Predictors of Occupational Differences in Tipping

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Abstract

The current study attempts to replicate a previous study in this journal reporting that the effects of tipping motives varied across more and less frequently tipped occupations. Results support most, but not all, of the original findings using different measures and more control variables than those used in the original study. Specific findings include the following: (i) future-service motives are positively related to likelihood of tipping only rarely tipped occupations, (ii) social-esteem motives are negatively related to the likelihood of tipping rarely and occasionally (but not often) tipped occupations, (iii) duty motives are positively related to likelihood of tipping only often tipped occupations, (iv) reciprocity motives are positively related to likelihood of tipping only occasionally and often (but not rarely) tipped occupations, and (v) altruism motives are positively related to likelihood of tipping all occupations, but especially occasionally tipped ones.

How Motivations for Tipping

Vary with Occupational Differences in Descriptive Tipping Norms

1. Introduction

Consumers around the world often leave gifts of money (aka, tips) to service workers who have served them. Though the frequency of tipping and typical tip amounts vary across service occupations, those receiving at least occasional tips include airport porters, appliance delivery men, baristas, bartenders, casino dealers, doormen, golf caddies, hairstylists, hotel maids, parking valets, pizza delivery drivers, taxicab drivers, tour guides, and waiters/waitresses (Star, 1988). Statistics on the total amount tipped across service professions around the world do not exist, but estimates place the amount tipped to food service workers in the United States alone at over $45 billion a year (Azar, 2011).

In addition to being pervasive and economically important, tipping is a complex and theoretically rich behavior that intrigues economists because it is an unnecessary, and therefore, irrational payment (Azar, 2007; Lynn, 2006). Thus, one frequently studied question about tipping is: What motivates this behavior? Scholars have identified numerous potential goals or motives for tipping, but five stand out – (1) to help service workers, (2) to gain or keep good (or preferential) service in the future, (3) to gain or keep the esteem (approval, liking and admiration) of others, (4) to reward good service, and (5) to fulfill a social duty or obligation (see Azar, 2005, 2008, 2010; Becker, Bradley and Zantow, 2012; Lynn, 2009, 2015a, 2015b; Saunders and Lynn, 2010; Whalen, Douglas and O'Niel, 2014). Researchers have found substantial support for the effects of these motives on tipping (see Lynn, 2015a, for a review) and

have begun to study the generalizability of those effects across situations (Becker, et. al. 2012), occupations (Lynn, 2015b), and cultures (Azar, 2010).

In one such study published in this journal, Lynn (2016a) asked a diverse U.S. sample about their likelihood of tipping 21 service providers and their motives/reasons for tipping restaurant waiters/waitresses. He used the mean of the tipping-likelihood measure to reflect descriptive tipping norms for that occupation in analyses using occupation as the unit of analysis. He also used those means to classify the occupations as rarely, occasionally and frequently tipped and then created indices of tipping likelihood for each category of occupations, which he used as dependent variables in repeated measures analyses at the individual-level. Predictor variables were obtained from the self-reported tipping motives. Lynn found four factors underlying those motives and created indices of each -- with five items reflecting social-esteem/future-service motives, one item reflecting reciprocity motives, two items reflecting duty motives, and two items reflecting altruistic motives.

Lynn's (2016a) analyses of these data indicated that:

(i) tipping likelihood increased with individual differences in social-esteem and future-service motives for rarely and occasionally tipped occupations, but not for frequently tipped occupations - such that the occupation-level impact of these motives decreased at a marginally increasing rate with occupational tipping likelihood,

(ii) tipping likelihood increased with individual differences in duty motives for frequently tipped occupations, but not for rarely or occasionally tipped occupations - such that the occupation-level impact of this motive increased at a linear rate with occupational tipping likelihood,

(iii) tipping likelihood increased with individual differences in altruistic motives for all occupations, but most strongly for occasionally tipped occupations - such that the occupation-level impact of this motive increased at a marginally increasing rate with occupational tipping likelihood, and

(iv) tipping likelihood decreased with individual differences in reciprocity motives for rarely tipped occupations, but not for occasionally or frequently tipped occupations - such that the occupation-level impact of this motive increased at a linear rate with occupational tipping likelihood.

Lynn's (2016a) findings that the motives underlying tipping varied with occupational tipping norms have important implications about the validity of self-reported tipping motives, the theoretical boundary conditions of those motives' effects, the processes underlying the development and spread of tipping norms, and the most effective strategies for increasing tips as discussed in the study article. However, Lynn's findings stand alone, may be specific to the measures he used, and may be confounded by other individual and occupational differences. Accordingly, the current study attempts to replicate those findings using alternative measures and more control variables as explained below.

2. Methodological Refinements

2.1. Alternative measures

This study attempts to conceptually replicate Lynn's (2016a) findings using alternative measures of both descriptive tipping norms and individual differences in tipping motives. First, Lynn measured occupational differences in descriptive tipping norms with the mean self-reported likelihood of tipping for each of the occupations. The current study uses mean ratings

of how many others tip each occupation instead. Occupational differences in average ratings of own and others likelihood of tipping are highly correlated (r = .97, see footnote 3 in Lynn, 2016b), so this change is unlikely to affect the results, but the ratings used here are a more direct measure of perceived descriptive norms. Second, Lynn measured individual differences in the motives for tipping a specific occupation -- restaurant waiters and waitresses. The current study uses ratings of motives for tipping "across a variety of service situations" instead. This change makes the contextual scope of the motivation measures more consistent with that of the behavioral tipping measures.

2.2. Individual-level confound and control

This study also measures and controls for individual differences in response style that might have confounded Lynn's (2016a) results. Lynn had subjects rate the likelihood of tipping a variety of different occupations and their agreement with a variety of different tipping motivation statements. This leaves the relationships of tipping likelihood with various tipping motives open to confounding by a form of measurement bias called "standard deviation (SD) response-style." SD response-style is an individual difference in the tendency to disperse vs. cluster ratings of multiple stimuli (Greenleaf, 1992a). Individual differences in this response style have many potential causes – including differences in (i) time and care devoted to the survey (Krosnik, 1991), (ii) the tendency to use the mid-points vs end-points of scales (Greenleaf, 1992b), and (iii) various cognitive styles such as perceptual leveling vs sharpening, complex vs simple conceptual articulation, and abstract vs concrete conceptual complexity (see Kozhevnikov, 2007).

For ratings that are roughly normally distributed, individual differences in SD response-style will systematically bias ratings of stimuli that are moderately to strongly different from the

average of the rated stimulus set by pulling the ratings in toward the average among those who cluster ratings and by pushing them further away from the average among those who disperse ratings. However, ratings of stimuli at or near the average of the rated stimulus set will be less consistently biased because those who cluster ratings will leave them bunched at the average and those who disperse ratings will push some above and others below the average with the direction of bias for a particular near-average stimulus varying across respondents.

