand loyalty (Deshpande, Hoyer and Donthu 1986), coupon use (Delner 1997; Green 1995a), household expenditure patterns (Dinkins 1994; Fan 1998), media use (Deshpande, et al 1986; Green 19995b), price sensitivity (Faber, O'Guinn and McCarty 1987; Saegert, Hoover and Hilger 1985), shopping venue choices (Eckman, Kotsiopulos and Bickle 1997; Saegert, et al 1985) and other consumer behaviors (Mulhern and Williams 1994; Wilkes and Valencia 1985; 1986). The explanation for these ethnic differences varies with the specific ethnic groups and consumer behaviors involved. However, most of the ethnic differences can be attributed to one or more of four underlying causes. Those causes are depicted in Figure 1 and are discussed below.

First, ethnic minority customers often face marketplace discrimination by salespeople and by corporations (see Yinger 1998 for a review). For example, real-estate agents show Black and Hispanic home buyers only about 75 percent as many houses as are shown to comparable White home buyers (Yinger 1995). In addition, automobile dealers charge Blacks higher prices than are charged to comparable Whites using identical price negotiation strategies (Ayres and

Siegelman 1995). On a more subtle level, manufacturers place many fewer coupons in Black newspapers than in White newspapers (Green 1995b). This marketplace discrimination may explain why ethnic minorities have a more negative view of marketing in general than do Whites (Pruden and Longman 1972). It may also help explain why ethnic minorities respond positively to marketing efforts that respectfully target them using minority models, media, and languages (Green 1999; Holland and Gentry 1999; Koslow, Shamdasani and Touchstone 1994).

-----  
Insert Figure 1 about here  
-----

Second, ethnic groups differ in terms of demographic characteristics such as average age, education, occupation, income, and household type (Humes and McKinnon 2000; McKinnon and Humes 2000; Ramirez 2000). Black and Hispanic baby-boomers, for example, have lower average incomes than do Asian and White baby-boomers (Dinkins 1994). Demographic variables affect a variety of consumer behaviors, so there is little doubt that the demographic differences between ethnic groups contribute to many of the differences observed in their consumer behaviors. However, ethnic differences in household expenditure patterns, coupon use and drinking behavior have been found even after statistically controlling for age, education, employment and income (Delener 1997; Fan 1998; Treno, Alaniz and Gruenewald 2000), so these demographic characteristics do not fully explain ethnic differences in consumer behavior.

Third, ethnic groups differ in terms of culture and values (see Goldsmith, White and Stith 1987; Valencia 1989; Wood and Howell 1991). For example, Hispanics report a greater relative value for friendship and for family than do Whites (Reardon, Hasty and McGowan 1997). Research suggests that these cultural and value differences underlie many ethnic differences in consumer behavior (c.f., Penaloza 1994). Particularly relevant to this point are studies

demonstrating that the levels of ethnic group identification, felt ethnicity and cultural assimilation moderate ethnic differences in coupon use, media use, brand loyalty, responsiveness to ethnic advertising, food consumption, and the perceived importance of product attributes (Deshpande, et al 1986; Donthu and Cherian 1992; Faber, et al 1987; Stayman and Deshpande 1989; Wallendorf and Reilly 1983).

Finally, ethnic groups differ in terms of physical and physiological characteristics. The most obvious of these characteristics is skin color. However, there are also ethnic differences in facial features, hair texture, physical size, ability to taste the compound phenylthiocarbamide (PTC), and other characteristics (Goldsby 1971). These physical and physiological differences are small and are irrelevant to most consumption behaviors, but they may help to explain some ethnic differences in product usage. For example, Asians and Blacks consume fewer milk products per person than do Whites (Klesges, et al 1999) in part because they are more likely than Whites to be lactose intolerant (France 1999).

#### Ethnic Differences in Tipping

Three of the four general factors that underlie ethnic group differences in consumer behaviors may also cause ethnic minorities to tip less than do Whites. Specifically, ethnic minorities may tip less than do White consumers because of: (1) discrimination in the delivery of service to ethnic minorities, (2) a greater preponderance of female headed households, large families/dining-parties, and low incomes among ethnic minorities, and/or (3) low familiarity with, and internalization of, tipping norms among ethnic minorities. Each of these possibilities is discussed in the paragraphs below.

First, differences in the service delivered to different ethnic groups may cause ethnic minorities to tip less than do Whites. As previously mentioned, many servers believe that ethnic minorities are poor tippers (Lynn 2000a). This belief may lead servers to deliver inferior service to their minority customers. Tips are supposed to be an incentive/reward for good service (Lynn and Graves 1996), so the inferior service that minority customers receive may cause them to leave small tips. In other words, servers' beliefs that ethnic minorities are poor tippers may lead servers to discriminate against ethnic minorities and thereby create a self-fulfilling prophecy (Rosenthal and Rubin 1978).

Second, other demographic differences between ethnic groups may cause ethnic minorities to tip less than do Whites. In comparison with Whites, Blacks and Hispanics have more female heads of households, larger families, and lower incomes (Dinkins 1994; McKinnon and Humes 2000; Ramirez 2000). Asians are more similar to Whites on many demographic dimensions than are Blacks and Hispanics, but Asians also have larger families than do Whites and are more likely than Whites to have incomes below \$25,000 (Humes and McKinnon 2000). These demographic characteristics of ethnic minorities suggest that ethnic minority restaurant customers are likely to have more women paying the bill, larger dining parties, and lower incomes than do White restaurant customers. Women, large dining parties and consumers with low incomes have all been found to leave smaller tips than their counterparts (see Lynn, Zinkhan and Harris 1993; Telenation 1999; Pearl and Sudman 1983), so these characteristics of ethnic minority dining parties may create ethnic differences in tipping.

Finally, ethnic differences in familiarity with, and/or internalization of, tipping norms may cause ethnic minorities to tip less than do Whites. Tipping in this country is guided by a social norm that calls for tipping 15 to 20 percent of the bill size with the exact percentage

depending on the quality of service received (Post 1997). This norm reflects the social expectations of the country's largely white population. Perhaps, ethnic minorities are less familiar with or committed to this social norm and, as a result, tip less than do Whites.

