

The Psychology of Restaurant Tipping

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Since its origins in 18th-century English pubs, tipping has become a custom involving numerous professions and billions of dollars. Knowledge of the psychological factors underlying tipping would benefit service workers, service managers, and customers alike. Two studies were conducted to provide such knowledge about restaurant tipping. The percent tipped in these studies was related to group size, the customer's gender, the method of payment (cash or credit), and in some cases, the size of the bill. Tipping was not related to service quality, waitperson's efforts, waitperson's gender, restaurant's atmosphere, or restaurant's food.

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 IRS 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, 1981).

The pervasiveness of this social phenomenon makes it an interesting topic of study, but tipping is deserving of investigation for other reasons as well. First, knowledge of the factors influencing tipping would allow over 1.3 million waiters and waitresses in the United States (along with countless other

service workers) to develop more effective and efficient strategies for increasing their incomes. Second, knowledge about the psychology of tipping would help managers and proprietors in the service industries to make better use of tips as indicators of customer satisfaction. Finally, empirical documentation of current motives for tipping would help consumer groups like Tippers Anonymous and Tippers International (whose claimed memberships total over 10,000) determine the need for their existence and activities.

Despite its potential usefulness, scientific research on tipping is scant. Only three studies that we are aware of have been conducted on restaurant tipping. These studies have found that:

1. Tipping adheres to the 15% norm (Freeman, Walker, Borden, & Latané, 1975; May, 1978).
2. The percentage of bill size tipped is an inverse power function of the number of people at the table (Freeman et al., 1975; May, 1978).¹
3. The percentage of bill size tipped is unrelated to per-person bill size (Freeman et al., 1975; May, 1978).
4. Attractive, or attractively apparelled, waitresses receive larger percentage tips than less attractive waitresses (May, 1978; Stillman & Hensley, 1980).
5. Charge customers leave larger tips than cash customers (May, 1978).
6. The percentage of bill size tipped is unrelated to whether the table ordered alcoholic beverages or not (Freeman et al., 1975).
7. The percentage of bill size tipped increases with the number of non-task oriented visits by the waitperson, but is unrelated to observers ratings of service (May, 1978).

¹ May claims that the results of her study "do not support the inverse function between percentage tipped and group size as reported by Freeman et al.," but the quadratic relationship she reports is not reliably non-monotonic and, hence, is consistent with the inverse power function described by Freeman et al.

8. The percentage of bill size tipped is sometimes related to the customers' gender—Freeman et al. (1975) found no gender differences in tipping, but Stillman and Hensley (1980) found that all male groups tipped more than all female groups.

Despite its paucity, the research on restaurant tipping outlined above has generated at least one debate. 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). Several alternative explanations for this effect, however, have been advanced by other researchers.

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 Latane' (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 (e.g., the interpersonal attraction between waiters and customers) rather than a causal relationship between service and tipping. Supporting this cautionary note is the fact that May found no relationship between observers' 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) nor 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.

The studies reported in this article were designed to examine the "equity" explanation of group size effects on tipping. In addition, these studies provided an opportunity to replicate earlier research findings and to examine the effects of several new variables on tipping.

Study I

In this study, customers at a low-price breakfast house were questioned about their dining experience. Patrons 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 there should be 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.

If, as Isen and Levin (1977) suggest, positive affect enhances helping, 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 should be happier than customers who feel that the food or atmosphere is bad. The ratings obtained in this study allow a test of this hypothesis.

Method

Procedure

A total of 169 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 21 instances in which two or more people at a table contributed to a single bill their responses were combined. At an additional 21 tables that 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 that 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. Approximately 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 1 to 10) 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.² When several people of different genders contributed to a table's bill(s), gender was coded as mixed. Finally, the time and date of each interview was noted.

Results and Discussion

Those IHOP customers interviewed rated the restaurant an average of 7 (on a ten-point scale) on food and service. The restaurant's atmosphere received an average rating of 6 on the same scale. The average bill per person was \$3.16 and the average tip per person was \$.42.

Tipping and the 15% 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 ($F(7,134) = 5.16$,

² A preliminary set of questions, asked of 13 subjects, did not include queries about the restaurant's atmosphere or about the customers' gender. As a consequence, only 156 restaurant atmosphere ratings and gender codings were obtained and analyzed.