In Lynn's (2016a) study, this response style could have positively biased the correlations of less (more) strongly endorsed motivations for tipping with the likelihood of tipping less (more) frequently tipped occupations and negatively biased the correlations of less (more) strongly endorsed motivations for tipping with the likelihood of tipping more (less) frequently tipped occupations. This differential bias may explain some of the occupation differences in tipping motive effects found by Lynn (2016a). For example, it may have strengthened/created the positive effect of social-esteem and future-service motives (which probably had below average endorsement – see Lynn, 2009, 2015b) on tipping of rarely tipped occupations while weakening/eliminating the effect of these motives on tipping of frequently tipped occupations. Accordingly, SD response style was measured and controlled for in the main analyses of this study.

2.3. Occupation-level confounds and controls

Finally, this study tests and controls for the effects of several occupational characteristics that may have confounded Lynn's (2016a) results. Lynn's usage of mean occupational likelihood of being tipped to operationalize descriptive tipping norms assumed that there were no other systematic differences between rarely, occasionally and frequently tipped occupations. However, in a different study, Lynn (2016b) found that occupational differences in the likelihood

of being tipped were reliably and, in some cases, strongly related to numerous characteristics of the occupations. For example, he found that people in the U.S. are more likely to tip occupations whose services they use frequently, whose service quality customers can monitor and evaluate more easily than can managers, whose income, skill, and needed judgement (i.e., occupational status) were low, and whose workers were less happy than their customers at the time of service delivery. Given these later findings, it is unclear if the occupational differences in the effects of various tipping motives reported by Lynn (2016a) are due to occupational differences in tipping likelihood as Lynn (2016a) suggests or to occupational differences in frequency of use, customer monitoring advantage, status, or other characteristics. Fortunately, Lynn (2016b) provided scores on these and many other occupational characteristics for all of the 21occupations in the current study. Those measures were used to test and control for potential confounds of descriptive tipping norms (i.e., tipping likelihood) in the analyses of the current study.

3. Method

As part of a larger, multi-study, online survey, participants were asked to: (i) indicate how often they tipped various service providers when those workers provide good service, (ii) indicate how many other people tip various service providers when those workers provide good service, and (iii) agree or disagree with statements reflecting motives for, and attitudes toward, tipping. The sample and questions are described in more detail below.

3.1. Sample

Six-hundred twenty-five Amazon.com Mechanical Turk (MTurk) workers completed an online survey about tipping in exchange for a small monetary payment. However, a few respondents failed to answer every question, so sample sizes vary slightly across the analyses

reported below. [Note: Analysis of the data began only after all responses were obtained; sample size was not determined post-hoc.] Respondents were not representative of the U.S. population, but were geo-demographically diverse. Based on end-of-survey geodemographic questions, they came from 50 states/territories of the United States and their ages ranged from 19 to 74 with a mean of 39 years and a standard deviation of 12.5 years. Seventy-seven percent were white, 46 percent were male, 57 percent had a four-year-college, graduate, or professional degree, 20 percent earned less than $20,000 per year, and 22 percent earned $70,000 or more per year.

3.2. Likelihood of tipping

After completing a hypothetical-scenario based experiment intended as a separate study, participants were asked to indicate "*How often do you tip the following service providers when they give you good service?*." Response options were: 1 = Never, 2 = Rarely, 3 = Sometimes, 4= Often, 5 = All of the time, 6 = don't know (coded as a missing value when used). The question included a list of 21 different service providers, which were presented in a different random order for each respondent. A list of the occupations and the mean rated likelihood of tipping each is presented in Table 1. These means were averaged across groups of occupations (see Section 3.3) to create indices of likelihood of tipping the rarely, occasionally, and frequently tipped occupations (with coefficient alphas of .78, .92 and .84 respectively) for use as dependent variables in individual level analyses.

3.3. Perceived frequency of others tipping

After indicating how likely they were to tip the 21 service occupations, participants were asked to indicate "*In your opinion, how many people in the U.S. tip the following service providers when those workers provide good service?."* Response options were: 1 = None, 2 =

Few, 3 = Some, 4= Many, 5 = Everyone. The question included the same list of 21 different service providers used previously, but in a different random order (see Table 1 for means by occupation). Those occupations whose mean rated frequency of being tipped was 2.5 or less were classified as rarely tipped occupations, those whose mean rated frequency of being tipped was between 2.5 and 3.5 were classified as occasionally tipped occupations, and those whose mean rated frequency of being tipped was 3.5 or greater were classified as frequently tipped occupations and this classification was used as the measure of descriptive tipping norms in individual-level analyses.

3.4. Motives for tipping

Next, respondents were asked: "Listed below are several statements expressing possible reasons or motives for tipping service workers (aka, servers). Thinking about your own tipping behavior across a variety of service situations, indicate how much YOU agree or disagree with each statement." A list of the tipping motives statements is presented in Table 2. Response options were: 1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 – neither agree nor disagree, 5 = slightly agree, 6= moderately agree, and 7= strongly agree. A principle components analysis of the ratings with Promax rotation produced 5 meaningful factors with eigen values greater than 1. Indices of each factor were constructed by averaging the four items that (i) loaded most highly on the factor and (ii) had a mean of 3.0 or more. In constructing these indices, any missing values were replaced with the mean of the other items as advocated by Roth, Switzer and Switzer (1999). The indices (with coefficient alphas of .91, .92, .84, .91, and .78 respectively) reflected individual differences in social-esteem, future-service, reciprocity, duty, and altruistic motives for tipping (see Table 2).

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insert Tables 1 and 2 about here

3.5. Attitude toward tipping

At the end of the motivation questions, and using the same response scale, were two statements reflecting attitudes toward tipping -- "I like the custom of tipping." And "I would like to see tipping abolished." The last item was reverse scored and averaged with the first item to create an attitude to tipping index, with a coefficient alpha of .75.

3.6. Standard deviation (SD) response-style

An initial analysis of the data raised post-hoc concerns about response bias. In particular, individual differences in the tendency to disperse vs cluster ratings of multiple stimuli (called "SD response style") may have created artefactual relationships between some of the motives for tipping and tipping likelihood measures as explained previously in Section 2.2. To control for this potential confound, three intra-respondent standard deviations among all the motivation ratings, all the likelihood of tipping ratings, and all the perceived frequency of others tipping ratings were calculated. Then these three standard deviation scores were standardized across respondents and averaged into an index of SD response style. This index had a coefficient alpha of .71.