Existing published research provides few tests of ethnic differences in tipping and no tests of the potential explanations outlined above. Only three published studies have examined ethnic differences in restaurant tipping. Two of these studies found that ethnic minorities tip less than do Whites (Lynn and Graves 1996; Lynn, Le and Sherwyn 1998). The other study found no ethnic differences in tipping (Mok and Hansen 1999). Unfortunately, small sample sizes in these studies meant that different ethnic minorities were collapsed into a single “Non-White” category. We could find no published study that has separately compared the tipping behaviors of Blacks, Asians, and/or Hispanics with that of Whites. Furthermore, none of the published studies provided tests of potential explanations for the observed ethnic differences. This paper reports on two studies that address these weaknesses in the existing literature.

## STUDY 1

Study 1 examines ethnic differences in tipping using data from a national telephone survey conducted by Market Facts for *American Demographics Magazine*. This survey was featured in an *American Demographics* article by Speer (1997). However, that article did not report the survey results on ethnic differences in tipping. We obtained the survey data from Market Facts and analyzed it for evidence of ethnic differences in restaurant tipping as described below.

## Method

Market facts conducted this national telephone survey using a single-stage, random digital sample technique. All numbers were called up to three times (as necessary to reach someone at the number). One thousand five interviews were completed -- 799 with white respondents, 91 with black respondents, and 115 with respondents of other ethnic backgrounds.

The key question of interest here asked respondents: "Of the following five choices, which best represents the amount you normally tip waiters or waitresses?" The response options were: (1) "\$1 or \$2," (2) "\$3 or more," (3) "less than 15 percent of the bill," (4) "15 percent of the bill," or (5) "more than 15 percent of the bill." These response options represent two different scales for measuring tip-size, so all responses were recoded into three variables. First, we coded whether respondents selected a dollar amount response (code=1) or a percentage of the bill response (code=2). We call this variable "tip type." Second, we coded whether respondents who selected a dollar amount response normally tip \$1 or \$2 (code=1) or normally tip \$3 or more (code=2). Respondents who did not select a dollar amount response were given a missing value on this variable, which we call "dollar tip." Finally, we coded whether respondents who selected a percentage of the bill response normally tip less than 15 percent of the bill (code=1), 15 percent of the bill (code=2), or more than 15 percent of the bill (code=3). Respondents who did not select a percentage of the bill response were given a missing value on this variable, which we call "percent tip."

In addition to the tipping question, respondents were asked numerous questions about their demographic characteristics. Those demographic variables used in this analysis are:

1. sex (male=0, female=1),
2. age as of last birthday,

3. amount of schooling completed (on a 6-point ordinal scale ranging from “completed grade school or less” to “postgraduate work started or completed,”
4. household size (including self and infants),
5. household income (on an 8-point ordinal scale ranging from “under \$15,000” to “\$75,000 or more,” and
6. ethnicity (White=1, Black=2, Asian=dropped, or Other=dropped).

Asians were dropped from the analyses, because their numbers were too small for meaningful comparisons. Members of “other” ethnic groups were dropped from the analyses, because this category was too broad to be meaningful.

## Results

The analyses of ethnic differences in tipping in this study are summarized in Table 1. Blacks were less likely than Whites to describe their usual tips as a percentage of the bill (49.3% vs 80.6%;  $z = -6.14, p < .0001$ ). Furthermore, those Blacks who did describe their usual tips as a percentage of the bill reported leaving smaller percentage tips than did Whites (mean rank = 249.31 vs 332.06;  $z = -2.93, p < .003$ ). However, those Blacks who described their tips in dollar terms were just as likely as those Whites who also described their tips in dollar terms to report leaving \$3 or more (37.8% vs 40.3%;  $z = -.27, p > .78$ ). The first finding suggests that Blacks are less likely to base their tips on bill size than are Whites. Overall, the second and third findings suggest that Blacks also leave smaller tips on average than do Whites, because the significant effect involving percent tip was not offset by a reversed effect involving dollar tip.

-----  
Insert Table 1 about here  
-----

Sex, age, education, household size, and household income were examined as potential mediators of the Black-White differences in tipping described above. According to Baron and Kenny (1986), the mediation of an independent variable's effect on a criterion variable is best established by demonstrating that the proposed mediator is related to the independent variable and to the criterion variable after controlling for the independent variable. Accordingly, tests of these relationships were conducted for the proposed mediators in this study. The results are presented in Tables 2 and 3. These analyses indicate that the Black-White difference in tip type (i.e., tendency to tip a dollar amount or a percentage of the bill) was partially mediated by education, household size, and household income. Similarly, the Black-White difference in percent tip was partially mediated by age, household size, and household income. However, both of these Black-White differences in tipping remained statistically significant after controlling for all the proposed mediators, so other processes must also underlie these ethnic differences in tipping.

-----  
Insert Tables 2 and 3 about here  
-----

### Conclusions

The results of this study suggest that Blacks are less likely than Whites to base their tips on bill size as called for by the 15 to 20 percent tipping norm and that Blacks leave smaller tips on average than do Whites. These ethnic differences in tipping are partially mediated by other demographic variables, such as household size and income. However, these demographic variables do not fully explain the observed ethnic differences in tipping, so other processes must also underlie these differences.

## STUDY 2

Study 2 replicates and extends the results of Study 1. It brings together and analyzes all the available published and unpublished data on ethnic differences in restaurant tipping that was collected at the restaurants where the tips were left. In this way, it is similar to a meta-analysis. However, the raw data from all the available studies was combined into one large data set and primary, rather than meta-analytic, statistical tests were performed on this data. The combined data from these studies allowed us to: (1) examine specific tipping decisions as opposed to self-reports of general tipping habits, (2) compare the tipping behaviors of Asians and Hispanics, as well as Blacks, with that of Whites, (3) disentangle ethnic differences in tipping from ethnic differences in restaurant choice, and (4) test several of the potential explanations of ethnic differences in tipping discussed earlier.

### Method

Identification of studies. A search was undertaken for published and unpublished academic studies providing data about ethnic differences in tipping that was collected at the restaurants where the tips were left. Data collected at the restaurant was sought because it is likely to be more accurate than self-reports of general tipping tendencies. In addition, this research methodology (unlike consumer diary studies or national surveys) allows ethnic differences in tipping to be disentangled from ethnic differences in restaurant choice. Relevant studies were identified in three ways. First, computerized searches of ABI Inform, Dissertation Abstracts, Psych Info and the Cornell Hospitality Database were conducted using the term “tipping” in conjunction with the term “restaurant.” Second, the references of already identified studies were examined for citations of prior studies. Finally, the authors of published studies on

tipping were contacted to ask for their raw data and to inquire about any other tipping studies they have conducted or are planning to conduct.

