Effects of the Big Five Personality Traits

on Tipping Attitudes, Motives, and Behaviors

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Abstract

Knowledge about the personality predictors of tipping attitudes, motives, and behaviors could shed light on the psychological processes underlying tipping and might allow service workers to better predict and manage their tip incomes. To those ends, analyses of online survey data revealed numerous direct and indirect (through tipping motives) Big Five personality trait effects on tipping attitudes and behavior. For example, Agreeableness, Conscientiousness and Openness affected tipping likelihood and tip sizes through its enhancement of intrinsic tipping motives. Also, the effects of Agreeableness, Conscientiousness, Extraversion, and Neuroticism on leaving sub-normative (<15%) or normative (15% - 20%) restaurant tips were independent of the traits' relationships with self-reported tipping motives. However, the sizes of these and other personality effects were small, so there is little to be gained from using customer's personalities to predict their tipping behavior.

Key words: Tipping, Consumer Personality, Big Five

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In many countries around the world, it is customary for consumers to supplement the pay of some service workers with a voluntary gift of money (variously called a tip, gratuity, propina, pourboire, and trinkgeld among other names). Who is tipped and how much varies across nations, but in the United States, baristas, bartenders, casino dealers, concierges, doormen, furniture/house movers, golf caddies, haircutters, hotel maids, masseuses, parking valets, pizza delivery drivers, porters, restaurant musicians, sommeliers, taxi drivers, and waiters can all expect tips from at least some of their customers (Lynn, 2016). Often, these voluntary consumer payments increase the "costs" of services by 10 percent or more (Lynn and Lynn, 2004) and represent 20 to 60 percent of service workers' incomes (Lynn, 2017).

Despite the customary nature of tipping, individuals in a given culture differ substantially in their tipping behavior. Chander, Gneezy, List and Muir (2019) report that tipper characteristics account for three times the variance in tips given to Uber drivers in the United States that service-provider characteristics do. While similar analyses of the relative importance of customer and server characteristics on tipping have not been conducted in other service contexts, wide variation across individuals in the tips given to various service providers has been documented (see Lynn, 2015b; Lynn, Jabbour and Kim, 2012). For example, Lynn (2015b) found that some participants in a hypothetical scenario study reported that they would tip a bartender and a bellman nothing while others responding to the same hypothetical scenario claimed they would tip the bartender

and bellman as much as $5 and $8 respectively. This variability in tipping leads many service workers to try to predict their customers' tipping propensities and to allocate their service efforts accordingly in an attempt to manage their tip incomes (Barkan and Israeli, 2004; Lynn, 2017). Hostesses, managers, and others who pair customers with particular service workers may also want to predict how much a customer will tip in an effort to allocate tip earning opportunities equitably across workers. Thus, research on the predictors of individual differences in tipping is of practical value. To the extent that different predictors implicate different underlying causal processes, then such research is also of potential theoretical value.

To date, most research studying individual differences in tipping has focused on the effects of self-attributed motives for tipping and/or on tippers' demographic characteristics such as age, education, income, race, religious faith and sex (e.g., Becker, Bradley and Zantow, 2012; Lynn, 2009, 2015b). Very little research has examined the effects of personality traits on tipping, which is unfortunate because personality has proven to be an important source of individual differences in behavior. Although personality is not directly visible, it can be inferred from behavior and other visible characteristics (Back and Nestler, 2016). In fact, salespeople are often trained to pick-up on cues to their prospects' personalities and to adjust their sales pitches accordingly (e.g., Allessandra, 1992; Metler, 2017). Thus, research on personality effects on tipping could help servers and other interested parties in predicting customers' tipping propensities. In addition, personality traits have been shown to affect a variety of cognitive, motivational and social processes and may shed light on corresponding processes underlying tipping.

Accordingly, the current paper empirically explores the effects on tipping attitudes, motives, and behaviors of the major dimensions of personality.

Literature Review

The Big Five Personality Traits

Personality traits are enduring affective, behavioral and cognitive tendencies or dispositions that differentiate individuals (American Psychological Association, 2020). Psychologists have identified hundreds of such traits at varying levels of domain specificity, but there is a general consensus that there are five major dimensions underlying these various individual differences (John, Naumann and Soto, 2008). Those "Big Five" dimensions have been labeled agreeableness, conscientiousness, extraversion, neuroticism and openness. Agreeableness is a dimension that underlies traits such as compassion, compliance, modesty, and trust and is regarded as a tendency to get along with and care for others (Tackettt, Hernandez and Eisenberg, 2019). Conscientiousness is a dimension that underlies traits such as industriousness, impulse control, reliability, and punctuality (Roberts, et. al., 2014) and can be thought of as a tendency to be self-controlled and rule following. Extraversion is a dimension underlying individual differences in outgoingness, sociality, and cheerfulness (among other things) and has been interpreted as a tendency to focus on rewards and to experience positive affect (Smillie, 2013). Neuroticism is a dimension underlying individual differences in anxiety, depression and emotional volatility and is generally defined as a tendency to experience negative affect (Shiner, 2018). Finally, Openness is a dimension underlying individual differences in "imagination, intelligence, openness to change and emotional and aesthetic

sensitivity" and can be thought of as reflecting a "tendency toward complexity and flexibility in information processing" (DeYoung, 2014).

Numerous scales directly measuring these big five dimensions of personality have been developed (Crede, Harms, Niehorster and Gaye-Valentine, 2012: John and Srivastave,1999) and a substantial interdisciplinary body of research has explored their correlates. That research has found that the big five traits correlate with numerous academic, financial, health, interpersonal, political, and workplace behaviors and outcomes, as well as with personal and beliefs, economic preferences, and cognitive processes (c.f., Gerber, Huber, Doherty and Dowling, 2011; Langston and Sykes, 1997; Malouff, Thorsteinsson and Schutte, 2010; Vedel, 2014). Given the breadth of the big five personality traits and of the outcomes they have been shown to predict, it is reasonable to expect that they might be related to, and shed light on, tipping attitudes, motives and behaviors as well.

Conceptual Relations of the Big Five to Tipping

Lynn (2015a) has theorized that tipping is primarily motivated by desires to (i) help the server, (ii) repay/reward the server for his/her efforts, (iii) gain/keep good service in future encounters with the server, (iv) gain/keep the server's and other observers' esteem, and (v) fulfill a social obligation or duty. Furthermore, he argues that these motives are likely to mediate the effects of most (if not all) situational, individual, occupational, and national determinants of tipping. Research on self-reported tipping motives has generally supported the existence and predictive power of these five motives, but often finds that future-service and esteem-seeking motives are positively corelated as are altruistic and reciprocity motives (Lynn, 2009, 2015b, 2018), which supports using a

simpler classification of tipping motives into intrinsic, extrinsic and obligation motives. This "Tipping Motives Framework" suggests that the big five personality traits might affect tipping through their effects on the afore mentioned tipping motives. Specifically, the strengths of these motivations for tipping, and hence tipping behaviors themselves, seem likely to vary with the big five personality traits as follows.