3.7. Occupation-level measures

Supplemental analyses used occupations as the units of analysis. For those analyses, coefficients from separate regressions predicting each occupations' likelihood of being tipped

from all the individual-difference motives for tipping (while controlling for attitude toward tipping and SD response style) served as occupation-level measures of the strength or impact of those motives for each occupation (see Table 3).[1] In addition, the means by occupation of perceived frequency of others tipping served as an occupation-level measure of descriptive tipping norms. Finally, occupation-level scores on various other characteristics were obtained from Lynn (2016b), examined as potential confounds, and used as control variables when needed. Specifically, the scores on Lynn's measures of Frequency of Use (FU), Same Server (SS), Customer Monitoring Advantage (CMA), Service Customization (SC), Contact Time (CT), Occupational Status (OS), Touch Likelihood (TL), Customer Happier (CH), and Public Visibility (PV) were obtained for each of the 21 occupations in this study. FU measures how often the typical customer uses the service. SS measures the likelihood of a customer getting the same server across multiple service occasions. CMA measures the extent to which customers can evaluate server performance more easily than can managers. SC measures how customized or personalized the service typically is. CT measures how long servers have face-to-face contact with their customers in a typical service encounter. OS measures the social status of the occupation as reflected in the income, skill and judgment associated with working in that occupation. TL measures the likelihood that servers physically touch their customers during a typical service encounter. CH measures the extent to which customers are happier than their

[1] These occupation-level measures of tipping motives reflect the extent to which individual differences in a particular motive affect tipping of a particular occupation, so determinants/predictors of these measures may be thought of as moderators of a particular motives' effects. However, the extent to which a particular motive affects tipping of a particular occupation may also be thought of as reflecting the level of that motivation to tip in that occupational context, so determinants/predictors of these measures may also be thought of simply as determinants/predictors of particular motivations to tip. Both perspectives on, and descriptions of, the determinants/predictors of occupation-level tipping motives will be used in this paper.

servers during a typical service encounter. Finally, PV measures how visible customer-server interactions are to other people.

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insert Tables 3 – 5 about here

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4. Results and Discussion

Descriptive statistics for, and correlations among, the individual-level variables in this study are presented in Table 4. Individual-level, multivariate analyses predicting the likelihoods of tipping rarely, occasionally, and frequently tipped occupations are presented in Table 5. Various occupation-level analyses are presented in Tables 6 thru 9. Comparisons of the current findings with those of Lynn (2016a) are presented in Tables 10 and 11. Key elements of these analyses and results are briefly summarized below.

4.1. Response-style effects

An initial analysis of the individual-level data (in the left panel of Table 5) produced some theoretically anomalous results – namely, that social-esteem motives were positively related to the likelihood of tipping rarely tipped occupations and negatively related to the likelihood of tipping occasionally and frequently tipped occupations. These findings are anomalous because three of the four items in the measure of social-esteem motives in this study reflected desires to <u>avoid</u> losing esteem (see Table 2) and tipping is necessary to avoid a loss of

esteem only when it is common and expected (Lynn, 2015a). Thus, the initial effects of loss-avoidant, social-esteem motives were opposite of what theory and common sense would dictate.[2]

Post-hoc efforts to explain these anomalous findings lead to the realization that they (and Lynn's, 2016, findings) could be explained by SD response style (see Section 2.2), so a measure of that response style was created for use as a control variable (see Section 3.7). The three standard deviation scores underlying the SD response style index were correlated with one another (.37 < all r's < .52, all p's <.001), so they provide clear evidence of a consistent individual difference in the tendency to disperse vs cluster ratings of multiple stimuli. Furthermore, consistent with expectations about the potentially biasing/confounding effects of this response style, the index measuring it was (i) negatively correlated with the likelihood of tipping rarely tipped occupations and with endorsement of the rarely endorsed social-esteem and future-service motives for tipping, (ii) uncorrelated with the likelihood of tipping occasionally tipped occupations and with endorsement of the moderately endorsed altruistic and duty motives for tipping , and (iii) positively correlated with the likelihood of tipping frequently tipped occupations and with endorsement of the highly endorsed reciprocity motive for tipping (see Table 3). Therefore, additional analyses controlling for this potential confound were conducted and became the primary focus of the study.

[2] Lynn (2016a) found a superficially similar positive effect of social-esteem motives on likelihood of tipping rarely tipped occupations, but his finding is not anomalous, because his measure of those motives involved statements about gaining (not about losing) the server's esteem and it is easier/cheaper to buy the server's esteem when others rarely tip. Nevertheless, that positive relationship may also be an artefact of SD response style.

4.2. Motivation effects

After controlling for SD response style and attitude toward tipping, analyses of the data indicated that:

(i) tipping likelihood increased with individual-differences in future-service motives for rarely tipped occupations but not for occasionally and often tipped occupations (see Table 5) – but the differences in these effects were not large and reliable enough to create a reliable relationship between the occupation-level impact of future-service motives and occupational tipping likelihood (see Table 6),

(ii) tipping likelihood decreased with individual-differences in social-esteem motives for rarely and occasionally tipped occupations but not for often tipped occupations (see Table 5) - such that the occupation-level impact of this motive was a U-shaped function of occupational tipping likelihood (see Table 7),

(iii) tipping likelihood increased with individual-differences in duty motives for often tipped occupations but not for rarely and occasionally tipped occupations (see Table 5) - such that the occupation-level impact of this motive increased linearly with occupational tipping likelihood (see Table 7),

(iv) tipping likelihood increased with individual-differences in reciprocity for occasionally and often tipped occupations but not for rarely tipped occupations (see Table 5) - such that the occupation-level impact of this motive increased at a marginally decreasing rate with occupational tipping likelihood (see Table 8),

(v) tipping likelihood increased with individual-differences in altruistic motives for all occupations but more so for occasionally tipped ones (see Table 5) - such that the occupation-

level impact of this motive was an inverted U-shaped function of occupational tipping likelihood (see Table 8).

These results differed from several of Lynn's (2016a) findings, but replicated others (see Tables 10 and 11). Most notable are differences in the two studies' findings about social-esteem and reciprocity motive effects. These different findings may be attributable to the differences in the studies' measures of tipping motives and/or control for SD response-style. Either explanation argues for having greater confidence in the current results than in the former ones. That several effects were replicated using new measures of tipping motives and using new controls for attitude toward tipping and SD response-style argues strongly for the reliability and robustness of those effects. Both the new and the replication effects enhance the empirical foundation for Lynn's hypothesis that descriptive tipping norms affect tipping motives.