Description of relevant studies. The search described above uncovered three published (Lynn and Graves 1996; Lynn, et al 1998; Mok and Hansen 1999) and two unpublished (Conlin, O'Donoghue and Lynn 2000; Lynn 2000b) academic studies that provided the sought after information about ethnic differences in tipping and that was available for inclusion in this analysis. One additional study (Thomas-Haysbert 2001) was located but was not available for inclusion in this analysis because it is being prepared for separate publication. All of the studies in this analysis were conducted in Houston, Texas. These studies employed one of two methodologies. Two of the studies (Lynn 2000b; Lynn, et al 1998) had restaurant servers record information about their customers -- including information about the customers' bill sizes, tips, and apparent ethnicities. The other three studies (Conlin, et al 2000; Lynn and Graves 1996; Mok and Hansen 1999) had students interview restaurant customers as they were departing the restaurant. The interviewers asked paying customers about the sizes of their bills and tips along with other questions about their restaurant dining habits and their satisfaction with the food and service. Interviewers also recorded the customers' apparent ethnicities. Both of these methodologies are within the mainstream of tipping research and are well represented in the published literature on tipping (see Bodvarsson and Gibson 1994; Cunningham 1979; Feinberg 1986; Freeman, Walker, Borden and Latane 1975; Lynn, 1988; Lynn and Grassman 1990; Lynn and Latane 1984).

Combined data sets. The raw data from all five of the studies providing information about ethnic differences in tipping was obtained and combined into one large data set. Observations from these studies were excluded from the data set in cases where: (1) the paying member of the

dining party was not categorized as White, Black, Asian, or Hispanic, (2) the dining party received a discount on it's bill, (3) the data came from one restaurant that had a large international clientele, (4) the data came from one restaurant that had no Black, Asian or Hispanic customers during the period studied, or (5) the data came from one of several interviewers whose data collection could not be verified by staff at the restaurant. The resulting data set contained 1,837 observations – 1,481 from White diners, 94 from black diners, 149 from Asian diners, and 113 from Hispanic diners.

Every observation included information about the identity of the restaurant, the bill and tip size of the dining party, and the ethnicity of the paying member of the dining party. Many (but not all) of the observations also included the following information:

1. The paying customers' sex (n = 1,809).
2. The number of people in the dining party (n = 1,832).
3. The paying customers' ratings of the server's appearance, knowledge of menu, friendliness, speed of service, and attentiveness on 5 point scales whose endpoints were labeled "poor" and "excellent." These ratings were averaged to produce a service quality index with a coefficient alpha of .88 (n = 1,242).
4. The paying customers' reports about how many times per year they eat at the restaurant they just exited and how many times per year they eat at all other full-service restaurants. These numbers were added to produce a measure of frequency of restaurant patronage and that measure was converted to quintile scores in order to avoid problems with outliers (n = 1,124).

## Results

Description of restaurants in sample. The five studies combined in this paper provided data from 28 different restaurants in or near Houston, Texas, with one restaurant being used as a source of data in two of the studies. In general, these restaurants tended to be mid-scale to up-scale establishments serving mostly White customers. The average per-person bill-size at each of the 28 restaurants ranged from \$6.52 to \$30.06 with a mean of \$11.79.<sup>2</sup> The average percent tip at each of the 28 restaurants ranged from 13.7% to 23.2% with a mean of 17.3%. The percentage of customers who were White at each of these restaurants ranged from 8.3% to 95.9% with a mean of 79.9%. The percentage of customers who were Black at each of these restaurants ranged from 0% to 13.9% with a mean of 4.7%. The percentage of customers who were Asian ranged from 0% to 89.6% with a mean of 8.9%. The percentage of customers who were Hispanic ranged from 0% to 17.7% with a mean of 6.5%.

Distribution of percent tip. The distribution of the dependent variable (percent tip) is presented in Table 4. This variable had a median of 15.2, a mean of 17.2 and a standard deviation of 12.4 in the combined sample. Unfortunately, there were 16 observations over three standard deviations from the mean with 11 of these observations over five standard deviations from the mean! Outliers adversely affect the power and correctness of parametric statistical tests (Wilcox 1997), so those observations with a percent tip exceeding a value of 55 (over 3 SD from the mean) were omitted from all the parametric analyses reported below. In addition, non-parametric tests involving the entire data set were used to complement the parametric tests of the trimmed data when examining the simple main effects of ethnicity on percent tip.

-----  
Insert Table 4 about here  
-----

Ethnic differences in tip size. The tip percentages left by different ethnic groups in this sample are displayed in Table 5. After deleting outliers, the mean tip was 16.6% for Whites, 13.0% for Blacks, 14.9% for Asians, and 16.6% for Hispanics. A simultaneous multiple regression analysis predicting percent tip from a dummy coding of customer ethnicity indicated that Whites tipped significantly more than did Blacks ( $B = -3.59$ ,  $t(1817) = -5.70$ ,  $p < .0001$ ) and Asians ( $B = -1.72$ ,  $t(1817) = -3.38$ ,  $p < .001$ ), but not Hispanics ( $B = -.01$ ,  $t(1817) = -.01$ ,  $p > .98$ ). Kruscal-Wallis tests of all the observations (with percent tip converted to rank scores) replicated the parametric analysis -- Whites left larger tips than did Blacks ( $X^2(1) = 31.76$ ,  $p < .0001$ ) and Asians ( $X^2(1) = 32.99$ ,  $p < .0001$ ), but not Hispanics ( $X^2(1) = 1.26$ ,  $p > .25$ ).