Agreeableness. People with a strong tendency to get along with, and care for, others seem more likely than less agreeable people to embrace altruistic, reciprocity and social obligation (or duty) motivations for tipping. Altruistic and reciprocity motives tend to be positively related to both tipping likelihood and tip size (Lynn, 2009, 2015b), so these motives may mediate a positive effect of agreeableness on these tipping behaviors. Duty motivations tend to increase tipping likelihood (with little or no effect on tip size) only when tipping norms are strong (Lynn, 2015b, 2018), so this motive may mediate positive effects of agreeableness on the likelihood of both tipping traditionally tipped workers and staying within normative prescriptions when deciding how much to tip.

 Conscientiousness. Self-controlled, rule following people seem more likely than others to follow tipping norms, which typically portray tips as rewards for good service and specify an acceptable range of tip amounts when service is satisfactory. This reasoning suggests that conscientiousness might increase the likelihood of tipping and of tipping amounts within normative prescriptions because it enhances self-reported reciprocity and duty motives for tipping. Since conscientiousness is associated with greater fiscal frugality as well as with conformity and compliance (Brown and Taylor, 2014; Jackson, Wood, Bogg, Walton, Harms and Roberts, 2010), it may also decrease the tendency to leave super-normative tips.

Extraversion. People focused on rewards, especially those who are socially outgoing and assertive, should like the attention and personalized service that tipping motivates more than do others. This reasoning suggests that extraversion might be positively related to self-reported esteem-seeking and future-service motives for tipping, which are associated with greater liking for the custom (Lynn, 2015b; Lynn and Brewster, 2020). Thus, extraversion may have an indirect positive effect on tipping attitudes through these motives. However, these motives for tipping have been weakly and inconsistently related to tipping likelihood and tip size (Lynn, 2015b, 2018), so it is unclear how extraversion's effects might impact these behavioral outcomes.

Neuroticism. People prone to experience negative affect seem more likely than others both to fear the negative consequences of sub-normative tipping and to feel the pain of large tip payments. Furthermore, since a prevention or avoidance focus leads to satisficing rather than maximizing behavior (Shah and Higgins, 1997), these mindsets should increase the likelihood of tipping within normative prescriptions and decrease the likelihood of tipping super-normative amounts. This reasoning suggests that neuroticism may indirectly increase the likelihood of normative tipping and decrease the likelihood of super-normative tipping through its effects on avoidant future-service and social-esteem motivations for tipping.

Openness. People with more complex and flexible thinking seem more likely than others to see tipping as a complex phenomenon and to recognize and embrace all of the motivations underpinning this behavior. This reasoning suggests that individual differences in openness are positively related to individual differences in all of the motives for tipping. Furthermore, embracing multiple motivations for tipping should

enhance tipping likelihood across diverse service settings, so openness may indirectly enhance tipping likelihood through its effects on tipping motives. However, different tipping motives have sometimes been found to have opposite effects on attitude toward tipping and on tip size (Lynn, 2009, 2015b, 2018), so it is unclear whether or how openness might affect these outcomes.

Insert table 1 about here

Empirical Relations of the Big Five to Tipping

Table 1 summarizes existing published research examining the big five's relationships to tipping attitudes, motives, and behaviors. As can be seen, few empirical tests of these relationships exist and those that do exist are inconsistent and inconclusive. Further compounding problems interpreting these inconsistent findings is the fact that Cho (2014) and Lynn, Jabbour and Kim (2012) used brief, two-item measures of each of the big five, which have proven to be unreliable and weak predictors (Crede, et. al., 2012). Clearly, additional research using more reliable multi-item scales is needed to better understand these relationships. The study reported below addresses this need by exploring the relationships of scores on the Big Five Inventory (John, Donahue and Kentle, 1991) with various measures of attitude toward tipping, motivations for tipping, and tipping behaviors.

Method

An online survey asked participants to: (i) indicate how likely they would be to tip 40 different service providers who did a good job serving them, (ii) indicate how much

they would tip a restaurant waitress assuming good but not exceptional service and a barista assuming minimal but friendly and prompt service, (iii) rate their agreement with a number of items measuring self-perceived motives for tipping, (iv) complete the Big Five Inventory (BFI), and (v) provide demographic and biographic information about themselves. More details about the methodology are presented below.

Sample

Participants in this study were recruited from Amazon Mechanical Turk workers residing in the United States and were paid fifty cents for their participation. Four hundred and twenty three people began the survey, but thirty of them were dropped from analyses because they failed to agree that they were serious, honest, careful and accurate when completing the survey and/or failed to respond properly to one question designed to identify those who were and were not reading the questions. Furthermore, many of the remaining 393 participants failed to answer one or more questions so the sample size varies from one analysis to another depending on the variables involved.

Tipping Likelihood

Subject were first shown a list of 40 service occupations and were asked "How likely would you be to tip the following people assuming that they did a good job in serving you?" Response options ranged from "Very Unlikely" =1 to "Very Likely" = 6, with a "Don't Know" option coded as a missing value when used. A components analysis of these items produced two large components with initial eigen values of 14.50 and 4.60 and several smaller components with initial eigen values less than 1.95. A Promax rotation of the two large components resulted in one loading highly on rarely tipped occupations (such as auto detailer, bike mechanic, fast-food worker, and locksmith) and

the other loading highly on frequently tipped occupations (such as bartender, concierge, hairstylist and pizza deliveryman). Accordingly, indices were made for these two components by averaging the available responses for all those occupations loading .5 or higher on that component. The resulting indices of tipping likelihood for rarely and frequently tipped occupations had coefficient alphas of .94 and .86 respectively. The two indices correlated with one another at .40 (n = 393, p < .001).

Waitress Tip Size and Derivative Measures

One survey question showed participants pictures of a waitress and a restaurant interior, described a service encounter in which the bill was $15.73 and the service was "good, but not exceptional," and asked "How much would you tip her (in dollars and cents)?" Three tip amounts in excess of the bill size were recoded as missing values on the grounds that they were unrealistic outliers. The remaining dollar and cent responses to this question were under 50 percent of the bill size and were used as a dependent variable called "waitress tip size" in the analyses below. In addition, the responses to this question were used to create three binomial variables called "normative tip" (reflecting whether or not the tip fell within 15 and 20 percent of the bill as called for by the U.S. restaurant tipping norm), "sub-normative tip" (reflecting whether or not the tip was less than 15 percent of the bill), and "super-normative tip" (reflecting whether or not the tip was greater than 20 percent of the bill).

Barista Tip Size

A second survey question showed participants pictures of a barista and a coffee-shop interior, described a service encounter in which the bill was $8.69 and the service was "minimal but friendly and prompt," and asked "How much would you tip her (in

dollars and cents)?" Two tip amounts in excess of the bill size were recoded as missing

values on the grounds that they were unrealistic outliers. The remaining dollar and cent

responses to this question were under 60 percent of the bill size and were used as a

dependent variable called "barista tip size" in the analyses below. Barista tip size

correlated with waitress tip size at .37 (n = 389, p < .001).