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insert Tables 6 - 11 about here

4.3. Potential confounding effects

Although consistent with descriptive tipping norm effects on tipping motives, the results described above are correlational and could be due to the effects of other occupational characteristics that affect both tipping norms and motives. To explore this possibility more, the potential linear and quadratic effects of several such occupational characteristics on descriptive tipping norms and on the impact of tipping motives were tested in separate regression analyses

using occupation as the unit of analysis (see Table 6). Four of those occupational characteristics were not reliably related to descriptive tipping norms and one of the others was not reliably related to the impact of any of the tipping motives, so those five characteristics are unlikely to be responsible for the relationships between descriptive tipping norms and the impact of tipping motives in this study. However, four occupational characteristics – frequency of use, customer monitoring advantage, occupational status, and customer happier -- were reliably related to both descriptive tipping norms and the impact of one or more tipping motives, so they could be responsible for some of the relationships between these variables. The sample of occupations in this study was too small to permit meaningful control for all four of these potential confounds simultaneously, so their potentially confounding effects were assessed separately. Separate regression analyses predicted the impact of tipping motives from linear and quadratic terms for perceived frequency of others tipping and for each of the potential confounds related to that motive's effects (see Tables 7 - 9).

The results of these analyses indicate that few of the occupation-level relationships between descriptive tipping norms (i.e., perceived frequency of others tipping) and the impact of tipping motives in this study are attributable to the confounding effects of other measured occupational characteristics. The impact of duty motives increased more (not less) with perceived frequency of others tipping after controlling for occupational frequency of using the service (see Table 7). The impact of reciprocity motives continued to increase at a marginally decreasing rate with increases in the perceived frequency of others tipping after controlling for frequency of use, customer monitoring advantage, occupational status, and customer happier (see

Table 8).[3] The impact of altruistic motives did increase with descriptive tipping norms less after controlling for frequency of use, customer monitoring advantage and customer happier, so the linear effect of descriptive tipping norms on this motivation for tipping may be an artifact of one or more of these confounds. However, the quadratic effect of descriptive tipping norms on this motivation for tipping were unaffected by the inclusion of potential confounds in the regression model as reflected in the size of the coefficients for that quadratic term (see Table 9). Furthermore, in only one of the nine regression models including both descriptive tipping norms and other occupational characteristics as predictors (see Model B of Table 8) did any of the potential confounds have reliable effects on the impact of a tipping motive after controlling for descriptive tipping norms. These findings suggest that the different effects of tipping motives across rarely, occasionally and frequently tipped occupations are unlikely to be attributable to occupational differences in any of the other characteristics studied here. Of course, different and unmeasured occupational characteristics could still confound the current results, but having ruled out the most obvious and likely confounds should increase readers' confidence that descriptive tipping norms may alter the impact of various tipping motives.

4.4. Attitude effects

Attitude toward tipping was primarily used as control variable in the regression analyses reported in Table 4, but its relationships to tipping motives and its effects on the likelihood of tipping may be of interest to other researchers. Attitude toward tipping was positively correlated with future-service, reciprocity and altruistic motives for tipping but was unrelated to duty and

[3] Although the linear effect of perceived frequency of others tipping became only marginally significant using two-tailed tests after controlling for customer monitoring advantage and occupational status, the magnitude of the coefficients was not appreciably affected by these control variables and the effects remained significant using one-tailed tests.

(the primarily avoidant) social-esteem motives for tipping in this study (see Table 4). The positive correlations replicate similar effects reported by Lynn (2015b) and suggest that the more tippers see positive benefits of tipping to the self or others the more they like the practice. The non-significant correlations fail to replicate the negative relationships of attitude toward tipping with avoidance and duty motives also reported by Lynn. Nevertheless, these non-significant correlations suggest that people gain no pleasures or satisfactions from fulfilling an obligation to tip or from tipping to avoid loss of social-esteem.

Attitude toward tipping was also positively correlated with the likelihood of tipping rarely and occasionally (but not frequently) tipped occupations (see Table 4). Moreover, these effects remained after controlling for the various tipping motives (see Table 5). That the effect was attenuated for frequently tipped occupations, is consistent with other findings of weaker dispositional effects under strong situational constraints (Meyer, Dalal and Hermida, 2010), and it suggests that social pressures can compel a high likelihood of tipping even from people who do not like the practice. That attitude toward tipping exerts an effect on tipping of rarely and occasionally tipped occupations that is independent of tipping motives argues against Lynn's (2015a) assertion that the primary explanation for this behavior must be motivational and that all social and cognitive processes underlying tipping must operate on or through motives.

5. Discussion and Conclusions

The results of this study join those of Lynn (2016a) in finding that the effects on tipping of individual differences in various tipping motives differ across rarely, occasionally and frequently tipped occupations. The findings have important implications about the validity of self-reported tipping motives, the boundary conditions of tipping motives' effects, the roles of

different motives in the development and spread of tipping norms, and the most effective strategies for increasing tips as discussed below.

5.1. Validity of self-reported tipping motives

Previous studies have found positive relationships between tipping and individual differences in self-reported motivations for tipping (see Azar, 2010; Becker, Bradley and Zantow, 2012; Lynn, 2009, 2015b; Saunders and Lynn, 2010; Whalen, Douglas and O'Niel, 2014), but those simple main effects are readily explainable as artifacts of self-perception, consistency-seeking, or demand characteristics. This study's finding of more complex, occupation-specific relationships of these motives with tipping likelihood, and of occupation-level relationships between the impact of these motives and other occupational characterisitcs, are not so easily explained as artifacts, so they provide stronger evidence for the validity of the self-reported tipping motives studied.

5.2. Moderation effects and boundary conditions

The results of this study indicate that the effects of various tipping motives vary with occupational differences in descriptive tipping norms. The data is only correlational and cannot support strong causal inferences, but the robustness of the occupation-level relationships to statistical control for several potentially confounding occupational characteristics increases the credibility of a direct causal connection between descriptive tipping norms and the impact of tipping motives. In particular, the current findings support the ideas that:

(i) the tendency to buy preferential future-service via tipping declines with the number of other people tipping an occupation and may be limited to occupations with few other tippers (perhaps because competition with other tippers drives up the cost of this positional good),

(ii) the tendency to buy social-esteem via tipping decreases the general likelihood of tipping more when a moderate number of others tip an occupation (for reasons beyond the author's grasp),

(iii) the tendency to tip out of a sense of obligation or duty increases with the number of other people tipping an occupation and may be limited to frequently tipped occupations (perhaps because tipping is seen as duty only when it is so common that servers are seen as legitimately expecting tips),

(iv) the tendency to tip as reward/repayment for services rendered increases at a marginally decreasing rate with the number of other people tipping an occupation and may be limited to occupations tipped moderately or more often (perhaps because small numbers of other tippers signals that servers are already adequately paid/compensated for their efforts), and

(v) the tendency to tip as a way to financially help servers, though evident across all levels of descriptive tipping norms, increases and then decreases in an inverted U-shaped fashion with the number of other people tipping an occupation (perhaps because increasing numbers of other tippers decreases perceptions of servers' wages and increases perceptions of their tip income such that their perceived need is greatest when tipping by others is moderate).