-----  
Insert Table 5 about here  
-----

Mediators of ethnic differences in tipping. Service quality, customer sex, dining party size, frequency of restaurant patronage, and restaurant identity were examined as potential mediators of ethnic differences in tipping using analytic procedures advocated by Baron and Kenny (1986). As previously mentioned, these authors argue that the mediation of an independent variables' effect on a criterion variable is best established by demonstrating that the proposed mediator is related to the independent variable and to the criterion variable after controlling for the independent variable. This approach could be used on all the proposed mediators except restaurant identity. Restaurant identity was a nominal variable with 29 levels (one for each restaurant in each study), so its relationship with customer ethnicity (another multi-level nominal variable) could not easily be tested. Therefore, restaurant expensiveness (as reflected in average per-person bill size) was substituted for restaurant identity in the first analysis called for by Baron and Kenny (1986). If there are ethnic differences in restaurant

expensiveness, then clearly there are ethnic differences in restaurant identity. This substitution was not needed in the second analysis called for by Baron and Kenny (1986), because restaurant identity could be dummy coded and used as an independent variable in regression analyses. The results of these mediation analyses are summarized in Tables 6 and 7 and are described below.

The Black-White difference in percent tip was mediated only by frequency of restaurant patronage. Blacks reported eating out at full service restaurants less frequently than did Whites (mean quintile score = 2.62 vs 3.06) and frequency of restaurant patronage predicted unique variance in percent tip after controlling for customer ethnicity (see Table 7). However, the Black-White difference in percent tip remained sizable and statistically significant after controlling for this mediator, so additional causal processes must underlie this ethnic difference in tipping.

-----  
Insert Tables 6 and 7 about here  
-----

The Asian-White difference in percent tip was mediated by service, dining party size, frequency of eating out, and restaurant identity. In comparison with Whites, Asians rated their service lower (mean = 4.11 vs 4.38), had larger dining parties (mean = 4.33 vs 2.52), dined out less frequently (quintile mean = 2.59 vs 3.06), and ate at less expensive restaurants (mean = 10.34 vs 11.29). Furthermore, service, dining party size, frequency of restaurant patronage and restaurant identity were all significantly related to percent tip after controlling for customer ethnicity (see Table 7). The Asian-White difference in percent tip became non-significant after controlling for these mediators (both alone and together), so no additional causal processes are needed to explain this ethnic difference in tipping.

Interactions with customer ethnicity. The possibilities that customer ethnicity interacts with bill size, service ratings, and/or frequency of restaurant patronage to affect tipping were examined in a series of multiple regression analyses. The tests for these interactions are summarized in Table 8 and the descriptions of the interactions are presented below.

First, bill size had a significantly larger effect on dollar tip amount for Whites (tip = .17 + .15 bill;  $R^2 = .92$ ) than for Blacks (tip = -.09 + .13 bill;  $R^2 = .70$ ), Asians (tip = .12 + .14 bill;  $R^2 = .94$ ), and Hispanics (tip = .47 + .13 bill;  $R^2 = .79$ ). Furthermore, a comparison of the variance in dollar tip amounts accounted for by bill size indicated that Whites varied their tips with bill size significantly more than did Blacks ( $z_{\text{contrast}} = 6.31, p < .0001$ ) and Hispanics ( $z_{\text{contrast}} = 4.69, p < .0001$ ), but not Asians ( $z_{\text{contrast}} = -1.47, p > .05$ ). These findings suggest that Whites are more likely than Blacks or Hispanics (but not Asians) to base their tips on bill size as called for the 15to 20 percent tipping norm.

Second, the effect of service ratings on percent tip was significantly stronger for Asians (percent tip = .40 + 3.98 service;  $R^2 = .14$ ) and Hispanics (percent tip = 5.04 + 2.70 service;  $R^2 = .06$ ) than for Whites (percent tip = 16.32 + .25 service;  $R^2 = .00$ ), but was not stronger for Blacks (percent tip = 12.73 + .16 service;  $R^2 = .00$ ) than for Whites. This finding suggests that Asians and Hispanics (but not Blacks) are more likely than Whites to base their tips on service quality.

-----  
Insert Table 8 about here  
-----

Third, the effect of frequent restaurant patronage on percent tip was significantly stronger for Asians (percent tip = 14.40 + 1.40 patronage;  $R^2 = .10$ ), and marginally stronger ( $p < .10$ ) for Blacks (percent tip = 11.75 + 1.20 patronage;  $R^2 = .11$ ), than for Whites (percent tip = 16.32 + .25 patronage;  $R^2 = .00$ ), but was not stronger for Hispanics (percent tip = 15.22 + .67 patronage;  $R^2 = .00$ ).

= .02) than for Whites. This finding indicates that Asian-White and Black-White differences in tipping decrease as restaurant patronage frequency increases.

Finally, the effect of bill size on percent tip was stronger for Hispanics (percent tip = 18.40 - .06 bill;  $R^2 = .05$ ) than for Whites (percent tip = 17.17 - .02 bill;  $R^2 = .01$ ), but was not stronger for Blacks (percent tip = 13.71 - .03 bill;  $R^2 = .01$ ) or Asians (percent tip = 15.74 - .02 bill;  $R^2 = .03$ ) than for Whites. This finding suggests that Hispanics (but not Blacks or Asians) are more sensitive to the costs of tipping than are Whites.

### Conclusions

This study found that Blacks left smaller percentage tips on average than did Whites. Mediation analyses indicated that this effect is not attributable to discrimination in service delivery or to ethnic differences in customer sex, dining party size, or restaurant choice. In addition, moderation analyses suggested that the effect is not attributable to ethnic differences in price sensitivity. However, the effect may be due to a lower familiarity with, or internalization of, the 15 to 20 percent tipping norm among Blacks than among Whites. Consistent with this possibility, Blacks based their dollar tips on bill size less than did Whites. Furthermore, frequency of restaurant patronage, which should increase familiarity with (and acceptance of) the 15 to 20 percent tipping norm, increased the percentage tips of Blacks more than those of Whites.

This study also found that Asians tipped less than did Whites. However, this effect was less robust than the Black-White difference in tip size. The Asian-White difference in tipping became smaller and non-significant after statistically controlling for each of the following mediators – service, dining party size, frequency of restaurant patronage, and restaurant identity. Frequency of restaurant patronage and restaurant identity (reflecting restaurant expensiveness)

should both be strongly affected by income, so these two mediators suggest that Asian-White differences in tipping may be attributable to income effects.

Finally, this study found that Hispanics' tipping behavior differed from that of Whites in several ways. Hispanics based their dollar tips on bill size less than did Whites. Furthermore, Hispanics increased their percentage tips with service and decreased their percentage tips with bill size more than did Whites. However, Hispanics did not leave smaller tips on average than did Whites.

