THE PSYCHOLOGY OF RESTAURANT TIPPING

A Thesis
Presented in Partial Fulfillment of the Requirements
for the Degree Master of Arts

by

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Approved by

Advisor
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Introduction and Literature Review

Tipping is said to have originated in 18th Century English pubs where customers would attach coins to notes to the waiter "To Insure Promptness" (T.I.P.). From that inauspicious beginning tipping has become a phenomenon involving numerous professions and billions of dollars. Among the various service personnel (other than waiters and waitresses) now receiving tips are bartenders, maitres d', restaurant musicians, checkroom attendants, cigarette girls, chambermaids, bellboys, porters, doormen, hair stylists, bootblacks, parking attendants, and cab drivers (Emily Post, 1975). The I.R.S. does not release estimates of the gross amount tipped in the United States each year, but the figure is undoubtedly enormous. In 1977, the restaurant industry took in $500 billion so it is likely that waiters and waitresses alone received $8 billion in tips (Statistical Abstracts, 1980).

The pervasiveness of this social phenomenon makes it an interesting topic of study, but tipping is deserving of investigation for other reasons as well. Over 1.3 million waiters and waitresses in the United States (along with countless other service workers) depend on tips as the major source of their income. Knowledge of the factors influencing tipping would allow these people to develop more effective and efficient strategies for increasing that income.

In addition to benefitting waiters and waitresses, a better understanding of why people tip would prove useful to managers and pro-
prieters in the service industries. Knowledge about the psychology of tipping would, for instance, help managers make better use of tips as indicators of customer satisfaction. If tipping is related to the speed of service, the friendliness of employees, or (in the case of restaurants) the taste of food, then the knowledgable manager can utilize tips to evaluate his establishment on these dimensions.

A third beneficiary of information about tipping would be the consumer. Tippers Anonymous and Tippers International (whose claimed memberships total over 10 thousand) are organizations of restaurant diners who feel tipping has become too obligatory. These groups urge their members to leave written evaluations of a restaurant's food, service, and atmosphere along with appropriately sized tips. In addition, these groups publicize their dissatisfaction with current tipping practices and remind the public of tipping's traditional role as a reward for service (May, 1980). Empirical documentation of current motives for tipping would help these groups by determining the need for their existence and activities.

Despite its potential usefulness, scientific research on tipping is scant. Freeman, Borden, Walker and Latané (1975) were the first psychologists to empirically investigate tipping in restaurants. They had waitresses at a mid-priced dinner house (Steak and Ale) record the number of people at a table, the size of the bill, the amount left as a tip, and other information for 396 groups of diners. In general they found that:
1) tipping adhered closely to the 15 percent norm -- the best linear prediction of tips from bill was 15.02% of the average bill minus .09 cents.

2) among parties of up to half a dozen people, the more people dining together the smaller the percent tip -- consistent with Latané's (1981) theory of social impact, the percentage of bill size tipped was an inverse power function of the number of people at a table (.18N\textsuperscript{-.22}),

3) groups with larger per-person bill sizes tipped no more or less than groups with smaller per-person bill sizes,

4) larger groups did not spend more or less per-person than smaller groups,

5) groups' gender composition and heterogeneity were not related to tipping, and

6) groups which ordered alcoholic beverages tipped no more or less than groups which did not order alcoholic drinks.

Following Freeman, et al., Joanne May (1978) conducted a second study of restaurant tipping. In addition to having waitresses at an expensive restaurant record the same information Freeman et al.'s waitresses did, May had independent observers unobtrusively rate waitresses' attractiveness, friendliness, and service for several hundred groups of diners. Her results may be summarized as follows:

1) people tipped an average of 14.2% of their bill size,

2) among parties of up to five people, the larger the party, the
smaller the tip (parties of six showed a non-reliable tendency
to tip a larger percentage of bill size than parties of five),
3) groups with larger per-person bill sizes tipped no differently
than those with smaller per-person bill sizes,
4) people paying their bills with credit cards tipped more than
those paying with cash,
5) attractive and smiling waitresses received larger percentage
tips than unattractive and unsmiling waitresses.
6) the more non-task oriented visits waitresses made to their
tables the larger percentage tips they received, and
7) observers' ratings of service did not predict customer's
tipping behavior.

In the most recent investigation of tipping, Stillman and Hensley
(1980) had waitresses at an expensive dinner house either wear a flower
while working or not. Waitresses received bigger tips when wearing the
flower and all male tables tipped more than all female tables.