Future research should attempt to strengthen our confidence in these moderation effects and boundary conditions by examining the differential impact of tipping motives across a larger sample of occupations differing in descriptive tipping norms. Such an analysis would have more statistical power than the current study and would allow more than one potential occupational confound to be statistically controlled at a time. Another worthwhile possibility would be to examine the differential impact of tipping motives for a single occupation across nations that

differ in descriptive tipping norms for that occupation. In addition, future research should test the speculative explanations for the moderation effects (offered in parentheses above) by testing the relationships of descriptive tipping norms with (i) perceptions of the minimum tip needed to acquire better future-service and/or social-esteem, (ii) perceptions of the need to tip in order to avoid loss of social-esteem, (iii) feelings of obligation or duty to tip, (iv) perceptions that servers' wages adequately compensate them for their efforts, and (v) perceptions of servers' financial needs or incomes.

5.3. Development and spread of tipping norms

The widespread and common tipping of an occupation is not imposed by a central authority, but emerges from individual voluntary behavior that is copied by increasing numbers of others (Lynn, 2015a). The current findings that the impacts of tipping motives vary with the number of people who tip an occupation may help explain this development and spread of tipping norms. Specifically, the current results suggest that tipping of a particular occupation may begin as an attempt by a few customers to help the server and/or to get preferential future service. If these motives generate enough tipping, then future-service motives for tipping may die out (perhaps because competition with other tippers drives up the cost of this positional good) while new reciprocity motives for tipping emerge and altruistic motives for tipping become stronger (perhaps because the existence of other tippers signals that workers are under-compensated for their efforts and need financial help). If these new and stronger motives increase tipping even further, then servers may come to expect tips and this expectation may lead consumers to feel a new obligation or duty to tip that adds to existing altruistic and reciprocity

motives for tipping.[4] While consistent with the current findings, this scenario about the development and spread of tipping norms clearly goes beyond the current data. Future researchers are encouraged to do historical research to test these ideas about temporal changes in the motives underlying tipping of a particular occupation.

The supplemental analyses of occupational characteristics as potential confounds of tipping norm effects on tipping motives in this study also makes other and new contributions to our understanding of how and why tipping norms spread. Specifically, they speak to why tipping becomes more widespread or common for some occupations than others and fill in a gap in the existing literature addressing this issue. Lynn (2015a, 2016b) theorized that occupational characteristics affect the extent to which an occupation is tipped through their effects on one or more motives for tipping. For example, he argued that tipping should be more common for occupations that involve:

(i) frequent server-customer interactions, because repeated interactions should increase future-service, altruistic and social-esteem motivations to tip,

(ii) work easily evaluated by customers, because ease of customer evaluation should increase reciprocity motives for tipping,

(iii) lower occupational status, because low worker status should increase altruistic motivations to tip,

(iv) disparities between customers' and servers' happiness, because such disparities enhance the potential for server envy of their customers and should, thereby, increase customers' desire for the servers' goodwill/esteem, and

[4] The role of social-esteem motives over time is less clear from the current findings because individual differences in this motive had negative rather than positive effects on tipping likelihood. Other operationalizations of esteem motives for tipping may prove more fruitful.

(v) public interactions between the server and customer, because public visibility should increase social-esteem motivations to tip.

Consistent with this reasoning, Lynn (2016b) found that the occupational likelihood of being tipped did vary as expected with occupational differences in frequency of use, customer monitoring advantage, status, disparity in customer-server happiness, and public visibility of the service encounter. However, a number of other expected effects involving other occupational characteristics were not observed.

The current study replicated Lynn's (2016b) findings about the predictors of occupational differences in tipping likelihood using a subset of his sample. More importantly, it extends Lynn's (2016b) research by examining for the first time the hypothesized relationships of these occupational characteristics with tipping motives (see Table 6). As hypothesized, frequency of use and lower occupational status were positively related to altruistic motives for tipping and customer monitoring advantage was positively related to reciprocity motives for tipping. However, greater relative customer happiness was unexpectedly associated with greater altruistic and reciprocity motives for tipping and not with social-esteem motives for tipping as expected. Furthermore, public visibility and some of the other occupational characteristics were unrelated to any motivation for tipping. These findings provide some support for the general direction of Lynn's (2015a, 2016b) reasoning about occupational differences in tipping, but also highlight the over-simplicity of his assumptions about the specific processes involved and especially about the determinants of occupational differences in tipping motives. Clearly more thought about, and empirical research on, the latter issue is needed.

5.4. Ways to increase tips

Finally, the relationships among descriptive tipping norms and motives observed in this study suggest that service workers or managers trying to increase the frequency of tipping a particular occupation should alter their tactics depending on the current level of tipping that occupation. Specifically, attempts to increase tipping of rarely tipped occupations should appeal to or engage altruistic and future-service motives, while attempts to increase tipping of occasionally tipped occupations should appeal to or engage altruistic and reciprocity motives. Attempts to increase tipping of frequently tipped occupations may run into ceiling effects, but should appeal to or engage altruistic, reciprocity and/or duty motives. For example, all counter workers should benefit from tip jar messages that prime altruistic motives -- such as: "Trickle Down Economy Bin" or "Tipping: Bad for Cows… Good for Us!" However, rarely tipped restaurant take-out workers are likely to benefit from tip jar messages that prime future-service motives (such as: "Wishing Well. Make a Wish." or "It taste better when you tip.") more than from tip jar messages priming reciprocity motives (such as: "We support your habit, so please support ours!" or "Karma Jar.") while the reverse is true for baristas, who are tipped more often. Finally, tip jar messages that prime duty motives (such as: "Tipping... Not just for cows" or "Tipping isn't a city in China.") will probably only work for very frequently tipped workers like bartenders. [Note: All of these tip jar slogans are from actual tip jar pictures posted on the internet.] This advice is consistent with the patterns of motivation effects observed here, but goes well beyond the current data, which did not test tactics for increasing tips. One interesting direction for future research would be to test these ideas. Such research would not only inform service workers about how to earn more tips, but would assess the robustness of descriptive tipping norm effects on tipping motives across different operationalizations of those motives.

Table 1. List of service occupations and their mean rated likelihood/frequency of being tipped by self and others.