## GENERAL DISCUSSION

The results of this investigation contribute to our understanding of ethnic differences in tipping, have important implications for the management of service delivery to ethnic minorities, and point out the need for more research on this topic. These points are discussed below.

### Contribution to Knowledge

The results of these studies make several contributions to our understanding of ethnic differences in tipping and consumer behavior. First, they indicate that Blacks and Asians tip less on average than do Whites. The Asian-White difference holds only in comparisons across restaurants, but the Black-White difference holds in comparisons both across and within restaurants. This documentation of ethnic differences in tipping is important because it dispels the notion that no such differences exist as well as the related notion that belief in such differences can only be attributed to racism.

Second, the results of Study 2 suggest that the Black-White difference in tipping was probably not caused by service discrimination against Blacks in this study. Blacks' service ratings were not lower than those of Whites. Moreover, Blacks' tips did not vary with ratings of service quality. Thus, differences in service delivery are unlikely to explain the observed Black-

White differences in tipping. Of course, this does not mean that discrimination in service delivery never occurs or that such discrimination never contributes to Black-White differences in tipping. It does mean that Black-White differences in tipping cannot be fully explained as the result of service discrimination.

Third, the results of Study 1 suggest that demographic variables, such as education, household size and income, partially mediate the Black-White difference in average tip size. The role of income is particularly interesting. Blacks' comparatively low incomes could reduce their average tip size by increasing their price sensitivity or by decreasing their frequency of restaurant patronage (and, therefore, familiarity with tipping norms). Other findings in Study 2 tend to discount the former, and to support the latter, of these two possibilities. The finding that percentage tips decreased with bill size equally for Blacks and Whites suggests that Blacks are not particularly sensitive to the costs of tipping. On the other hand, the finding that Blacks ate at restaurants less often than Whites and that frequency of restaurant patronage was positively related to tip size after controlling for customer ethnicity suggest that frequency of restaurant patronage does partially mediate the Black-White difference in tipping.

Finally, the results of this study suggest that the Black-White difference in average tip size is at least partly due to cultural differences between the two groups. Study 1 found that Blacks were less likely than Whites to describe their usual tip size in percentage terms and Study 2 found that dollar tips were less strongly related to bill size for Blacks than for Whites. These findings suggest that Blacks are less familiar with, or committed to, the 15 to 20 percent tipping norm than are Whites. Further supporting this idea is the finding that frequency of restaurant patronage, which should increase familiarity with (and commitment to) the 15 to 20 percent tipping norm, increased the tips of Blacks more than that of Whites.

## Practical Implications

The Black-White and Asian-White differences in tipping found across restaurants in Study 2 pose a problem in recruiting and retaining wait-staff at restaurants with many Black and Asian customers. In order to solve this problem, managers at such restaurants may need to compensate for lower expected tips by offering larger hourly wages. Restaurant chains can tie the amount of this compensation to average tip levels at the affected restaurants without explicitly mentioning customer ethnicity, so chains need not open themselves to charges of racial discrimination in addressing this problem.

The ethnicity effects found after controlling for restaurant identity in Study 2 represent both good and bad news for the restaurant industry. The good news is that two of the fastest growing ethnic groups in this country – Asians and Hispanics – appear to leave average tips that are comparable to those left by Whites at the same restaurants. These findings suggest that servers' perceptions that Asians and Hispanics are poor tippers are unfounded (at least at mid-scale and up-scale restaurants) and that educational efforts to correct those perceptions will not have to contend with an opposing reality. Furthermore, both Asians and Hispanics base their tips on service quality to a greater extent than do Whites. This information can be given to servers to further motivate them to deliver good service to their Asian and Hispanic customers.

The bad news is that Blacks do appear to tip less on average than Whites. Moreover, this difference is not entirely due to discrimination against Blacks in service delivery. These findings mean that efforts to convince servers that Blacks who are given good service will tip the same as Whites will meet resistance based on the servers' own real experiences and, thus, will probably fail. In the long-term, the restaurant industry will need to increase Blacks' tipping rates in order to ensure that servers working for tips do not deliver inferior service to their Black customers.

To some extent, this can be accomplished through educational/promotional campaigns. The evidence that Blacks are less likely than Whites to base their dollar tips on bill size suggests that Blacks should be reminded of the 15 to 20 percent tipping norm and encouraged to adhere to it. The fact that frequency of restaurant patronage increases the tips of Blacks more than that of Whites suggests that such campaigns to increase Blacks' familiarity with tipping norms will help reduce the Black-White difference in average tip size. Thus, the restaurant industry should consider partnering with Black organizations, celebrities and media to promote the 15 to 20 percent tipping norm in the Black community. In addition, restaurant managers should consider including information about tipping norms, or suggestions about how much to tip, on the menus, checks, or tip trays that all customers receive.

Another way to encourage the delivery of good service to Blacks and other ethnic minorities is for restaurant managers to monitor server performance and to make it clear that delivering poor service to any customer is unacceptable. Efforts in this direction have been undertaken to good effect by one restaurant chain. In the aftermath of some widely publicized episodes of discrimination against Black customers at its restaurants, Denny's began hiring mystery diners with different ethnic backgrounds, comparing the service received by minority and White mystery diners, and holding managers and servers responsible for any service discrepancies that are found. The chain's Chief Diversity Officer, Rachelle Hood-Phillips (2000), reports that there has been a significant reduction in such service discrepancies since the inception of this program. Given that ethnic differences in tipping are real and are likely to affect server motivation, other restaurant chains may want to consider implementing similar programs.

## Future Research

The state of race relations in this country has made researchers reluctant to study ethnic differences in tipping. It has also made many people in the restaurant industry reluctant to openly discuss and deal with this issue. Unfortunately, this reluctance to openly study, discuss, and deal with ethnic differences in tipping only perpetuates a status quo in which many waiters and waitresses deliver poor service to the ethnic minorities they believe are poor tippers. By testing the existence of, and possible explanations for, ethnic differences in tipping, we hope that this study encourages more research and dialogue on the topic. Additional research is needed to assess ethnic differences in tipping at lower-class restaurants, in different geographic locations, and among different sub-groups of the Black, Asian and Hispanic populations. More research is also needed to test various explanations for ethnic differences in tipping. For example, researchers should test the possibility that Blacks tip less than do Whites because Black consumers are less likely than Whites to identify with restaurant servers, who tend to be White (Seagrave 1998). The data in these studies did not permit a test of this possibility, but future researchers can test it by examining the interaction of customers' ethnicity and servers' ethnicity on tip size. Exploring and openly discussing these issues is necessary to deal with the widespread belief among servers that ethnic minorities are poor tippers and to insure that ethnic minorities receive the same levels of service quality that White consumers receive.