Attitude toward and Motivations for Tipping

Following the tipping behavior questions, subjects were asked to rate (using a

seven-point scale) how strongly they disagreed or agreed with several statements

reflecting their attitude toward and motivations for tipping. These items were the same as

those used by Lynn (2015b, 2018). The two attitude items were averaged (after reverse

coding one of the negatively worded items) into an attitude toward tipping index that had

a coefficient alpha of .79. A maximum likelihood factor analysis of the 37 motivation

items produced five factors with initial eigen values greater than 1, but only three factors

with initial eigen values greater than 3.5 were retained in this analysis in order to reduce

correlations among the rotated factors. After promax rotation, one factor loaded on

extrinsic motives such as future-service and esteem-seeking, the second factor loaded on

intrinsic motives such as altruism, expression of gratitude and reciprocity, and the third

factor loaded on duty or social obligation motives. Accordingly, indices were made for

these three factors by averaging the available responses for all those items loading .5 or

higher on that factor. The resulting indices of extrinsic, intrinsic and obligation motives

for tipping had coefficient alphas of .94, .92 and .86 respectively. The extrinsic and

obligation indices correlated with one another at .31 (n = 393, p < .001), but were

uncorrelated with the intrinsic index (r's = .03 and .08 respectively, n = 393, n.s.).

Big Five Inventory

Participants were also asked to indicate (using a five point scale) how strongly they disagreed or agreed with the 44 statements comprising John, Donahue and Kentle's (1991) Big Five Inventory (BFI). Responses to these items were used to obtain measures of agreeableness (A), conscientiousness (C), extraversion (E), neuroticism (N), and openness (O), which had coefficient alphas of .81, .86 .89, .90, and .86 respectively.

Demographic Variables

Following the BFI, participants were asked a number of questions about their biographic and demographic characteristics as well as about their attitude and approach to taking the survey. Those questions used as control variables in the current study asked about the participants' work experience (1 = has worked for tips, 0 = not), political, economic and social conservatism (1= very liberal, 5 = very conservative; averaged into an index of conservatism that had a coefficient alpha of .88), birth year (used to calculate age), sex (M=1, F =2), education (1 = less than high school, 2 = high school/GED, 3 = some college, 4 = 4-year college degree, and 5 = graduate/professional degree), annual income (1 = below $20,000, 2 = $20,000 - $29,000, …, 9 = $90,000 - $99,000, 10 = $100,00 or more), race (recoded as white: yes = 1, no = 0), and religion (recoded as Christian: yes = 1 , no = 0).

Results and Discussion

Descriptive statistics for the variables in this study are presented in Table 2. Zero-order correlations of each tipping measure with the personality, biographic and demographic variables are presented in Table 3. Finally, multiple regression analyses

predicting the various tipping measures are presented in Tables 4 and 5. Key findings

from these and other supplemental analyses are described and discussed below.

Insert tables 2 - 5 about here

Big Five and Attitude toward Tipping

A regression analysis in Table 4 that predicted attitude toward tipping from the

tippers' personality, biographic and demographic characteristics indicated that

Agreeableness is sizably and positively related to liking for the custom, but that the other

Big Five traits did not predict unique variance in this attitude. These findings suggest that

liking for tipping is substantially driven by an appreciation of its role in getting along

with and caring for service workers. An additional analysis tested the mediating effects of

all three tipping motives on the Agreeableness-Attitude relationship while controlling for

biographic and demographic variables (model 4; Hayes, 2018). This analysis, which used

bootstrapped error terms, indicated that the relationship was partially mediated by

individual differences in intrinsic motives for tipping ($B_{indirect}$ = .33, Bootstrap S.E. = .09,

p < .05), but had a large direct component (B_{direct} = .54, S.E. = .14, p < .001). Apparently,

the appeal of tipping to agreeable people can be explained in part by their desires to help

and thank/repay servers, but also for other reasons yet to be determined.

Big Five and Tipping Motives

Regression analyses in Table 4 that predicted tipping motives from the tippers'

personality, biographic and demographic characteristics indicated that:

- Agreeableness and Conscientiousness were both associated with increased intrinsic motives for tipping (and these effects were significantly different from their non-reliable, negative effects on extrinsic tipping motives),

- Extraversion was associated with decreased obligation motives for tipping (and this effect was significantly different from its' non-reliable effects on intrinsic and extrinsic tipping motives),

- Neuroticism was associated with increased obligation motives for tipping, and

- Openness was associated with increased levels of all the motives for tipping.

The observed motivational effects of Agreeableness, Conscientiousness and Openness are largely consistent with the conceptual analyses in the introduction and, therefore, provide some support for the validity of those ideas about personality trait effects on tipping motives and for the validity of the self-reported measures of tipping motives. The observed motivational effects of Neuroticism and Extraversion are less intuitive and obvious. Nevertheless, the fact that obligation motives for tipping increased with the tendency to experience negative affect and decreased with the tendency to experience positive affect suggests that the obligation to tip (at least as measured here) is largely experienced as a negative or unwelcome constraint. Further supporting this conclusion is the fact that obligation motives for tipping were negatively correlated with attitude toward the custom (see Table 3).

Big Five and Tipping Likelihood

Regression analyses in Table 4 that predicted tipping likelihood from the tippers' personality, biographic and demographic characteristics indicated that Openness was associated with an increased likelihood of tipping frequently but not rarely tipped

occupations and that the difference between these two effects was itself statistically significant. The other Big Five traits did not reliably predict unique variance in either measure of tipping likelihood. However, within-subjects analyses predicting these two measures of tipping likelihood from Big Five traits (plus biographic and demographic characteristics) indicated that Conscientiousness had reliably more positive effects on the likelihood of tipping frequently tipped occupations than on the likelihood of tipping rarely tipped occupations. The reliably different effects of Conscientiousness and Openness on the likelihood of tipping frequently and rarely tipped occupations suggests that stronger tipping norms may strengthen one or more of the motives for tipping that underlie these traits' effects. Consistent with this possibility, within-subjects analyses predicting these two measures of tipping likelihood from tipping motives (plus biographic and demographic characteristics) found that intrinsic and obligation motives had reliably more positive effects on the likelihood of tipping frequently tipped occupations than on the likelihood of tipping rarely tipped occupations (see Table 5).