The data on restaurant tipping reviewed above complement and
buttress one another on several points -- most notably the inverse
relationship between percent tip and group size. The form of this
relationship seems to have both linear and quadratic components, with
the largest differences in the effect of group size coming among the
smallest groups. May claims that the results of her study "do not
support the inverse function between percentage tipped and group size
as described by Freeman et al."
but it is hard to see how she reached
this conclusion. The quadratic relationship she reports is not
reliably non-monotonic and, hence, is consistent with Freeman et al.'s inverse power function.

Freeman et al. (1975) suggested that diffusion of responsibility may account for their group size effect on tipping. "To the extent that many people contribute to a check," they reasoned, "the responsibility of each to the waiter may be psychologically divided among the people present (p. 584)." Unfortunately, several alternative explanations for this effect exist.

One such explanation of the group size effect on tipping is based on Adams (1965) theory of equity. Snyder (1976) suggested that larger groups may require less per-person effort to serve than smaller groups, and that the group size effect on tipping may reflect an equitable adjustment to this difference in waiters' efforts. Consistent with the first of these suggestions, Scarlett, Lynn, and Latané (1982) found that the amount of service rendered to restaurant diners increased at a marginally decreasing rate as group size increased. In addition, May (1978) argued that her data supported Snyder's second suggestion by demonstrating a relationship between waiters' non-task oriented visits and the percent their customers tipped. This relationship, however, may reflect the influence of a third variable, the interpersonal attraction between waiters and customers, rather than reflecting a causal relationship between service and tipping. Supporting this cautionary note is the fact that May found no relationship between observer's ratings of service and the percent tipped.
Elman (1976) has offered yet another explanation of the group size effect on tipping. He suggested that larger parties have larger bill sizes than smaller parties, and that the increased cost associated with tipping in larger parties may account for their smaller percentage tips. Neither Freeman et al. (1975) or May (1978), however, found a reliable relationship between per-person bill size and percent tipped. Such a relationship should exist if considerations of costs mediate peoples' tipping decisions.

A second point of agreement between restaurant tipping studies concerns the relationship between a waitress' appearance and percent tip. Both May (1978) and Stillman and Hensley (1980) found that attractive, or attractively appareled, waitresses received larger percentage tips than their less attractive counterparts. This is consistent with other psychological literature on physical appearance and interpersonal attraction (Berscheid and Walster, 1974).

A final point of agreement between the different restaurant studies has already been discussed. Both Freeman et al. and May (1978) found that per-person bill size was unrelated to tipping. These results counterintuitively suggest that tipping is unaffected by considerations of cost.

While complementing and buttressing one another on some points, the results on restaurant tipping found thus far disagree on at least one other point. Freeman et al. (1975) did not find an effect of gender composition and heterogeneity of dining groups on tipping while Stillman and Hensley (1980) found that groups of men tipped more than
groups of women. This difference in results is difficult to account for. One explanation, however, may be that Freeman et al.'s study contained fewer same gender groups than Stillman and Hensley's study.

Stillman and Hensley (1980) suggested that one reason why the men in their study tipped more than did the women was that they had more money. While men typically earn more than women, this explanation is conjectural. Equally plausible is the possibility that men tipped more than women because they were more concerned with impressing their waitresses. Yet another possible explanation is that men are more knowledgeable about the norms governing tipping than are women.

In summary, tipping has become a custom involving numerous professions and billions of dollars. Understanding the causes underlying this widespread behavior would benefit service workers, service industry managers, and consumers alike. Despite its potential importance, however, very little research has been conducted on this topic. A few studies have attempted to correlate restaurant tipping with independent variables such as group size, bill size, service, server's appearance, and customer's gender. Unfortunately, the relationships uncovered thus far have a number of competing explanations and more research is needed to distinguish between them. The studies reported here are devoted to this task.
Study I

In this study, customers at a low price breakfast house were questioned about their dining experience. Patron's evaluated the restaurant's service, food, and atmosphere, and reported their party size, bill size and tip. Of particular interest are the relationships of tipping to customers' ratings of the restaurant's service, food, and atmosphere which are being investigated here for the first time.

If, as Snyder (1976) suggests, larger groups tip less than smaller ones because each member receives proportionately less service efforts, then one might expect a significant positive relationship between the quality of the service and the percent tipped. Previous attempts to investigate this relationship, however, produced differing results with different measures of service (May, 1978). Since customers' perceptions of service are thought to affect tipping, this study's use of customers' own ratings should resolve the issue.