## REFERENCES

- Anonymous (1999), "Eyes Wide Shut? Discrimination Shouldn't be Tolerated by Industry," Nations' Restaurant News, December 6, 29.
- Ayres, Ian and Peter Siegelman (1995), "Race and Gender Discrimination in Bargaining for a New Car," American Economic Review, 85 (June), 304-321.
- Baron, Reuben and David Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations," Journal of Personality and Social Psychology, 51(6), 1173-1182.
- Bodvarsson, Orn and William A. Gibson (1994), "Gratuities and Customer Appraisal of Service: Evidence from Minnesota Restaurants," Journal of Socio-Economics, 23 (3), 287-302.
- Clary, Mike (1999), "Unusual Dinner Tab Brings Outcry Over Stigma of 'Dining While Black'," Los Angeles Times, November 14, Part A, 33.
- Conlin, Michael, Ted O'Donoghue and Michael Lynn (2000), "The Social Norm of Restaurant Tipping," unpublished manuscript, Department of Economics, Syracuse University, Syracuse, New York.
- Cunningham, Michael (1979), "Weather, Mood and Helping Behavior: Quasi Experiments With the Sunshine Samaritan," Journal of Personality and Social Psychology, 37 (11), 1947-1956.
- Delener, Nejdjet (1997), "Sales Promotion Strategies: The Influence of Demographics and Purchase Situations," The Journal of Business and Economic Studies, 3(2), 21-31.

- 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.
- Dinkins, Julia M. (1994), "Expenditures for Baby-Boomer Householders: Racial and Ethnic Differences," Family Economics Review, 7(4), 11-19.
- Donthu, Naveen and Joseph Cherian (1992), "Hispanic Coupon Usage: The Impact of Strong and Weak Ethnic Identification," Psychology and Marketing, 9 (6), 501-510.
- Eckman, Molly, Antigone Kotsiopulos and Marianne C. Bickle (1997), "Store Patronage Behavior of Hispanic Versus Non-Hispanic Consumers," Hispanic Journal of Behavioral Sciences, 19(1), 69-83.
- 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.
- Fan, Jessie X. (1998), "Ethnic Differences in Household Expenditure Patterns," Family and Consumer Sciences Research Journal, 26(4), 371-400.
- Feinberg, Richard (1986), "Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation," Journal of Consumer Research, 13 (December), 348-356.
- France, David (1999), "Groups Debate Role of Milk In Building a Better Pyramid," New York Times, (June 29), 7.
- Freeman, Stephen, Markus R. Walker, Richard Borden and Bibb Latane (1975), "Diffusion of Responsibility and Restaurant Tipping: Cheaper by the Bunch," Personality and Social Psychology Bulletin, 1 (Fall), 584-587.
- Goldsby, Richard A. (1971), Race and Races, New York: Macmillan.

- Goldsmith, Ronald E., J. Dennis White and Melvin T. Stith (1987), "Values of Middle-Class Blacks and Whites: A Replication and Extension," Psychology and Marketing, 4 (Summer), 135-144.
- Green, Corliss (1999), "Ethnic Evaluations of Advertising: Interaction Effects of Strength of Ethnic Identification, Media Placement and Degree of Racial Composition," Journal of Advertising, 28 (1), 49-64.
- Green, Corliss L. (1995 a), "Differential Responses to Retail Sales Promotion Among African-American and Anglo-American Consumers," Journal of Retailing, 71(1), 83-92.
- Green, Corliss L. (1995 b), "Media Exposure's Impact on Perceived Availability and Redemption of Coupons by Ethnic Consumers," Journal of Advertising Research, (March/April), 56-64.
- Holland, Jonna and James W. Gentry (1999), "Ethnic Consumer Reaction to Targeted Marketing: A Theory of Intercultural Accommodation," Journal of Advertising, 28 (1), 65-77.
- Hood-Phillips, Rachel (2000), "Denny's Restaurants," presentation at Cornell University, September 26, Ithaca, NY 14850.
- Humes, Karen and Jesse Mc Kinnon (2000), "The Asian and Pacific Islander Population in the United States: March 1999," U.S. Census Bureau, Current Population Reports, Series P20-529, U.S. Government Printing Office, Washington, DC.
- Klesges, Robert C., Karen Harmon-Clayton, Kenneth D. Ward, Elizabeth M. Karufman, C. Keith Haddock, G. Wayne Talcott and Harry A. Jando (1999), "Predictors of Milk Consumption in a Population of 17 to 35 Year-Old Military Personnel," Journal of the American Dietetic Association, 99 (7), 821-826.

- Koslow, Scott, Prem N. Shamdasani and Ellen E. Touchstone (1994), "Exploring Language Effects in Ethnic Advertising: A Sociolinguistic Perspective," Journal of Consumer Research, 20 (March), 575-600.
- Lynn, Michael (2000a), "Servers' Perceptions of Who Are Good and Poor Tippers," Unpublished study, School of Hotel Administration, Cornell University, Ithaca, New York.
- Lynn, Michael (2000b), "Tipping: A Reward for Server Effort?," unpublished study, School of Hotel Administration, Cornell University, Ithaca, New York.
- Lynn, Michael (1988), "The Effects of Alcohol Consumption on Restaurant Tipping," Personality and Social Psychology Bulletin, 14 (March), 87-91.
- Lynn, Michael and Andrea Grassman (1990), "Restaurant Tipping: An Examination of Three 'Rational Explanations'," Journal of Economic Psychology, 11 (June), 169-181.
- Lynn, Michael and Jeffrey Graves (1996), "Tipping: An Incentive/Reward for Service?," Hospitality Research Journal, 20 (1), 1-13.
- Lynn, Michael and Bibb Latane (1984), "The Psychology of Restaurant Tipping," Journal of Applied Social Psychology, 14 (November/December), 551-563.
- Lynn, Michael, Joseph-Mykal Le and David S. Sherwyn (1998), "Reach Out and Touch Your Customers," Cornell Hotel and Restaurant Administration Quarterly, 39 (June), 60-65.
- Lynn, Michael, George Zinkhan and Judy Harris (1993), "Consumer Tipping: A Cross-Country Study," Journal of Consumer Research, 20 (December), 478-488.
- McKinnon, Jesse and Karen Humes (2000), "The Black Population in the United States: March 1999," U.S. Census Bureau, Current Population Reports, Series P20-530, U.S. Government Printing Offices, Washington, DC.