Additional analyses tested potential indirect effects through tipping motives of the Big Five traits on tipping likelihood. These analyses, which used the same methods described previously, indicated that:

- Agreeableness had positive indirect effects through intrinsic tipping motives on the likelihood of tipping both rarely tipped occupations ($B_{indirect}$ = .07, Bootstrap S.E. = .02, p < .05) and frequently tipped occupations ($B_{indirect}$ = .15, Bootstrap S.E. = .05, p < .05),

- Conscientiousness had positive indirect effects through intrinsic tipping motives on the likelihood of tipping both rarely tipped occupations ($B_{indirect}$ = .04,

Bootstrap S.E. = .02, p < .05) and frequently tipped occupations ($B_{indirect}$ = .08,

Bootstrap S.E. = .03, p < .05),

- Extraversion had a trivially small, indirect positive effect through extrinsic tipping

  motives on the likelihood of tipping frequently tipped occupations ($B_{indirect}$ = .00,

  Bootstrap S.E. = .01, p < .05),

- Neuroticism had no reliable indirect effects on tipping likelihood,

- Openness had indirect positive effects through intrinsic ($B_{indirect}$ = .03, Bootstrap

  S.E. = .02, p < .05) and extrinsic ($B_{indirect}$ = .06, Bootstrap S.E. = .02, p < .05)

  tipping motives on the likelihood of tipping rarely tipped occupations, and

- The positive effect of Openness on the likelihood of tipping frequently tipped

  occupations was mediated by intrinsic tipping motives ($B_{indirect}$ = .06, Bootstrap

  S.E. = .03, p < .05).

That several of these reliable, indirect-effects occurred in the absence of reliable total-

effects suggests that some other unknown mediator(s) is(are) countering the indirect

effects and, thereby, suppressing the total effects (Rucker, Preacher, Tormala and Petty,

2011). Identifying those other mediators is one potential goal for future research.

Big Five and Tip Size

Regression analyses reported in Table 4 predicting tip size from the tippers'

personality, biographic and demographic characteristics indicated that Agreeableness was

associated with larger tips for a waitress. The other Big Five traits were unrelated to this

measure and none of the Big Five traits was reliably related to the sizes of tips

respondents said they would give a barista. As before, additional analyses tested potential

indirect effects through tipping motives of the Big Five traits on the tip sizes respondents said they would give (model 4; Hayes, 2018). They indicated that:

- Agreeableness had positive, indirect effects through intrinsic motives on tip sizes for a barista ($B_{indirect}$ = .05, Bootstrap S.E. = .02, p < .05) as well as a waitress ($B_{indirect}$ = .06, Bootstrap S.E. = .03, p < .05),

- Conscientiousness had positive, indirect effects through intrinsic motives on tip sizes for a barista ($B_{indirect}$ = .03, Bootstrap S.E. = .01, p < .05) and a waitress ($B_{indirect}$ = .03, Bootstrap S.E. = .02, p < .05),

- Extraversion had a positive indirect effect through obligation motives on tip sizes for a barista ($B_{indirect}$ = .02, Bootstrap S.E. = .01, p < .05).

- Neuroticism had a positive indirect effect through extrinsic motives on tip sizes for a barista ($B_{indirect}$ = .01, Bootstrap S.E. = .01, p < .05), and

- Openness had positive, indirect effects through intrinsic motives on tip sizes for a barista ($B_{indirect}$ = .02, Bootstrap S.E. = .01, p < .05) and a waitress ($B_{indirect}$ = .02, Bootstrap S.E. = .02, p < .05),

The positive, indirect effects through intrinsic motives of Agreeableness, Conscientiousness, and Openness on tip size conceptually replicate similar effects on tipping likelihood reported above. These personality traits appear to increase tip size as well as tipping likelihood through their enhancement of desires to help servers and thank/repay them for their service efforts. The positive, indirect effect through obligation motives of Extraversion on barista tip size reflects a tendency for introverts to feel a stronger obligation to tip than do extraverts and for this sense of obligation to decrease the size of tips to baristas (for whom norm-prescribed tip-amount s are ambiguous). The

positive, indirect effect through extrinsic motives of Neuroticism on barista tip size seems suspect given the non-reliable effect of this trait on extrinsic tipping motives and may be a Type 1 error.

Big Five and Restaurant Tip Norm Compliance

Regression analyses reported in Table 4 predicting the tendency to give sub-normative (<15%), normative (15% - 20%), and super-normative (>20%) to a waitress from the tippers' personality, biographic and demographic traits found that Agreeableness and Neuroticism were negatively related to sub-normative restaurant tipping, while Conscientiousness and Introversion (the opposite of Extraversion) were positively related to normative restaurant tipping. Additional analyses indicated that none of these multivariate effects were reliably mediated by self-reported differences in intrinsic, extrinsic, and/or obligation motives for tipping. The independence of these effects from mediation by explicit tipping motives suggest that less deliberate and controlled psychological processes may underlie them. In particular, the negative effects of Agreeableness and Neuroticism on sub-normative tipping suggests that these personality types may have either an implicit desire, or habitual tendency, to avoid social sanctions that is not captured by the extrinsic motives index in this study. In addition, the positive effects of Conscientiousness and Introversion (the opposite of Extraversion) on normative tipping suggest an implicit desire by, or habitual tendency of, these personality types to comply with tipping norms that is not captured by the study's obligation motive index. Future research should explore the roles of such implicit motives and/or habits in tipping.

Tipping Motives and Tipping

The correlations reported in Table 3 and the multivariate regression coefficients reported in Table 5 were generally consistent with one another regarding the effects of different tipping motives. Specifically, they indicated that:

- Stronger extrinsic motives for tipping were associated with a greater likelihood of tipping rarely tipped occupations, but were not reliably related to the likelihood of tipping frequently tipped occupations or to tip amounts for baristas or waitresses,

- Stronger intrinsic motives for tipping were associated with a greater likelihood of tipping frequently and rarely tipped occupations as well as with larger tip amounts for baristas and waitresses, and

- Stronger obligation motives for tipping were associated with a lower likelihood of tipping rarely tipped occupations (but not frequently tipped occupations) as well as with smaller tip amounts for baristas (but not for waitresses).

These findings are generally consistent with previous research (see Lynn, 2009, 2015b, 2018).

Control Variables and Tipping

The biographic and demographic control variables in this study had numerous relationships with the measures of tipping attitude, motivations and behaviors as reported in Tables 3 and 4. Among the more interesting findings from regression analyses that controlled for other personality, biographic and demographic characteristics were the following:

- Compared to others, respondents who had worked for tips were less likely to tip for extrinsic reasons, more likely to tip frequently tipped occupations, and more generous with their tips for a waitress (but not for a barista),

- Compared to younger respondents, older ones liked tipping more, reported stronger intrinsic and weaker extrinsic tipping motives, and reported a greater likelihood of tipping frequently tipped occupations than did younger consumers,

- Compared to men, women reported having weaker extrinsic tipping motives reasons and being less generous with their tips for a waitress,

- Compared to less educated respondents, more educated ones liked tipping less, reported stronger obligation motives for tipping, and reported that they would give smaller tips to baristas and waitresses,

- Compared to liberals, conservatives reported that they were less likely to tip frequently tipped occupations and were more likely to leave sub-normative tips for waitresses who provided them with good service.