Isen and Levine (1977) found that giving people cookies increased their willingness to help others. These authors attributed this result to the positive affect subjects were likely to feel after receiving the cookies. If this explanation is correct, then how much customers enjoy a restaurant's food and atmosphere should be positively related to how much they tip. Customers who find a restaurant's food and atmosphere good may be happier than customers who feel that the food or atmosphere is bad.
METHOD

Procedure: One hundred sixty-nine groups of diners at an International House of Pancakes in Columbus, Ohio were interviewed as they left the restaurant. Only those people who paid a bill were questioned. In the twenty-one instances that two or more people at a table contributed to a single bill their responses were combined. At an additional twenty-one tables which requested separate checks, each person paying a check was interviewed and responses from the same table were later combined.

Every party leaving the restaurant was approached and asked to answer questions for a psychology experiment. Several exceptions to this rule should be noted however. First, groups with children were not approached because it wasn't clear how children should be counted when recording the number of people at a table. Second, three parties which had taxis waiting were not approached. Finally, those people who left the restaurant while the investigator was interviewing others were necessarily lost for questioning. Six customers who used coupons were interviewed but later excluded from analysis because it wasn't clear whether pre-coupon or post-coupon prices should be used in computing the percent they tipped.

Participation among those who were asked varied between 80 and 95%, depending on the weather. Overall, about 90% of those questioned were cooperative, suggesting little sampling bias.

Questions: Participants were asked the following sets of questions:
1) How many people were at your table?/ How many were on your bill?/ How many bills were at your table?

2) How would you rate (on a scale from one to ten) the atmosphere of this restaurant?/ How would you rate the food?/ The quality of the service?

3) How much was your bill?/ How much did you tip the waitress?

4) Do you have any suggestions to improve the restaurant?

In addition, the interviewer recorded the sex of each respondent. When several people of different genders contributed to a table’s bill(s), then gender was coded as mixed. Finally, the time and date of each interview was noted. Copies of the question sheets on which data was recorded are presented in Appendices A and B.

RESULTS AND DISCUSSION

Those IHOP customers interviewed rated the restaurant an average of seven (on a ten point scale) on food, and service. The restaurant’s atmosphere received an average rating of six on the same scale. The average bill per-person was $3.16 and the average tip per-person was $.42. In general, IHOP appears to be a restaurant where people can get a good, yet inexpensive, meal served in a pleasant atmosphere.

Tipping and the 15 Percent Norm

Consistent with normative prescriptions, people tipped an average of 15.6% of their bill size. Moreover, the best linear prediction of tip from bill size was 10 percent of bill size plus 23 cents. This equation accounted for 46% of the variance in tip size. While the slope of this line is smaller than that called for by the 15% tipping norm
this appears to be due to its non-zero y-intercept. Emily Post (1975) advises us to tip a minimum of 15 cents, however, and the 23 cent y-intercept in this study is fairly consistent with this policy.

**Predicting the Percent Tipped**

A hierarchical, multiple linear regression of customer's gender, party size, number of separate checks, atmosphere, service, and food ratings and per-person bill size on the percent tipped was performed to evaluate the predictive power of these independent variables. The model accounted for 21.2% of the variance in percent tipped. Though the entire model was highly significant ($F(7,134) = 5.16, p < .001$), only customer's gender, group size and per-person bill size predicted a significant amount of variance unaccounted for by the variables entered into the model ahead of them (see Table 1). Further analyses of the relationships of these variables with the percent tipped are reported and discussed below.

**Gender and Tipping.** Men in this study tipped more than women (17.4% vs 9.5%, $T(140) = -3.48, p < .001$). It is possible, as Stillman and Hensley (1980) argue, that this is because men have more money and are freer with it than women. Inconsistent with this explanation, however, is the fact that men's per-person bills were no larger than women's ($2.95$ vs. $3.28$, $T(140) = 1.21$, n.s.). Men may be more familiar with the tipping norm than women, but another possibility is that men are more concerned with impressing waitresses than are women.

**Group Size and Tipping.** Consistent with previous research, larger parties tipped a smaller percentage of their bill size than did smaller
Table One

Table of incremental variance in percent tipped attributable to each source in a hierarchical multiple regression in Study I.