- Mok, Connie and Sebastian Hansen (1999), "A Study of Factors Affecting Tip Size," Journal of Restaurant and Foodservice Marketing, 3(3/4), 49-64.
- Mulhern, Francis J. and Jerome D. Williams (1994), "A Comparative Analysis of Shopping Behavior in Hispanic and Non-Hispanic Market Areas," Journal of Retailing, 70(3), 231-251.
- Pearl, Robert B. and Seymour Sudman (1983), "A Survey Approach to Estimating the Tipping Practices of Consumers," Final Report to the Internal Revenue Service under Contract TIR 82-21, Survey Research Laboratory, University of Illinois.
- Penaloza, Lisa (1994), "Atravesando Fronteras/ Border Crossings: A Critical Ethnographic Exploration of the Consumer Acculturation of Mexican Immigrants," Journal of Consumer Research, 21 (June), 32-54.
- Post, Peggy (1997). Emily Post's Etiquette (16th Edition), New York: Harper Collins, pp. 532.
- Pruden, Henry and Douglas Longman (1972), "Race, Alienation and Consumerism," Journal of Marketing, 36 (July), 58-63.
- Ramirez, Roberto R. (2000), "The Hispanic Population in the United States: March 1999," U.S. Census Bureau, Current Population Reports, Series P20-527, U.S. Government Printing Office, Washington, DC.
- Reardon, James, Ronald Hasty and Karen McGawan (1997), "Value Systems and Acculturation: Differences in Anglo and Hispanic Values," Journal of Retailing and Consumer Services, 4 (3), 153-158.
- Rosenthal, Robert and Donald B. Rubin (1978), "Interpersonal Expectancy Effects: The First 345 Studies," Behavioral and Brain Science, 2, 377-415.

- Seagrave, Kerry (1998), Tipping: An American Social History of Gratuities, Jefferson, NC: McFarland and Company, pg. 148.
- Saegert, Joel, Robert J. Hoover and Marye Tharp Hilger (1985), "Characteristics of Mexican American Consumers," Journal of Consumer Research, 12 (June), 104-109.
- Speer, Tibbett (1997), "The Give and Take of Tipping," American Demographics, 19 (February), 51-54.
- Stayman, Douglas M. and Rohit Dashpande (1989), "Situational Ethnicity and Consumer Behavior," Journal of Consumer Research, 16 (December), 361-371.
- Telenation (1996), "American Demographics Tipping Study," unpublished survey report for American Demographics Magazine, Market Facts Inc., New York, 10010.
- Thomas-Haysbert, Clorice (2001), unpublished, untitled data set, Howard University.
- Treno, Andrew, Maria L. Alaniz and Paul J. Gruenewald (2000), "The Use of Drinking Places by Gender, Age, and Ethnic Groups: An Analysis of Routine Drinking Activities," Addiction, 95(4), 537-551.
- Valencia, Humberto (1989), "Hispanic Values and Subcultural Research," Journal of the Academy of Marketing Science, 17 (1), 23-28.
- Wallendorf, Melanie and Michael D. Reilly (1983), "Ethnic Migration, Assimilation and Consumption," Journal of Consumer Research, 10 (December), 292-302.
- Wilcox, Rand R. (1997), Introduction to Robust Estimation and Hypothesis Testing, New York: Academic Press.
- Wilkes, Robert E. and Humberto Valencia (1986), "Shopping – Related Characteristics of Mexican-Americans and Blacks," Psychology and Marketing, 3 (Winter), 247-259.

- Wilkes, Robert E. and Humberto Valencia (1985), "A Note on Generic Purchaser Generalizations and Subcultural Variations," Journal of Marketing, 49 (Summer), 114 - 120.
- Wood, Van R. and Roy Howell (1991), "A Note on Hispanic Values and Subcultural Research: An Alternative View," Journal of the Marketing Science, 19 (1), 61-67.
- Yinger, John (1998), "Evidence on Discrimination in Consumer Markets," Journal of Economic Perspectives, 12 (2), 23-40.
- Yinger, John (1995), Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination, New York: Russell Sage Foundation.

TABLE 1

Re-coding of responses to the question about how much respondents usually tip by ethnicity of the respondent in Study 1.

Variable/ Level	White Respondents	Black Respondents
<u>Tip Type</u>		
Dollar Tip	N = 149 (19.4%)	N = 37 (50.7%)
Percent Tip	N = 618 (80.6%)	N = 36 (49.3%)
<u>Dollar Tip</u>		
\$1 - \$2	N = 89 (59.7%)	N = 23 (62.2%)
\$3 or more	N = 60 (40.3%)	N = 14 (37.8%)
<u>Percent Tip</u>		
< 15%	N = 64 (10.4%)	N = 5 (13.9%)
15%	N = 362 (58.6%)	N = 29 (80.6%)
> 15%	N = 192 (31.1%)	N = 2 (5.6%)

TABLE 2

Analyses of demographic characteristics by ethnic group in Study 1.

Variable	White Mean	Black Mean	Statistical Test	Test Value	p-value
Sex (M=0, F=1)	.51 (n = 799)	.46 (n = 91)	Z <sup>a</sup>	-.87	.387
Age (in years)	46.0 (n = 784)	39.7 (n = 89)	T (871)	-3.29	.001
Education (rank score)	451.8 (n = 795)	365.3 (n = 90)	Z <sup>a</sup>	-3.15	.002
Household Size (# of people)	2.8 (n = 797)	3.2 (n = 91)	T (105.5) <sup>b</sup>	-2.18	.032
Income (rank score)	391.5 (n = 685)	292.9 (n = 77)	Z <sup>a</sup>	-3.76	.001

<sup>a</sup> Z approximation of Mann-Whitney U<sup>b</sup> T-test with unequal variances

TABLE 3

Coefficients and test statistics from regressions of tipping variables on respondents' demographic characteristics in Study 1.