These relationships replicate some previously reported findings, but fail to replicate others (see Lynn, 2009, 2015, 2018; Lynn, Jabbour and Kim, 2012). Reviewing and integrating the existing literature on tippers' biographic and demographic effects on tipping attitude, motivations and behavior is beyond the scope of the current paper and is left for future research.

General Discussion

The Big Five personality traits of Agreeableness, Conscientiousness, Introversion/Extraversion, Neuroticism, and Openness are related to many beliefs, behaviors, cognitive processes, economic preferences, and life outcomes (c.f., Barrick

and Mount, 1991; Becker, Deckenrs, Dohmen, Falk and Kosse, 2012; Gerber, Huber, Doherty and Dowling, 2011; Langston and Sykes, 1997). However, little is known about their relationships with tipping attitudes, motives, and behaviors. The current study examined these relationships and produced the following key findings:

- Statements about altruism and reciprocity motives for tipping loaded on a common factor (labeled intrinsic motives) while statements about future-service and esteem-seeking motives loaded together on another factor (labeled extrinsic motives) and statements about a duty or obligation to tip loaded on a third factor (labeled obligation motives),

- Agreeableness, Conscientiousness and Openness were associated with enhanced desires to help and thank/repay service workers and, indirectly through these intrinsic motives, with increased tipping likelihood and tip sizes,

- Conscientiousness and Openness had reliably more positive associations with the likelihood of tipping frequently tipped occupations than with the likelihood of tipping rarely tipped occupations,

- Introversion was associated with enhanced feelings of obligation to tip and, indirectly through this duty motive, with decreased barista tip sizes,

- Neuroticism was also associated with increased feelings of obligation to tip, but had no reliable indirect relationships with tipping likelihood (and only questionable indirect relationships with tip size),

- Agreeableness and Neuroticism were associated with less frequent sub-normative tipping of a waitress and these relationships were independent of the traits' relationships with self-reported tipping motives,

- Conscientiousness and Introversion were associated with more frequent normative tipping of a waitress and these relationships were independent of the traits' relationships with self-reported tipping motives, and

- Together, the personality and demographic characteristics in this study accounted for only 7 to 20 percent of the squared differences in respondents' tipping attitudes, motives and behaviors.

The theoretical and practical implications of these findings are discussed below along with study limitations and directions for future research.

Theoretical Implications

The results of this study are correlational and do not permit strong causal inferences. Nevertheless, they are consistent with personality effects on tipping motives, with personality and tipping motive effects on tipping behavior, and with the moderation of those effects by descriptive tipping norms. Thus, they provide some, limited support for behavioral economic and psychological theories about these effects. In particular, the current findings should increase our confidence in the following theorized effects.

Lynn (2015a) theorized that desires to help servers, reward service, gain or keep better future service, gain or keep social-esteem, and fulfill social obligations underlie tipping and mediate the effects of many situational, individual, occupational and national differences in this behavior. The many indirect effects through intrinsic and obligation motives for tipping of Big Five traits on tipping likelihood and tip size in this study are consistent with this theory. The current study particularly strengthens existing evidence for intrinsic tipping motives by demonstrating that two traits conceptually and

empirically related to this motive but not explicitly mentioning tipping (i.e.,

Agreeableness and Openness) predict tipping behavior.

Lynn (2015a) also theorized that the effects of tipping motives are moderated by

descriptive and injunctive tipping norms. His original ideas about this have evolved as

new evidence has become available (see Lynn 2015, 2018) culminating in his most recent

theorizing that altruistic, reciprocity and duty motives for tipping should all have stronger

effects when tipping is common and customary (see Lynn and Brewster, 2020). The

current findings that intrinsic and obligation motives for tipping have reliably more

positive effects on the likelihood of tipping frequently tipped occupations than on the

likelihood of tipping rarely tipped occupations conceptually replicate previous empirical

support for this theory. The current findings that Conscientiousness and Openness also

have reliably more positive effects on the likelihood of tipping frequently tipped

occupations than on the likelihood of tipping rarely tipped occupations provides even

stronger support for this theory, because these traits are conceptually and empirically

related to intrinsic tipping motives but do not explicitly mention tipping, so their

relationships with tipping likelihood are harder to attribute to consistency pressures or

demand artifacts.

Although they support the idea that the Big Five traits affect tipping through their

enhancement of intrinsic and obligation motives for tipping, the current study also found

direct effects of personality on tipping that were unmediated by explicit, self-reported

tipping motives. These direct relationships - of Agreeableness and Neuroticism with less

frequent sub-normative restaurant tipping, and of Conscientiousness and Introversion

with more frequent normative restaurant tipping - suggest that more automatic and less-

conscious process may underlie at least some personality effects on tipping. In particular, these direct personality effects on tipping could be mediated by implicit tipping attitudes, motives and/or habits. No published research has examined such automatic and unconscious processes on tipping, so this is a neglected and wide-open area of inquiry for future tipping research.

Practical Implications

The results of this study also have practical implications for hospitality managers and for scholars studying tipping motives. While the managerial implications are largely negative (about what not to do), the methodological implications are more positive (about what to do). These implications are detailed below.

Implications for the prediction of customer tipping. As mentioned previously, many service workers try to predict their customers' tipping propensities and to allocate their service efforts accordingly in an attempt to manage their tip incomes (Barkan and Israeli, 2004; Lynn, 2017). Hostesses, supervisors and others who pair customers to particular service workers may also want to predict how much a customer will tip in an effort to allocate tip earning opportunities equitably across workers. The results of this study suggest that these workers and supervisors should focus more on assessing the customers' agreeableness and openness than on assessing their extraversion, neuroticism or conscientiousness, because the former traits were stronger predictors of tip size and tipping likelihood respectively. However, doing that would ignore a bigger lesson of the findings.

The biggest practical takeaway from the current findings is that the tipper's apparent personality should not be used to assess his or her tipping propensities, because

the effects of any one personality trait alone accounted for less than four percent of the variance in reported hypothetical tipping in this study. Even the combined predictive power of the Big Five traits and other biographic and demographic traits accounted for only 10 percent of the variance in tip sizes for waitresses. In real world service contexts, where situational influences on tipping are likely to be more vivid and powerful, the effects of personality and other individual differences are likely to be even weaker. Furthermore, the weak effects observed in this study involved reliable and well validated measures of the Big Five personality traits. Less reliable and valid estimates of customers' personalities based on brief observations of their dress and behavior would undoubtedly prove to be even weaker predictors of their tipping. Thus, even though the tippers' personality does contain some information about his or her tipping propensities, the amount of such information is too low to benefit from using personality to predict tipping behavior.