Service occupation	Mean likelihood of respondent tipping[a]	Mean frequency of others tipping[b]
Rarely Tipped Occupations		
Dental hygienists	1.26	1.46
Veterinarians	1.33	1.48
Car mechanics	1.52	1.76
Appliance delivery and installation men	2.11	2.26
Restaurant workers who hand you the food when you pick up take-out orders	2.25	2.46
Occasionally Tipped Occupations		
Tour guides	2.64	2.60
Casino dealers	2.81	2.83
Hotel maids	3.01	2.89
Hotel doormen	2.81	2.96
Airport porters	3.07	2.96
Counter workers at places with tip jars	3.05	3.05
Baristas at coffee shops	3.01	3.12
Golf caddies	2.70	3.24
Hotel bellmen/porters	3.50	3.27
Hotel room service delivery persons	3.53	3.28
Frequently Tipped Occupations		
Parking valets	3.76	3.53
Taxi drivers	3.81	3.57
Hairstylists/barbers	4.29	3.72
Bartenders	4.09	3.81
Pizza delivery drivers	4.62	4.03
Restaurant waiters/waitresses	4.68	4.20

[a] 1 = Never, 5 = All of the time [b] 1 = None, 5 = Everyone

Table 2. Pattern matrix for tipping motive statements

Items	Mean Rated Agreement with Item	Component Loadings				
		Social Esteem Motives	Future Service Motives	Reciprocity Motives	Duty Motives	Altruism Motives
I tip to help servers.	5.72	-.062	-.071	.374	.010	.558
I tip to make servers happy.	5.30	.020	.072	.216	.035	.599
I tip because servers need the money more than I do.	4.13	.128	.025	-.086	-.123	.778
I tip to make up for servers' low wages.	5.38	.005	-.087	.135	.073	.752
I would tip less if servers were paid higher wages.	4.90	.037	-.024	-.297	.265	.417
I tip to thank servers for the time and energy they spend on my behalf.	5.79	-.072	.083	.793	-.027	.092
I tip because I am grateful for the service I receive.	5.77	-.055	.069	.830	-.055	.085
I tip out of gratitude for a positive service experience.	5.81	-.044	.003	.874	-.055	.004
I tip as a way of saying "Thank You."	5.87	-.033	.040	.814	-.092	.112
I tip so the server will remember me positively the next time I encounter him/her.	4.35	-.116	.864	.154	.000	.005
I tip in order to get better service than the typical customer.	3.89	-.116	.969	-.056	.032	.000
I tip because it improves the service I get from that server in the future.	4.10	-.112	.957	.049	.023	-.055
I tip in order to get preferential treatment on my next visit.	3.50	.024	.913	-.109	-.009	-.007

I tip so the server will like me more.	3.51	.253	.689	-.056	.013	.089
I tip to get the respect of the server.	3.58	.214	.652	-.005	-.019	.128
I tip in order to gain social status/respect.	3.04	.557	.318	-.112	-.038	.212
I tip in order to impress the people I am with.	2.79	.725	.101	-.129	-.097	.273
I tip in order to appear generous.	3.26	.729	.076	-.028	-.013	.202
I tip so that I do not get lousy service the next time I see the server.	3.58	.265	.641	.074	.068	-.162
I tip so that the server does not give more attention and effort to other customers than to me.	2.89	.530	.413	-.038	-.040	.011
- I tip to keep from getting worse service than other customers.	3.07	.562	.415	.018	-.040	-.101
I tip because servers would give me worse service if I didn't.	3.20	.594	.327	.064	.071	-.230
I tip to keep the server from envying me.	2.37	.876	-.052	-.012	-.179	.063
I tip to keep the server from disliking me.	2.87	.863	.005	.103	.010	-.076
I tip to keep the server from doing something bad to me.	2.81	.854	.021	.119	-.077	-.161
I tip to avoid being looked down upon by others.	3.05	.912	-.167	-.006	.155	-.053
I tip because I do not want to appear cheap or stingy.	3.51	.784	-.099	.100	.272	-.057
I tip in order to keep from making a bad impression on the people I am with.	3.18	.850	-.170	-.028	.181	.026
I tip in order to repay the server for his/her efforts.	5.35	.247	-.156	.814	.021	-.065
I tip to avoid feeling indebted to the server.	2.87	.857	-.115	.055	-.076	.113

I tip because I believe in reciprocating when someone has done something for me.	4.93	.271	-.067	.741	-.031	-.079
I tip to reward good service.	5.86	-.077	.048	.814	.059	-.175
I tip because it is the proper thing to do.	5.68	-.213	.110	.388	.455	.220
I tip to obey social norms.	4.91	-.051	.059	-.068	.904	.023
I tip because it is expected.	4.99	-.022	.061	.005	.909	-.028
I tip because doing so is a social obligation.	4.76	.053	-.004	-.018	.913	-.080
I tip out of a sense of duty.	4.73	.115	-.062	.004	.756	.097

Note: Extraction Method: Principal Component Analysis; Rotation Method: Promax with Kaiser Normalization; Shaded loadings identify items used in indices measuring each motive.

Table 3. Coefficients from regressions of tipping likelihood on individual differences in tipping motives by occupation.

Occupation	Future-Service Motives	Social-Esteem Motives	Duty Motives	Reciprocity Motives	Altruistic Motives
Dental hygienists	.04	-.02	.01	.01	.01
Veterinarians	.06*	-.01	-.02	-.03	.03
Car mechanics	.04	-.04	.01	-.01	-.01
Appliance delivery	.04	-.02	.01	.06	.05
Restaurant take-out	.11*	-.05	-.10*	.01	.17*
Tour guides	-.12*	-.12	.11	.27*	.08
Casino dealers	.09	-.11	.02	.20*	.04
Hotel maids	-.03	-.11*	.01	.18*	.19*
Hotel doormen	.10	-.15*	.09	.22*	.06
Airport porters	.12	-.30*	.24*	.31*	.08
Counter workers	-.03	-.08*	-.07*	.16*	.23*
Baristas	-.02	-.07	-.05	.12*	.24*
Golf caddies	-.05	-.06	.14	.20	.17
Hotel bellmen/porters	.02	-.19*	.12*	.28*	.12
Hotel room service	.04	-.07	-.03	.30*	.10
Parking valets	.03	-.06	.13*	.26*	.03
Taxi drivers	.05	-.13*	.05	.17*	.13*
Hairstylists/barbers	.11*	-.09*	.09*	.09	.09*
Bartenders	.03	-.03	.08	.13*	.16*
Pizza delivery drivers	.02	.01	.02	.14*	.11*
Restaurant waiters/waitresses	.00	.01	.06*	.08*	.07*

Note: Coefficients come from regression models that included a constant, all of the motivation indices, the SD response style index and the attitude toward tipping index. Coefficients with asterisks were reliably different from zero at the .05 level

Table 4. Descriptive statistics for, and correlations among, the individual level variables in this study.

	n	Mean	Standard Deviation	OTO	FTO	SEM	FSM	RM	DM	AM	Att	SDRS
Tipping Likelihood												
- Rarely Tipped Occupations (RTO)	616	1.73	.90	.44**	.06	.19**	.25**	-.06	-.05	.11**	.17**	-.53**
- Occasionally Tipped Occupations (OTO)	616	3.06	1.05		.52**	-.10*	.08*	.32**	-.01	.30**	.26**	-.04
- Frequently Tipped Occupations (FTO)	621	4.29	.85			-.11**	.03	.36**	.19**	.28**	.06	.38**
Social-Esteem Motives (SEM)	624	3.25	1.69				.46**	-.06	.42**	.14**	.03	-.42**
Future-Service Motives (FSM)	624	3.96	1.70					.21**	.18**	.23**	.25**	-.28**
Reciprocity Motives (RM)	624	5.70	1.15						.15**	.47**	.35**	.31**
Duty Motives (DM)	623	4.85	1.54							.25**	-.06	.07
Altruistic Motives (AM)	624	5.13	1.25								.32**	.05
Attitude to Tipping (Att)	623	4.04	1.86									-.05
SD Response-Style (SDRS)	624	-.001	.80									

* $p < .05$, ** $p < .01$

Table 5. Coefficients (and standard errors) from analyses predicting likelihood of tipping rarely, occasionally and often tipped occupations from tipping motives ($n_{subjects} = 611$).