Independent Variable	Tip Type <sup>a</sup>	Dollar Tip <sup>a</sup>	Percent Tip <sup>b</sup>
Sex (M=0, F=1)	.20 (.94)	.52 (1.96)	.00 (.05)
Age	.01 (1.26)	.00 (.02)	-.01** (-3.56)
Education	.64** (34.48)	.15 (.54)	.02 (.90)
Household Size	-.15* (4.19)	.12 (.82)	-.06** (-3.12)
Household Income	.30** (32.46)	.34** (11.33)	.03* (2.12)
Ethnicity (W=1, B=2)	-1.33** (18.83)	-.21 (.23)	-.33** (-2.98)

<sup>a</sup> B-coefficients and Wald statistics from logistic regression

<sup>b</sup> B-coefficients and t statistics from least squares regression

\*p < .05    \*\* p < .01

TABLE 4

Distribution of percentage tips in Study 2.

Percentage Tip	Frequency
0	20
5	40
10	265
15	942
20	366
25	101
30	38
35	23
40	19
45	2
50	5
55	1
60	2
65	1
70	0
75	1
80	0
85	1
90	0
95	0
100	0
105	0
110	0
115	1
120	0
125	0
130	0
135	0
140	0
145	0
150+	9

---

Median = 15.2  
Mean = 17.2  
S. D. = 12.4

---

TABLE 5

Tipping by ethnic group in Study 2.

Percent Tipped	% Whites (n = 1,481)	% Blacks (n = 94)	% Asians (n = 149)	% Hispanics (n = 113)
0	1	6	0	1
5	2	9	1	7
10	13	31	20	13
15	51	35	66	47
20	22	11	9	18
25	6	7	2	5
30	2	0	1	3
35	1	1	0	2
40	1	0	0	2
45+	1	0	1	3
Median	15.6%	13.0%	14.0%	15.0%
Mean*	16.6%	13.0%	14.9%	16.6%
S.D.*	5.8	6.2	4.6	7.9

\*The mean and standard deviation were calculated omitting outlying observations where the percent tipped exceeded a value of 55.

TABLE 6

Means of potential mediator variables by ethnicity (with associated F-tests) in Study 2.

Ethnicity / Test Statistics	Service*	Custmer Sex* (M=0, F=1)	Dining Party Size*	Frequency of Eating Out*	Restaurant Expensiveness*
White	4.38 <sup>a</sup>	.29 <sup>a</sup>	2.52 <sup>a</sup>	3.06 <sup>a</sup>	11.29 <sup>a</sup>
Black	4.45 <sup>a</sup>	.46 <sup>b</sup>	2.34 <sup>a</sup>	2.62 <sup>b</sup>	10.50 <sup>a</sup>
Asian	4.11 <sup>b</sup>	.24 <sup>a</sup>	4.33 <sup>b</sup>	2.59 <sup>b</sup>	10.34 <sup>b</sup>
Hispanic	4.43 <sup>a</sup>	.32 <sup>a</sup>	2.60 <sup>a</sup>	2.78 <sup>ab</sup>	11.50 <sup>a</sup>
F-Test	2.54	4.92	57.98	4.01	3.59
Numerator df	3	3	3	3	3
Denominator df	1226	1790	1812	1107	1817
p-value	.06	.003	.0001	.008	.02

\*Means with different superscripts are significantly different from one another at the .05 level.

TABLE 7

B-coefficients and t-statistics from analyses regressing percent tip on ethnicity and potential mediators in Study 2.

Independent Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Service		1.09** (4.85)					1.12** (4.17)
Customer Sex (M=0, F=1)			0.29 (.96)				0.38 (.90)
Dining Party Size				-0.45** (-5.25)			-0.58** (-4.57)
Freq. Eating Out					0.39** (3.12)		0.35* (2.54)
Restaurant (dummy coded)						N/A**	N/A
Black (no=0, yes=1)	-3.59** (-5.70)	-3.31** (-4.55)	-3.58** (-5.65)	-3.57** (-5.70)	-2.98** (-3.53)	-3.23** (-5.13)	-2.49** (-2.88)
Asian (no=0, yes=1)	-1.72** (-3.38)	0.37 (.44)	-1.69** (-3.30)	-0.93 (-1.76)	-0.03 (-.03)	-0.66 (-.84)	0.22 (.22)
Hispanic (n=0, yes=1)	-0.01 (-.01)	0.26 (.41)	0.00 (.00)	0.01 (.01)	-0.31 (-.45)	0.14 (.24)	-0.07 (-.09)

\*  $p < .05$  \*\*  $p < .01$

TABLE 8

B-coefficients and t-tests from analyses involving interactions between ethnicity and potential moderators in Study 2.

Independent Variables	Dependent Variable/Moderator			
	Dollar Tip/ Bill Size	Percent Tip/ Service	Percent Tip/ Rest. Patronage	Percent Tip/ Bill Size
Intercept	.17** (3.21)	12.74** (11.73)	16.32** (47.11)	17.17** (82.59)
Moderator	.15** (121.77)	.90** (3.69)	.25 (1.80)	-.02** (-3.84)
Black (no=0, yes=1)	-.26 (-.95)	-.00 (-.00)	-4.57** (-3.70)	-3.46** (-3.28)
Asian (no=0, yes=1)	-.05 (-.26)	-12.34* (-2.28)	-1.92 (-1.52)	-1.43 (-1.93)
Hispanic (no=0, yes=1)	.30 (1.39)	-7.70* (-1.99)	-1.10 (-.99)	1.23 (1.51)
Black x Moderator	-.02* (-2.43)	-.74 (-.70)	.95 (1.73)	-.01 (-.28)
Asian x Moderator	-.01** (-4.59)	3.08* (2.37)	1.15* (2.00)	.00 (.05)
Hispanic x Moderator	-.02** (-4.13)	1.80* (2.90)	.42 (.87)	-.04* (-2.06)
Error df	1813	1222	1103	1813

\*  $p < .05$  \*\*  $p < .01$

FIGURE 1

MODEL OF ETHNIC GROUP MEMBERSHIP EFFECTS ON CONSUMER BEHAVIOR