Implications for the validity and use of self-reported tipping motives. The positive relationships of Agreeableness and Conscientiousness with intrinsic motives for tipping, of Introversion and Neuroticism with obligation motives for tipping, and of Openness with intrinsic, extrinsic and obligation motives for tipping all provide needed empirical support for the validity of the self-reported tipping motives. Previous research had found that these or very similar motives were related to tipping likelihood and tip size in predictable ways (Lynn, 2009, 2015b, 2018), but the fact that both the motive statements and the outcome variables in those studies were self-reported and explicitly referred to tipping means that many of the observed relationships could be due to consistency pressures or other demand artifacts. That those tipping motive statements are logically

related to well-validated personality measures containing no mention of tipping is harder to attribute to these potential biases. Thus, the current findings indirectly support the validity of previous research using these and related measures of tipping motivation as well as their continued use in future research.

   Implications for the study of individual differences in tipping motives. The fact that statements about altruism and reciprocity motives for tipping loaded on a common factor, while statements about future-service and esteem-seeking motives loaded together on another factor and statements about a duty or obligation to tip loaded on a third factor, suggests that tipping motives might be more efficiently and informatively grouped into three rather than more categories when studying individual differences in these motives. Extracting five or more factors as Lynn (2015b, 2018; Lynn and Brewster, 2020) has done creates correlated motivation-traits whose shared variance (though potentially meaningful) is partialed-out in regression models that include all the motives. This may decrease the reliability and consistency of findings about the traits' relationships with other variables. More fine-grained differentiation of tipping motives may be justified when studying within-person motivational states, but the current findings suggest that only the three categories of intrinsic, extrinsic, and duty motives for tipping may be more efficient when studying tipping motives as individual differences traits.

Conclusion

   Analyses of online survey data revealed numerous direct and indirect (through tipping motives) Big Five personality trait effects on tipping attitudes and behavior. However, the sizes of personality effects on tipping in this study were small and are likely to be even smaller in real world contexts where situational drivers of tipping are

more salient and vivid and where the assessment of customers' personalities is less

reliable and valid, so there is little to be gained from servers or managers using

customer's personalities to predict their tipping behavior. Indeed, even adding all the

standard demographic information about customers to their personality information left

90 percent of variance in tip size unaccounted for in this study, so customer profiling of

any kind is unlikely to be helpful in increasing tips. Instead, servers should embrace the

uncertainty about how much a particular customer will tip and use it to view the customer

as a potentially great tipper to whom they want to give their best service efforts.

References

Alessandra, T. (1992). *Non-manipulative selling*. New York: Simon and Schuster.

Allen, T. A., and DeYoung, C. G. (2016). "Personality neuroscience and the five factor model," in *Oxford Handbook of the Five Factor Model*, ed. T. A. Widiger (New York, NY: Oxford University Press).

American Psychological Association (2020). https://www.apa.org/topics/personality/, accessed 6/25/20.

Back, M. D., & Nestler, S. (2016). *Accuracy of judging personality.* In J. A. Hall, M. S. Mast, & T. V. West (Eds.), *The social psychology of perceiving others accurately* (p. 98–124). Cambridge University Press.

Barkan, R., & Israeli, A. (2004). Testing servers' roles as experts and managers of tipping behaviour. *The Service Industries Journal*, *24*(6), 91-108.

Becker, C., Bradley, G. T., & Zantow, K. (2012). The underlying dimensions of tipping behavior: An exploration, confirmation, and predictive model. *International Journal of Hospitality Management*, *31*(1), 247-256.

Brown, S. and Taylor, K. (2014) Household Finances and the 'Big Five' Personality Traits. Journal of Economic Psychology, 45. pp. 197-212. ISSN 0167-4870

Chandar, B., Gneezy, U., List, J. A., & Muir, I. (2019). *The Drivers of Social Preferences: Evidence from a Nationwide Tipping Field Experiment* (No. w26380). National Bureau of Economic Research.

Cho, S. B. (2014). Factors Affecting Restaurant Consumers' Tipping Behavior. *Journal of the Korean Society for Quality Management*, *42*(1), 15-32.

Credé, M., Harms, P., Niehorster, S., & Gaye-Valentine, A. (2012). An evaluation of the consequences of using short measures of the Big Five personality traits. *Journal of personality and social psychology*, *102*(4), 874.

DeYoung, C. G. (2014). Openness/Intellect: A dimension of personality reflecting cognitive exploration. In M. L. Cooper and R. J. Larsen (Eds.), APA handbook of personality and social psychology: Personality processes and individual differences (Vol 4, pp. 369–399). Washington, DC: American Psychological Association.

Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The mini-IPIP scales: tiny-yet-effective measures of the Big Five factors of personality. *Psychological assessment*, *18*(2), 192.

Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). The big five personality traits in the political arena. *Annual Review of Political Science*, *14*, 265-287.

Hayes, A.F. (2018). *Mediation, moderation and conditional process analysis: A regression-based approach*. 2nd Ed. New York: Guilford Press.

Jackson, J. J., Wood, D., Bogg, T., Walton, K. E., Harms, P. D., & Roberts, B. W. (2010). What do conscientious people do? Development and validation of the Behavioral Indicators of Conscientiousness (BIC). *Journal of Research in Personality*, *44*(4), 501-511.

John, O.P., Donahue, E.M. & Kentle, R.L. (1991). *The Big Five Inventory – Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big

    five trait taxonomy. *Handbook of personality: Theory and research*, *3*(2), 114-

    158.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement,

    and theoretical perspectives. *Handbook of personality: Theory and*

    research, *2*(1999), 102-138.

Langston, C. A., & Sykes, W. E. (1997). Beliefs and the Big Five: Cognitive bases of

    broad individual differences in personality. *Journal of Research in*

    Personality, *31*(2), 141-165.

Lynn, M. (2008). Personality effects on tipping attitudes, self-reported behaviors and

    customs: A multi-level inquiry. *Personality and Individual Differences, 44*, 989-

    999.

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. (2016). Why are we more likely to tip some service occupations than others?

    Theory, evidence, and implications. *Journal of Economic Psychology*, *54*, 134-

    150.

Lynn, M. (2017). Should US restaurants abandon tipping? A review of the issues and
    evidence. *Psychosociological issues in human resource management*, *5*(1), 120-
    159.

Lynn, M. (2018). How motivations for tipping vary with occupational differences in
    descriptive tipping norms. *Journal of behavioral and experimental economics*, *77*,
    1-10.

Lynn, M., & Brewster, Z. W. (2020). The Tipping Behavior and Motives of US Travelers
    Abroad: Affected by Host Nations' Tipping Norms?. *Journal of Travel
    Research*, *59*(6), 993-1007.

Lynn, M., Jabbour, P. & Kim, W.G. (2012). Who uses tips as a reward for service and
    when? An examination of potential moderators of the service-tipping relationship.
    Journal of Economic Psychology, 33, 90-103.

Lynn, M., & Lynn, A. (2004). National values and tipping customs: A replication and
    extension. *Journal of Hospitality & Tourism Research*, *28*(3), 356-364.

Malouff, J. M., Thorsteinsson, E. B., Schutte, N. S., Bhullar, N., & Rooke, S. E. (2010).
    The five-factor model of personality and relationship satisfaction of intimate
    partners: A meta-analysis. *Journal of Research in Personality*, *44*(1), 124-127.