<table>
<thead>
<tr>
<th>Source</th>
<th>dF</th>
<th>SS</th>
<th>F</th>
<th>PR</th>
<th>F</th>
</tr>
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<tbody>
<tr>
<td>Customers' Gender</td>
<td>2</td>
<td>1456.29</td>
<td>7.73</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Group Size</td>
<td>1</td>
<td>388.82</td>
<td>4.13</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Number of Checks</td>
<td>1</td>
<td>6.32</td>
<td>.07</td>
<td>n.s.</td>
<td></td>
</tr>
<tr>
<td>Atmosphere, Service, and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Ratings</td>
<td>3</td>
<td>329.98</td>
<td>1.16</td>
<td>n.s.</td>
<td></td>
</tr>
<tr>
<td>Per-person Bill Size</td>
<td>1</td>
<td>1611.59</td>
<td>17.10</td>
<td>.0001</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>142</td>
<td>13855.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>155</td>
<td>17648.40</td>
<td></td>
<td></td>
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parties ($r = -.20$, $n = 169$, $p < .008$). As seen in Table 2, the percent tipped dropped from 19% at tables of one to 11% at tables of four and six. Further, consistent with social impact theory (Latané, 1981), a least squares estimate of the best fitting power curve — percent tipped $= 19 \times $ group size $^{-33}$, accounted for a significant portion of the variance in percent tipped ($r^2 = .053$, $F(1,168) = 8.48$, $p < .001$).

**Separate Checks and Tipping.** The number of separate checks per table was not significantly related to the percent tipped in the analysis above. This remained true even when looking at the zero-order correlation of these two variables ($r = -.13$, $n = 169$, n.s.). These results are inconsistent with a speculation by Freeman et al. that providing separate checks would reduce diffusion of responsibility and increase percent tipped, but it is possible that there were simply not enough parties requesting separate checks to reveal such an effect.

An additional analysis involving parties with separate checks was performed to evaluate the independence of peoples' tipping decisions from the tipping decisions of others at the same table. The variance in percent tipped by individuals paying separate checks was greater between tables with separate checks than it was within those table groupings ($R^2 = .68$, $F(20,26) = 2.79$, $p < .008$). Moreover, this remained true even after partialling out the potentially confounding effects of group size, number of separate checks, atmosphere rating, service rating, food rating, per-person bill size, and tipper's gender ($spr^2 = .57$, $F(14,14) = 2.97$, $p < .03$). These results strongly suggest
Table Two

Mean percent tipped by different sized groups in study I

<table>
<thead>
<tr>
<th>Group Size</th>
<th>Sample Size</th>
<th>Mean % Tip</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>55</td>
<td>18.97</td>
</tr>
<tr>
<td>2</td>
<td>75</td>
<td>14.59</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>14.21</td>
</tr>
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<td>4</td>
<td>15</td>
<td>11.05</td>
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<tr>
<td>5</td>
<td>3</td>
<td>16.93</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>10.65</td>
</tr>
</tbody>
</table>
that people's tipping decisions conform to those of others at the same table.

**Atmosphere, Service, and Food Ratings and Tipping.** Inconsistent with a "glow of goodwill" hypothesis regarding tipping, customers' ratings of the restaurant's atmosphere and food were not predictive of the percent they tipped in the hierarchical multiple regression above. Moreover, this was true when looking at the zero-order correlations of these variables with percent tipped as well ($r = .04$, $n = 156$, n.s. and $r = .04$, $n = 169$, n.s.). Atmosphere and food ratings, however, were predictive of the number of suggestions customers made to improve the restaurant ($r = -.30$, $n = 156$, $p < .001$ and $r = -.21$, $n = 169$, $p < .005$), so the failure to find a rating-tipping relationship cannot be attributed to problems of construct validity. Perhaps customers who found the restaurant pleasant failed to develop a "glow of goodwill" because a pleasant atmosphere and good food are normal, expected qualities in a restaurant and hence nothing to become particularly happy about.

Despite the fact that tipping is ostensibly a payment for services, customers' ratings of service did not reliably predict the percent they tipped ($r = .12$, $n = 169$, n.s.). The failure to find a relationship between tipping and service is also inconsistent with Snyder's (1976) suggestions that large parties may tip a smaller percentage of their bill than small parties because the per-person effort required to serve them is less. This explanation assumes that effort is related to tipping and, though service is not synonymous with
effort, the absence of a relationship between tipping and service implies that waitresses receive the same tip no matter how hard they work. Also inconsistent with the idea that effort mediates a group size-tipping relationship is the fact that large groups rated their service no differently than small groups (r = -.05, n = 169, n.s.).

**Bill Size and Tipping.** Considerations of costs do seem to effect peoples' tipping behavior. The larger the per-person bill size in this study the smaller the percentage of total bill tipped (r = -.35, n = 169, p < .0001). This result is different from that found in two previous studies (Freeman et al., 1975; May, 1978), but this may be attributable to differences in the populations studied. Both of the previous studies were conducted at more expensive restaurants than that used in this study. It may be that people feel a need to leave at least some minimal amount as a tip. If so, the customers in this study who ordered only drinks or light meals may have tipped a larger percentage of their bills in order to meet this tipping minimum. The customers at the more expensive restaurants, on the otherhand, may not have had to worry about this problem.