	Rarely Tipped Occupations	Occasionally Tipped Occupations	Often Tipped Occupations	F-Test of Difference between Coefficients (df = 2, 1206)	Rarely Tipped Occupations	Occasionally Tipped Occupations	Often Tipped Occupations	F-Test of Difference between Coefficients (df = 2, 1204)
Intercept	1.45*** (.20)	1.20*** (.24)	2.50*** (.19)		1.07*** (.18)	1.05*** (.24)	2.70*** (.18)	
Future-Service Motives	.10*** (.02)	.02 (.03)	.01 (.02)	7.63**	.06** (.02)	-.002 (.03)	.03 (.02)	2.84ŧ
Social-Esteem Motives	.07** (.03)	-.08** (.03)	-.10*** (.02)	21.34***	-.05* (.02)	-.13*** (.03)	-.04 (.02)	5.70**
Duty Motives	-.08** (.03)	-.02 (.03)	.11*** (.02)	20.40***	-.003 (.02)	.02 (.03)	.07** (.02)	3.79*
Reciprocity Motives	-.12** (.04)	.17*** (.04)	.21*** (.03)	36.61***	.02 (.03)	.22*** (.04)	.14*** (.03)	12.92***
Altruism Motives	.08* (.03)	.17*** (.04)	.10** (.03)	3.08*	.06* (.03)	.16*** (.04)	.11*** (.03)	4.21*
Attitude to Tipping	.06** (.02)	.07** (.02)	-.03 (.02)	11.78***	.04* (.02)	.07** (.02)	-.02 (.02)	8.14***
SD Response-Style					-.62*** (.05)	-.25*** (.06)	.32*** (.05)	142.32***

ŧ p < .10, * p < .05, **p < .01, *** p < .001

Table 6. Coefficients for linear and quadratic effects of service/occupation characteristics on frequency of tipping and tipping motive coefficeints in separate regression analyses for each predictor using occupation as the unit of analysis (n = 21).

	Dependent Variable					
	Perceived Frequency of Others Tipping	Future-Service Motives	Social-Esteem Motives	Duty Motives	Reciprocity Motives	Altruistic Motives
Frequency of Use						
Linear	.90***	-.00	.01	-.03	.02	.09***
Quadratic	-.98*	-.06	.08	-.12*	-.18*	.04
Customer Monitoring Advantage						
Linear	1.47**	-.05	-.07	.08	.20**	.10*
Quadratic	-1.42	-.15ŧ	-.01	.07	-.04	-.12
Occupational Status						
Linear	-.51**	.01	.02	-.01	-.07**	-.04*
Quadratic	-.23	.00	.01	-.03	-.03	.00
Customer Happier						
Linear	1.24***	-.02	-.01	.01	.11*	.08*
Quadratic	-.81	-.01	.14ŧ	-.11	-.18ŧ	-.08
PublicVisibility						
Linear	1.06*	.00	.03	.03	.01	.02
Quadratic	.63	.04	.04	-.00	-.13	.02
Same Server						
Linear	-.43ŧ	.01	.04	-.01	-.09**	-.02
Quadratic	-.13	.06*	-.02	.01	-.03	-.05
Service Customization						
Linear	-.21	-.03	.03	.01	-.07	-.02
Quadratic	.74	.04	-.07	.06	.09	-.00
Contact Time						
Linear	-.19	-.03ŧ	.01	.02	-.01	-.02
Quadratic	.14	-.03*	-.03	.02	.08**	.02
Touch Likelihood						
Linear	-13	.01	.02	.01	-.04	-.02
Quadratic	-.28	.02	-.01	-.03	-.03	-.01

Note: Quadratic terms are squared values of the variable that have had the linear component of the variable removed, so that the linear effect of the variable is preserved when both the linear and quadratic terms are entered into the model simultaneously. ŧ $p \leq .10$, * $p < .05$, ** $p < .01$,***$p < .001$

Table 7. Coefficients (and standard errors) from regressions of future-service, esteem and duty tipping motive coefficients on frequency of tipping and selected service/occupation characteristics using occupation as the unit of analysis (n = 21).

	Future Service Motives	Esteem Motives	Duty Motives	
			Model A	Model B
Constant	.05	-.06	-.05	.04
	(.06)	(.05)	(.07)	(.07)
Frequency of Use (FU)				-.11*
				(.04)
Residual FU^2				-.03
				(.06)
Perceived Frequency	-.01	-.01	.03	.09*
of Others Tipping (PFOT)	(.02)	(.02)	(.02)	(.03)
Residual $PFOT^2$	.01	.07**	-.01	-.02
	(.02)	(.02)	(.03)	(.02)
R^2	.01	.40*	.10	.47*

Note: Residuals of squared values have had the linear component of the variable removed, so the linear effect of the variable is preserved when both the linear and quadratic terms are entered into the model simultaneously. ŧ $p \leq .10$, * $p < .05$, ** $p < .01$

Table 8. Coefficients (and standard errors) from regressions of reciprocity tipping motive coefficeints on frequency of tipping and selected service/occupation characteristics using occupation as the unit of analysis (n = 21).

	Model A	Model B	Model C	Model D	Model E
Constant	-.04	.04	-.03	-.06	.04
	(.07)	(.06)	(.09)	(.11)	(.18)
Frequency of Use (FU)		-.09*			
		(.04)			
Residual FU^2		-.02			
		(.06)			
Customer Monitoring			.04		
Advantage (CMA)			(.08)		
Residual CMA^2			.07		
			(.12)		
Occupational Status (OS)				.00	
				(.04)	
Residual OS^2				.01	
				(.02)	
Customer Happier (CH)					-.04
					(.07)
Residual CH^2					.02
					(.10)
Perceived Frequency	.07**	.11**	.06ŧ	.07ŧ	.08*
of Others Tipping (PFOT)	(.02)	(.03)	(.03)	(.04)	(.04)
Residual $PFOT^2$	-.09**	-.10***	-.08*	-.10*	-.10*
	(.02)	(.02)	(.03)	(.04)	(.04)
R^2	.57**	.74***	.59**	.57**	.58**

Note: Residuals of squared values have had the linear component of the variable removed, so the linear effect of the variable is preserved when both the linear and quadratic terms are entered into the model simultaneously. ŧ $p \leq .10$, * $p < .05$, ** $p < .01$

Table 9. Coefficients (and standard errors) from regressions of altruistic tipping motive coefficients on frequency of tipping and selected service/occupation characteristics using occupation as the unit of analysis (n = 21).