Metler, R. (2017). How to sell to different personality types. www.salesforcesearch.com.
    Accessed 7/11/20.

Roberts, B. W., Lejuez, C., Krueger, R. F., Richards, J. M., & Hill, P. L. (2014). What is
    conscientiousness and how can it be assessed? *Developmental psychology*, *50*(5),
    1315.

Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation analysis
    in social psychology: Current practices and new recommendations. *Social and
    Personality Psychology Compass*, *5*(6), 359-371.

Shah, J., & Higgins, E. T. (1997). Expectancy× value effects: Regulatory focus as
    determinant of magnitude and direction. *Journal of personality and social
    psychology*, *73*(3), 447.

Shiner, R. L. (2018). Negative Emotionality and Neuroticism from Childhood through
    Adulthood. *Handbook of Personality Development*, 137.

Smillie, L. D. (2013). Extraversion and reward processing. *Current Directions in
    Psychological Science*, *22*(3), 167-172.

Tackett, J. L., Hernández, M. M., & Eisenberg, N. (2019). Agreeableness. In D. P.
    McAdams, R. L. Shiner, & J. L. Tackett (Eds.), Handbook of Personality
    Development (pp. 171–184). The Guilford Press.

Vedel, A. (2014). The Big Five and tertiary academic performance: A systematic review
    and meta-analysis. *Personality and Individual Differences*, *71*, 66-76.

Table 1. Summary of existing tests of the big five's relationships with tipping attitude, motives and behavior.

	Cho (2014)	Lynn, Jabbour & Kim (2012)	Lynn (2008)				
	Restaurant Tip Size	Restaurant Tip Size	Restaurant Tip Size	Like Tipping	Social-Esteem Motives	Altruistic Motives	Future-Service Motives
Agreeableness	n.s.	n.s.					
Conscientiousness	-	n.s.					
Extraversion	n.s.		+	+	+	+	+
Neuroticism	-		n.s.	n.s.	n.s.	n.s.	n.s.
Openness	n.s.						

Table 2. Descriptive statistics for the variables in this study.

	N	Minimum	Maximum	Mean	Std. Deviation
Likelihood of Tipping Rarely Tipped Occupations	393	1.00	5.84	2.47	1.01
Likelihood of Tipping Often Tipped Occupations	393	1.00	6.00	4.72	.94
Barista Tip Size($)	390	.00	5.00	1.16	.90
Waitress Tip Size ($)	390	.00	7.27	3.22	1.02
Normative Tip (15% to 20%; y = 1, n = 0)	390	.00	1.00	.41	.49
Sub-normative Tip (< 15%; y = 1, n = 0)	390	.00	1.00	.20	.40
Super-normative Tip (> 20%; y = 1, n = 0)	390	.00	1.00	.39	.49
Extrinsic Tipping Motivation	393	1.00	6.21	3.08	1.23
Intrinsic Tipping Motivation	393	1.00	7.00	5.68	1.12
Obligation Tipping Motivation	393	1.00	7.00	5.05	1.34
Attitude toward Tipping	393	1.00	7.00	4.35	1.78
Agreeableness	393	1.56	5.00	3.74	.66
Conscientiousness	393	1.11	5.00	3.82	.73
Extraversion	393	1.00	5.00	2.91	.95
Neuroticism	393	1.00	5.00	2.76	.95
Openness	393	1.44	5.00	3.66	.74
Worked for Tips (y =1, n =0)	389	.00	1.00	.39	.49
Age	386	18.00	71.00	36.31	11.81
Sex (M = 1, F = 2)	390	1	2	1.52	.50
Education	392	1	5	3.47	.92
Income	393	1	10	3.51	2.63
White (y = 1, n = 0)	389	.00	1.00	.82	.39
Christian (y = 1, n = 0)	392	.00	1.00	.45	.50
Conservative	392	1.00	5.00	2.55	1.12

Table 3. Correlations of the various tipping attitude, motivations and behaviors with tippers' personality, biographic and demographic characteristics.

	Likelihood of Tipping Often Tipped Occupations	Likelihood of Tipping Rarely Tipped Occupations	Barista Tip Size($)	Waitress Tip Size ($)	Normative Tip (15% to 20%)	Sub-normative Tip (< 15%)	Super-normative Tip (> 20%)	Extrinsic Tipping Motivation	Intrinsic Tipping Motivation	Obligation Tipping Motivation	Attitude toward Tipping
Agreeableness	.139**	.015	.087	.118*	.006	-.093	.070	-.144**	.312**	.021	.357**
Conscientiousness	.141**	-.071	.005	.023	.057	-.059	-.009	-.176**	.250**	.008	.193**
Extraversion	-.007	-.007	.098	.147**	-.177**	.019	.162**	-.015	.072	-.160**	.175**
Neuroticism	-.041	.007	-.085	-.061	.102*	-.052	-.061	.120*	-.124*	.132**	-.235**
Openness	.197**	-.003	-.049	.024	-.048	-.010	.057	.123*	.182**	.111*	.073
Attitude toward Tipping	.187**	.072	.268**	.151**	-.079	-.055	.124*	-.054	.541**	-.196**	1
Extrinsic Tipping Motivation	.073	.177**	.038	.070	-.102*	.017	.088	1	.029	.309**	-.054
Intrinsic Tipping Motivation	.471**	.164**	.146**	.164**	-.045	-.113*	.137**	.029	1	.083	.541**
Obligation Tipping Motivation	.139**	-.119*	-.179**	-.084	.134**	-.047	-.096	.309**	.083	1	-.196**
Worked for Tips	.118*	-.040	-.029	.138**	-.022	-.119*	.119*	-.132**	.049	-.086	.072
Age	.187**	-.079	-.042	-.058	.067	-.022	-.049	-.177**	.186**	.007	.121*
Female	.067	-.010	-.041	-.114*	.073	.033	-.100*	-.192**	.122*	.107*	-.010
Education	.054	-.091	-.238**	-.180**	.099	.050	-.140**	.029	-.028	.281**	-.236**
Income	.019	-.176**	-.041	.017	.012	.003	-.014	-.033	-.011	.061	-.049
White	-.037	-.121*	-.091	.020	.023	-.077	.040	-.026	-.030	-.009	-.026
Christian	.019	-.074	-.008	.021	-.026	.048	-.013	-.015	.071	.082	.086
Conservative	-.171**	-.117*	-.015	-.071	-.024	.124*	-.078	-.091	-.065	-.096	.061

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

Table 4. Coefficients (and standard errors) from regressions of tipping attitude, motivations and behavior on personality, biographic and demographic characteristics.