Inconsistent with Freeman et al.'s (1975) results, large parties in this study had larger per-person bill sizes than did small parties (r = .19, n = 169, p < .02). This discrepancy between studies may also be attributable to differences in the restaurants studied. The breakfast house at which this study was conducted, unlike the restaurants of previous studies, has a large number of customers who come in just for coffee or a light snack. These customers usually snack alone or in
small groups. Members of larger groups in this restaurant then are more likely to want a full meal and this may account for their larger per-person bill sizes.

Summary

This study replicates previous research in finding that tipping adheres closely to the 15% norm, that men tip more than women and that larger groups leave smaller percentage tips than smaller groups. The study contributes to previous research by providing strong evidence against a tipping-service relationship, thus arguing against an equity explanation of the group size effect on tipping. In addition, its failure to find a significant relationship between percent tipped and customers' perception of the restaurant's atmosphere and food suggest that tipping is not affected by a "glow of goodwill." Finally, this study suggests that, among the lower range of bill sizes, the percent people tip is negatively related to per-person bill size.

Study II

The results of Study I, while contributing to our understanding of tipping, leave a number of questions unanswered. Though arguing against an equity explanation of tipping and its relationship to group size, for instance, Study I does not present as strong a case as desirable. It is possible that people base their tips on how much effort was expended in serving them rather than on the more general quality of that service. The service quality ratings in Study I then may have measured the wrong construct. This study examines the
relationship between waitresses' ratings of their effort and customers' tipping.

Study I replicated Stillman and Hensley's (1980) finding that men tip more than women, but its results are inconsistent with their income difference explanation for this effect. Another possible explanation centers around the fact that both Stillman and Hensley's study and the Study I were conducted at restaurants employing only female servers. Men may tip more than women in these situations because they are more interested in impressing waitresses than are women. This study was conducted at a restaurant containing both waiters and waitresses. If the sex based impression management explanation of gender differences in tipping is correct, then a server's gender x customer's gender interaction should affect tipping. More specifically, men should tip waitresses more than waiters and women should tip waiters more than waitresses.

In addition to addressing the issues outlined above, this study provides an opportunity to replicate several results from previous research. In particular, the effects of the 15% norm, separate checks, absolute bill size and credit vs. cash payment are investigated.

Method

Four waiters and five waitresses at a moderately high price dinner house (Smuggler's Inn) in Columbus, Ohio recorded information about their customers for one week's time. The following data were collected for 206 dining groups during that time period:
1) the waiter's or waitress' gender,
2) the number of people on the check,
3) the number of people at the table,
4) the number of checks at the table,
5) the size of the check(s)
6) the gender of the person(s) paying the check(s) (male, female, or both)
7) the method of bill payment (cash, credit, or both)
8) the amount left as a tip, and
9) the waiter's or waitress' rating (on a scale of one to five) of the effort spent serving the table for which the check(s) was/were written.

Appendix C contains the chart on which these data were recorded. Waiters and waitresses were instructed to fill this chart out for every check they wrote with the exception of those checks to which a 15% tip was automatically added. The restaurant at which this study was conducted adds a 15% tip to the bills of those parties of over five people who make reservations. Smaller parties or large parties without reservations do not have the tip added. The data from 19 tables which requested separate checks was recorded by check and later combined to make one observation per table.

Results and Discussion

The restaurant at which this study was conducted is a nice, fairly high-priced dinner house. The average bill per-person was $13.01 and the average tip per-person was $2.01. This setting represents a sharp
contrast to the inexpensive breakfast house at which Study I was conducted and should provide a good test of the generalizability of the previous study's results.

**Tipping and the 15 Percent Norm**

Consistent with normative prescriptions, the average percent tipped in this study was 15.5% of bill size. Moreover, the best fitting linear regression of tip amount on bill amount was 16.7% of bill size minus 31 cents. This equation is basically consistent with the 15% norm (the negative y-intercept in this study is not significantly different from zero) and it accounts for 72% of the variance in tip amount.

It is interesting to compare the amount of variance in tip amount explained by bill size in this and in previous studies. Bill size accounted for 72% of the variance in tip amount in this study, but only accounted for 34 to 45% of the variance in tip amount in previous studies. These results suggest that compliance with the tipping norm is higher in more expensive restaurants than in less expensive ones, though why this might be so is unexplained.