	Model A	Model B	Model C	Model D	Model E
Constant	-.01	-.09*	.03	-.01	-.09
	(.05)	(.04)	(.08)	(.09)	(.15)
Frequency of Use (FU)		.08**			
		(.03)			
Residual FU^2		.06			
		(.04)			
Customer Monitoring			.04		
Advantage (CMA)			(.07)		
Residual CMA^2			-.08		
			(.10)		
Occupational Status (OS)				-.01	
				(.03)	
Residual OS^2				.02	
				(.02)	
Customer Happier (CH)					.03
					(.06)
Residual CH^2					-.01
					(.09)
Perceived Frequency	.04ŧ	.00	.02	.04	.02
of Others Tipping (PFOT)	(.02)	(.02)	(.03)	(.03)	(.03)
Residual $PFOT^2$	-.04*	-.04*	-.04	-.05	-.04
	(.02)	(.02)	(.03)	(.03)	(.03)
R^2	.33*	.70***	.36	.41ŧ	.35

Note: Residuals of squared values have had the linear component of the variable removed, so the linear effect of the variable is preserved when both the linear and quadratic terms are entered into the model simultaneously. ŧ $p \leq .10$, * $p < .05$, ** $p < .01$

Table 10. Comparison of individual-level tipping-motive effects on tipping likelihood from Lynn (2016) and current study.

	Lynn (2016)			Current Study		
	Rarely Tipped Occupations	Occasionally Tipped Occupations	Often Tipped Occupations	Rarely Tipped Occupations	Occasionally Tipped Occupations	Often Tipped Occupations
Social-Esteem Motives	+	+	n.s.	-	-	n.s.
Future-Service Motives	+	+	n.s.	+	n.s.	n.s.
Reciprocity Motives	-	n.s.	n.s.	n.s.	+	+
Duty Motives	n.s.	n.s.	+	n.s.	n.s.	+
Altruism Motives	+	+	+	+	+	+

Note: Future-service and social-esteem motives were combined in Lynn (2016).

Table 11. Comparison of occupation-level effects of descriptive tipping norms on tipping motive coefficients from Lynn (2016) and from current study.

	Lynn (2016)		Current Study	
	Tipping Likelihood	Tipping Likelihood^2	Perceived Tipping Frequency	Perceived Tipping Frequency^2
Social-Esteem Motives	-	-	n.s.	+
Future-Service Motives	-	-	n.s.	n.s.
Reciprocity Motives	+	n.s.	+	-
Duty Motives	+	n.s.	(+)	n.s.
Altruism Motives	+	-	(+)	(-)

Note: Future-service and social-esteem motives were combined in Lynn (2016), but were separate motives in the current study. Effects in parentheses are marginal or qualified in some way as described in the text or other tables.

References

Azar, O.H. (2005). Who do we tip and why? *Applied Economics, 37*, 1871-1879.

Azar, O.H. (2007). Do people tip strategically, to improve future service? Theory and evidence. *Canadian Journal of Economics, 40*, 515-527.

Azar, O.H. (2008). Strategic behavior and social norms in tipped service industries. *The B.E. Journal of Economic Analysis and Policy, 8*, Article7. Available at: http//www.bepress.com/bejeap/vol8/iss1/art7.

Azar, O.H. (2010). Tipping motivations and behavior in the U.S. and Israel. *Journal of Applied Social Psychology, 40*, 421-457.

Azar, O.H. (2011). Business strategy and the social norm of tipping. *Journal of Economic Psychology*, 32, 515-525.

Becker, C., Bradley, G. and Zantow, K. (2012). The underlying dimensions of tipping behavior: An exploration, confirmation and predictive model. *International Journal of Hospitality Management*, 31, 247-256.

Greenleaf, E.A. (1992a). Improving rating scale measures by detecting and correcting bias components in some response styles. *Journal of Marketing Research*, XXIX, 176-88.

Greenleaf, E.A. (1992b). Measuring extreme response style. *Public Opinion Quarterly*, 56, 328-351.

Kozhevnikov, M. (2007). Cognitive styles in the context of modern psychology: Toward an integrated framework of cognitive style. *Psychological Bulletin*, 133 (3), 464-481.

Krosnik, J. A. (1991). Response strategies for coping with the cognitive demands of attitude measures in surveys. *Applied Cognitive Psychology*, 5, 213-236.

Lynn, M. (2006). Tipping in restaurants and around the globe: An interdisciplinary review. In Altman, M. (Ed.) *Handbook of Contemporary Behavioral Economics*, Armonk, NY: M.E. Sharpe, pp. 626-643.

Lynn, M. (2009). Individual differences in self-attributed motives for tipping: Antecedants, consequences, and implications. *International Journal of Hospitality Management, 28*, 432-438.

Lynn, M. (2015a). Service gratuities and tipping: A motivational framework. *Journal of Economic Psychology*, 46, 74-88.

Lynn, M. (2015b). Explanations of service gratuities and tipping: Evidence from individual differences in tipping motivations and tendencies. *Journal of Behavioral and Experimental Economics*, 55, 65-71.

Lynn, M. (2016a). Motivations for tipping: How they differ acrossmore and less frequently tipped services. *Journal of Behavioral and Experimental Economics*, 65, 38-48.

Lynn, M. (2016b). Why are we more likely to tip some service occupations than others? Theory, evidence and implications. . *Journal of Economic Psychology*, 54, 134-150.

Meyer, R.D., Dalal, R.S. and Hermida, R. (2010). A review and synthesis of situational strength in organizational sciences. *Journal of Management*, 36 (1), 121-140.

Roth, P.L., Switzer, F.S. III & Switzer, D.M. (1999). Missing data in multiple item scales: A Monte Carlo analysis of missing data techniques. *Organizational Research Methods*, 2, 211-232.

Saunders, S.G. & Lynn, M. (2010). Why tip? An empirical test of motivations for tipping car guards. *Journal of Economic Psychology, 31*, 106-113.

Siemsen, E., Roth, A. and Oliveira, P. (2010). Common method bias in regression models with linear, quadratic and interaction effects. *Organizational Research Methods*, 13 (3), 456-476.

Star, N. (1988). *The International Guide to Tipping*. New York: Berkley Books.

Whalen, J.E., Douglas, A.C. & O'Neill, M.A. (2014). What's in a tip? The creation and refinement of a restaurant-tipping motivations scale: A consumer perspective. *International Journal of Hospitality Management*, 37, 121-130.