$p < .001$), 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% versus 9.5%, $r(140) = -3.48$, $p < .001$). 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 versus \$3.28, $t(140) = 1.21$, n.s.).

Group Size and Tipping. Consistent with previous research, larger parties tipped a smaller percentage of their bill size than did smaller parties ($r = -.20$, $n = 169$, $p < .008$). The percent tipped dropped from 19% at tables of one to 11% at tables of four and six. Further, consistent with social impact theory (Latane', 1981), a least squares estimate of the best-fitting power curve—percent tipped = $19 \times \text{group size}^{-.33}$ —accounted for a significant portion of the variance in percent tipped ($r^2 = .053$, $F(1, 168) = 8.48$, $p < .001$).

Table 1

Incremental Variance in Percent Tipped Attributable to Each Source in a Hierarchical Multiple Regression in Study I

| Source | <i>dF</i> | <i>Incremental SS</i> | <i>F</i> | <i>PR</i> | <i>F</i> |
|---------------------------------------|-----------|-----------------------|----------|-----------|----------|
| Customers' Gender | 2 | 1456.29 | 7.73 | .001 | |
| Group Size | 1 | 388.82 | 4.13 | .05 | |
| Number of Checks | 1 | 6.32 | .07 | n.s. | |
| Atmosphere, Service, and Food Ratings | 3 | 329.98 | 1.16 | n.s. | |
| Per-person Bill Size | 1 | 1611.59 | 17.10 | .0001 | |
| Error | 142 | 13855.40 | | | |
| Corrected Total | 155 | 17648.40 | | | |

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 ($\text{spr}^2 = .57$, $F(14,14) = 2.97$, $p < .03$). These results strongly suggest that peoples' tipping decisions conform to those of others at the same table.

Atmosphere, Food, and Service 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.). 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.

Bill Size and Tipping. 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 had very small bills may have tipped a larger percentage of their bills in order to meet this tipping minimum.

Study II

Though arguing against an equity explanation of tipping and its relationship to group size, 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 a customer's gender interaction should affect tipping. 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 versus 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 period³:

1. the waiter's or waitress's 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
9. the waiter's or waitress's rating (on a scale of 1 to 5) of the effort spent serving the table for which the check(s) was/were written.

Waiters and waitresses were instructed to record this information 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

³ Six groups for whom incomplete and ambiguous records were kept were omitted from the study.

from 19 tables that requested separate checks were 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.

Table 2

Incremental Variance in Percent Tipped Attributable to Each Source in Hierarchical Multiple Regression in Study II

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

Tipping and the 15% 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 16.5% 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.

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 2). 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 their interaction on the percent tip produced only a marginally significant effect for customer's gender ($F(2,201) = 2.94, p < .06$). Men tipped slightly more than women (15.7% versus 14.6%). 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 smaller parties ($r = -.03, n = 206, n.s.$). Moreover, an analysis of variance revealed no significant differences in the percent tipped by any of the group sizes ($F(7,198) = 1.79, n.s.$). 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.

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 ($r = -.07$, $n = 206$, 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 individuals 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 partialling 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 the results of Freeman et al. (1975) and May (1978), 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 that 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 & 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 R² 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 the group size effect on tipping is not mediated by waitpersons' efforts.

Credit versus 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% versus 14.5%, $r(198) = 3.49$, $p < .001$). Too few groups ($n = 6$) paid their bills with both cash and credit to evaluate the effects of this payment method on tipping.

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 waitresses 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 the waitpersons in these studies were friends or even acquaintances of the investigator, so impression management desires were minimal. Second, previous studies have utilized waitpersons' reports with no obvious biasing of the results. In fact, May (1978) checked waitpersons' 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.

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 (Latane, 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.

Equally as important as the theoretical implications of these results are their practical implications for waitpersons, restaurant managers, and restaurant diners. 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. Finally, these results suggest that tradition-minded consumers need to restore 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. 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'Conner, 1971; Mayo, 1976) and a careful investigation of those differences seems warranted. Furthermore, 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, & Latane\ 1980). A complete understanding of the psychology of tipping requires that tipping in other service professions be investigated as well.

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