**Predicting the Percent Tipped**

A hierarchical multiple linear regression of customer's gender, waitperson's gender, group size, number of separate checks, effort rating, per-person bill size and payment method on the percent tipped was performed to evaluate the predictive power of these independent variables. The complete model accounted for a statistically significant 11.6% of the variance in percent tipped.
(F(9, 196) = 2.87, p < .005). Of those variables entered, however, only customer's gender, effort rating, and payment method accounted for a significant increment in explained variance (see Table 3). Additional analyses assessing these independent variables' relationships with the percent tipped are reported and discussed below.

**Gender and Tipping.** A multiple regression of customer's gender, waiter's gender, and customer's gender x waiter's gender interaction on the percent tip produced only a marginally significant effect for customer's gender (F(2, 201) = 2.94, p < .06). Customer's gender contributed a significant increment in the R² of the hierarchical multiple regression reported above, however, suggesting that a weak relationship does exist. Men tipped slightly more than women (15.7% vs. 14.6%). Given this relationship between customer's gender and tipping, the failure to find a waiter's gender x customer's gender interaction does not support the sex based impression management explanation of previous gender effects on tipping. Failure to find support for this explanation, however, may be due to the small number of women customers in this study (n = 22).

**Group Size and Tipping.** Inconsistent with previous research, larger parties in this study did not tip a smaller percentage of their bill size than did smaller parties (r = -.02, n = 206, n.s. — ). As seen in Table 4, there is no apparent, consistent relationship between group size and tipping. Moreover, an analysis of variance revealed no significant differences in the percent tipped by any of the group sizes (F(7, 198) = 1.74, n.s.).
Table Three

Table of incremental variance in percent tipped attributable to each source in hierarchical multiple regression in Study II.

<table>
<thead>
<tr>
<th>Source</th>
<th>dF</th>
<th>SS</th>
<th>F</th>
<th>PR F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer's Gender</td>
<td>2</td>
<td>131.82</td>
<td>3.14</td>
<td>.05</td>
</tr>
<tr>
<td>Waitperson's Gender</td>
<td>1</td>
<td>13.94</td>
<td>.66</td>
<td>n.s.</td>
</tr>
<tr>
<td>Group Size</td>
<td>1</td>
<td>1.65</td>
<td>.08</td>
<td>n.s.</td>
</tr>
<tr>
<td>Number of Checks</td>
<td>1</td>
<td>4.16</td>
<td>.20</td>
<td>n.s.</td>
</tr>
<tr>
<td>Effort Ratings</td>
<td>1</td>
<td>86.90</td>
<td>4.14</td>
<td>.05</td>
</tr>
<tr>
<td>Per-person Bill Size</td>
<td>1</td>
<td>4.20</td>
<td>.20</td>
<td>n.s.</td>
</tr>
<tr>
<td>Payment Method</td>
<td>2</td>
<td>299.11</td>
<td>7.13</td>
<td>.001</td>
</tr>
<tr>
<td>Error</td>
<td>196</td>
<td>4110.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>205</td>
<td>4652.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table Four

Mean percent tipped by different sized groups in study II

<table>
<thead>
<tr>
<th>Group Size</th>
<th>Sample Size</th>
<th>Mean % Tip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>66</td>
<td>16.27</td>
</tr>
<tr>
<td>2</td>
<td>84</td>
<td>14.93</td>
</tr>
<tr>
<td>3</td>
<td>26</td>
<td>15.88</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>13.82</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>14.19</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>15.13</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>24.10</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>15.00</td>
</tr>
</tbody>
</table>
One possible reason that group size was not related to percent tipped in this study may be that group size did not contribute to customers' feelings of anonymity or to a diffusion of responsibility. The restaurant at which this study was conducted was a more expensive one than those at which the previous studies were run. It is possible that the waiters and waitresses at this more expensive restaurant were so attentive that their customers did not feel anonymous or diffuse responsibility. Consistent with this explanation is the fact that the customers in this study paid their bills to their server at the table. In Freeman et al.'s study and in Study I, on the other hand, waitresses merely laid bills on the table and customers paid those bills at a central register.

**Separate Checks and Tipping**

As in Study I, the number of checks at a table was unrelated to the percent tipped in the multiple regression analysis above. Moreover, this remained true even when looking at the zero-order correlation of these variables (r = -.03, n = 206, n.s.). This suggests, contrary to speculation by Freeman et al., that waiters and waitresses have nothing to gain, or lose, by writing separate checks for their customers.

Also consistent with the results of Study I, the variance in percent tipped by individual's paying separate checks was greater between tables with separate checks than it was within tables with separate checks \( R^2 = .60, F(17,35) = 3.05, p < .003 \). Unlike the earlier study's results, however, this relationship did not remain statistically significant after partially out the effects of a
number of potentially confounding variables ($\text{spr}^2 = .15$, $F(8,32) = 1.51$, n.s.). Those variables statistically controlled for in this analysis were customer's gender, waitperson, group size, number of separate checks, waitperson's effort, per-person bill size, and payment method. Some of these variables are different from those controlled for in the corresponding analysis in Study I, and the failure to replicate that earlier analysis may be due to this difference.

**Bill Size and Tipping.** Consistent with Freeman et al.'s (1975) and May's (1978) results, per-person bill size was unrelated to percent tip in this study ($r = -.01$, $n = 206$, n.s.). This result is somewhat inconsistent with the results of Study I, but that inconsistency is probably due to the different populations in the studies. This study was conducted at a moderately high priced dinner house rather than a cafe and there were no customers who, having had only coffee or a snack, were faced with the necessity of leaving a minimum tip amount which exceeded 15% of their bill size.

**Effort and Tipping.** The effort waiters and waitresses spend serving a table does not appear related to tipping. A correlation of waiters' and waitresses' effort ratings with the percent tipped was not statistically reliable ($r = .11$, $n = 206$, n.s.). This result seems to differ from the hierarchical, multiple regression reported above. This difference in results is an example of suppression (Cohen and Cohen, 1975) and may be interpreted in a variety of ways. One possibility is that there is no relationship between effort and tipping and that effort ratings contributed a significant increment in the multiple regression
model's $R^2$ because it suppressed some variance in the other independent variables that was uncorrelated with percent tipped. Another possibility is that effort is weakly related to tipping, but that this relationship was hidden by the other variables when computing the zero-order correlation. Regardless of which explanation is correct, it is evident from this analysis that waiters' and waitresses' efforts are not strongly related to the percent their customers tip. This suggests that tipping is not a reward for service and that the group size effect on tipping is not mediated by wait persons' efforts.

**Credit vs. Cash Payment and Tipping.** Consistent with May's (1978) results, people paying their bills with credit tipped a larger percentage of that bill than those paying with cash (16.9% vs. 14.5%, $T(198) = 3.49, p < .001$). Too few groups ($n=6$) paid their bills with both cash and credit to evaluate the effects of this payment method on tipping. One possible explanation for the larger percentage tips left by charge customers than by cash customers is that deferring payment through the use of credit reduces the psychological costs of tipping. Another possibility is that charge customers are wealthier than cash customers, and, hence, less concerned about the costs of tipping. Perhaps too, as May suggests, charge customers dine out more regularly than cash customers and hence are more familiar with the norms governing tipping.

**Summary**

The results of this study replicate previous research in finding that tip amount is strongly related to bill size; that tipping is
unrelated to service, the number of separate checks per table, and, per-
person bill size, that men tip more than women, and finally, that charge
customers tip a larger percentage of their bill sizes than do cash
customers. The study fails to replicate previous findings that larger
groups leave smaller percentage tips than smaller groups. These
results suggest that people adhere closely to the 15% tipping norm, that
compliance with the norm is higher at more expensive restaurants than at
less expensive ones, that the group size effect on tipping is not an
equitable adjustment to waiters' efforts, and that this effect may be
eliminated if waiters are particularly attentive to their customers.

General Discussion and Conclusion

One concern with the two studies reported here is the honesty of
the people they employed as data sources. Both the customers in Study I
and the waiters and waitress in Study II may have lied about the tips
they gave and received respectively. Such lies might have been employed
by customers to make themselves appear more generous and by waiters and
waitresses to make themselves appear more competent. Though no direct
means of testing the veracity of customers' and waitpersons' reports
were employed in these studies, there are a number of reasons for
trusting those reports. First, neither the customers nor waitpersons
in these studies were friends or even acquainances of the
investigator, so impression management desires were minimal. Secondly,
previous studies have utilized waitpersons' reports with no obvious
biasing of the results. In fact, May (1978) checked waitperson's
reports concerning charge customers in her study by comparing them with
the restaurant's records. She found no evidence of deceit. Finally, in both Studies I and II, previous research findings were replicated. Such replications serve not only to generalize previous findings, but also to validate the operations and measuring instruments employed in the replicating study.

Given the reliability of the data sources in Studies I and II, a number of theoretical and practical implications may be drawn from their results. The failure to find that tipping is affected by customers' perceptions of a restaurant's atmosphere and food, for instance, suggests that these variables do not engender a "glow of goodwill" in restaurant patrons. Perhaps the "glow of goodwill," found by Isen and her colleagues (Isen, 1970; Isen and Levin, 1972) to affect prosocial behavior, is created only by unusual or unexpected pleasant experiences. Since restaurant customers are likely to expect a pleasant dining experience, this hypothesis would explain why customers' ratings of the restaurant in this study did not predict the percent they tipped.

In addition to suggesting a possible limiting condition to the establishment of a "glow of goodwill," the results of Studies I and II provide some evidence for a diffusion of responsibility in non-emergency as well as emergency helping behavior. Consistent with a process of diffusion of responsibility, and its elaboration by Social Impact Theory (Latané, 1981), the percent tipped in Study I decreased, at a marginally decreasing rate, as group size increased. The failure to find a strong, consistent relationship between tipping and service
argues against an equity explanation of this group size effect, thus strengthening the diffusion of responsibility explanation. The failure to find a group size effect in a restaurant where customers are closely attended to, and hence, highly identifiable, also supports the diffusion of responsibility explanation for group size effects on tipping. Diffusion of responsibility, unlike other hypothesized processes to explain this effect, may very well be impeded by highly individuating situations.

Perhaps more important than the theoretical implications of these results are their practical implications for waitpersons, restaurant managers, and restaurant diners. People's adherence to the 15% norm suggests that the income minded waiter should work at the most expensive restaurant possible. Though expensive restaurants frequently get less business than inexpensive ones, the dollar amount of each tip will be larger the larger the customer's bill. In addition, the fact that tipping is unrelated to service, food, or dining atmosphere suggests, not that the waiters may ignore these factors, but that they should not become unduly upset if some unavoidable problem on one of these dimensions does arise. Such a relaxed attitude will go a long way toward making a very stressful job less so. The fact that tipping was unrelated to a waiter's efforts and service, or to a restaurant's food and atmosphere also suggests that restaurant managers should not use tips to evaluate their personnel and establishments on these dimensions, and that tradition minded consumers need to reestablish tipping to its former status as a reward.
Though the studies reported above have a number of useful implications and augment our understanding of tipping, a great deal of research is still needed on this topic. Many of the explanations offered for observed relationships are only weakly supported by the available data. In addition, the different effects of group size, customer's gender, and per-person bill-size on tipping in Studies I and II suggest that type of restaurant and perhaps meal time - i.e. breakfast, lunch, or dinner, should be investigated as independent variables affecting tipping. Yet another reason for further investigations of tipping is the fact that all the existing research has been conducted in the midwestern cities of Columbus, Ohio; Chicago, Illinois; and Milwaukee, Wisconsin. A number of non-academic surveys indicate that tipping varies between different geographic regions of the United States (Gallup Organization Incorporated, 1967; O'Connor, 1971; Mayo, 1976) and a careful investigation of those differences seems warranted. Finally, further research is needed in order to determine if the psychology of tipping is similar across different service professions. Research on tipping to date has concentrated on restaurants, with a few studies investigating tipping in taxicabs (Karen, 1968; Nida, Jackson, and Latané, 1980). A complete understanding of the psychology of tipping requires that tipping in other service professions be investigated as well.
Footnotes

1A preliminary set of questions, asked of 13 subjects did not include queries about the restaurant's atmosphere or about the customers' gender (See Appendix A). As a consequence, only 156 restaurant atmosphere ratings and gender codings were obtained and analyzed.

2Six groups for whom incomplete and ambiguous records were kept were omitted from the study.
References


Scarlett, S., Lynn, M., and Latané, B. Social Impact Theory: Turning the Tables on Tipping. 53rd Annual Meeting of the Eastern Psychological Association, Baltimore, Maryland, April 14-17, 1982.

Snyder, M. L. The Inverse Relationship between Restaurant Party Size


APPENDIX A

Time:

IHOP Questionnaire 10:45
10/19

1. How would you rate (on a scale of one to ten) the quality of the service here? 7

2. How would you rate the food? 8

3. How many people were in your party? 4

4. How much was your bill? $ 60%

5. How much did you tip the waitress? $5

6. What suggestions do you have to improve this restaurant?

Faster service
lower prices
fix seat
APPENDIX B

IHOF Questionnaire

1. How many people were in your party?/How many were on your bill?
   2 1 1

2. How would you rate (on a scale of one to ten) the atmosphere of this restaurant?
   9

3. How would you rate the quality of the service here?
   1 0

4. How would you rate the food?
   3

5. How much was your bill?
   1 7 7 3 6

6. How much did you tip the waitress?
   7 8

7. What suggestions do you have to improve this restaurant?
   Get better cooks

Group composition: 1 M 1 F

Responder's age: 3 0

Time: 1 0 3 5

10/29