	Attitude toward Tipping	Extrinsic Tipping Motivation[x]	Intrinsic Tipping Motivation[x]	Obligation Tipping Motivation[x]	Likelihood of Tipping Rarely Tipped Occupations[y]	Likelihood of Tipping Often Tipped Occupations[y]	Barista Tip Size($)[z]	Waitress Tip Size ($)[z]	Normative Tip (15% to 20%)	Sub-normative Tip (<15%)	Super-normative Tip (> 20%)
Agreeableness	.83*** (.16)	-.11[a] (.12)	.42***[b] (.11)	.16[ab] (.13)	.04 (.10)	.12 (.09)	.08 (.09)	.21* (.10)	.28 (.21)	-.70** (.26)	.23 (.22)
Conscientiousness	.12 (.15)	-.18[a] (.10)	.23*[b] (.09)	.07[b] (.11)	-.09a (.09)	.09b (.08)	-.02 (.08)	-.04 (.09)	.44* (.19)	-.32 (.23)	-.23 (.19)
Extraversion	.05 (.11)	.07[a] (.08)	-.05[a] (.07)	-.19*[b] (.08)	.03 (.06)	-.08 (.06)	.08 (.06)	.10 (.06)	-.40** (.14)	.16 (.17)	.31 (.14)
Neuroticism	.02 (.13)	.14 (.09)	.11 (.08)	.20* (.10)	-.04 (.08)	.05 (.07)	-.03 (.07)	.05 (.08)	.33 (.17)	-.49* (.21)	.01 (.17)
Openness	-.00 (.13)	.28** (.09)	.17* (.08)	.21* (.10)	-.07[a] (.08)	.19**[b] (.07)	-.10 (.07)	-.04 (.08)	-.16 (.17)	.19 (.21)	.00 (.17)
Worked for Tips	.18 (.18)	-.32* (.13)	.01 (.12)	-.29 (.14)	-.06[a] (.11)	.20*[b] (.10)	-.06[a] (.10)	.23*[b] (.11)	-.18 (.24)	-.40 (.31)	.43 (.24)
Age	.02* (.01)	-.01*[a] (.01)	.01**[b] (.005)	-.00[a] (.01)	-.00[a] (.01)	.01**[b] (.004)	-.00 (.00)	-.00 (.01)	.01 (.01)	-.01 (.01)	-.00 (.01)
Female	-.15 (.19)	-.47***[a] (.13)	.10[b] (.12)	.14[b] (.14)	-.02 (.12)	-.03 (.10)	-.05 (.10)	-.26* (.11)	.09 (.24)	.42 (.30)	-.41 (.25)
Education	-.48*** (.10)	.05[a] (.07)	-.09[a] (.07)	.37***[b] (.08)	-.01 (.06)	.01 (.06)	-.22*** (.06)	-.21** (.06)	.18 (.13)	.18 (.17)	-.30* (.13)
Income	-.01 (.04)	.01 (.03)	-.00 (.02)	.01 (.03)	-.07**[a] (.02)	.01[b] (.02)	.01 (.02)	.04 (.02)	-.02 (.05)	-.02 (.06)	.04 (.05)
White	-.27 (.23)	-.02 (.16)	-.19 (.15)	.08 (.17)	-.25 (.14)	-.18 (.13)	-.21 (.12)	-.02 (.14)	.31 (.30)	-.50 (.34)	.04 (.30)
Christian	-.09 (.20)	.25 (.14)	.03 (13)	.40** (.15)	.01 (.12)	.13 (.11)	-.03 (.11)	.08 (.12)	-.21 (.26)	.15 (.32)	.10 (.26)
Conservative	.07 (.09)	-.08 (.06)	-.04 (.06)	-.12 (.07)	-.10 (.06)	-.14** (.05)	-.05 (.05)	-.11* (.05)	.01 (.12)	.32* (.14)	-.23 (.12)
Constant	1.94 (1.13)	3.75*** (.81)	2.39** (.73)	2.24* (.87)	3.79 (.69)	3.19*** (.62)	2.32*** (.62)	3.52*** (.69)	-3.27* (1.48)	1.24 (1.80)	.52* (1.49)
R^2	.20***	.14***	.15***	.16***	.07*	.13***	.08**	.10***	NA	NA	NA

* $p < .05$, ** $p < .01$, *** $p < .001$

[x,y,z] The coefficients for these sets of outcome measures were compared using within-subjects, repeated-measures analyses. Those coefficients with different alphabetic superscripts significantly differ from one another at the .05 level.

Table 5. Coefficients (and standard errors) from 14 models regressing tipping behavior on tipping motivations, personality, biographic and demographic characteristics.[z]

	Likelihood of Tipping Rarely Tipped Occupations[x]	Likelihood of Tipping Often Tipped Occupations[x]	Barista Tip Size($)[y]	Waitress Tip Size ($)[y]	Normative Tip (15% to 20%)	Sub-normative Tip (< 15%)	Super-normative Tip (> 20%)
Extrinsic Tipping Motivation	.19***[a] (.04)	.05[b] (.04)	.06 (.04)	.07 (.05)	-.23* (.10)	.07 (.12)	.22* (.10)
Intrinsic Tipping Motivation	.15**[a] (.05)	.36***[b] (.04)	.13** (.04)	.16** (.05)	-.10 (.10)	-.25* (.11)	.32** (.11)
Obligation Tipping Motivation	-.15***[a] (.04)	.06[b] (.04)	-.11** (.04)	-.06 (.04)	.29** (.09)	-.16 (.11)	-.21* (.10)
R^2	.15***	.29***	.11***	.12***	NA	NA	NA
Extrinsic Tipping Motivation	.19***[a] (.05)	.04[b] (.04)	.07 (.04)	.07 (.05)	-.19 (.10)	.03 (.13)	.21 (.11)
Intrinsic Tipping Motivation	.17**[a] (.05)	.35***[b] (.04)	.12** (.04)	.15** (.05)	-.15 (.11)	-.20 (.12)	.33** (.12)
Obligation Tipping Motivation	-.14**[a] (.04)	.05[b] (.04)	-.10** (.04)	-.05 (.04)	.23* (.10)	-.13 (.12)	-.18 (.10)
Agreeableness	.01 (.10)	-.03 (.08)	.05 (.09)	.17 (.10)	.29 (.22)	-.59* (.27)	.15 (.23)
Conscientiousness	-.08 (.09)	.02 (.07)	-.03 (.07)	-.06 (.09)	.43* (.20)	-.26 (.24)	-.26 (.20)
Extraversion	-.00 (.06)	-.06 (.05)	.06 (.06)	.10 (.06)	-.36* (.14)	.12 (.17)	.30* (.14)
Neuroticism	-.06 (.08)	-.01 (.06)	-.04 (.07)	.04 (.08)	.32 (.17)	-.46* (.22)	-.01 (.18)
Openness	-.12[a] (.08)	.11[b] (.07)	-.12 (.07)	-.07 (.08)	-.13 (.17)	.27 (.22)	-.07 (.18)
R^2	.16***	.30***	.12***	.14***	NA	NA	NA

* $p < .05$, ** $p < .01$. *** $p < .001$

[x,y] The coefficients for these pairs of behaviors were statistically compared in within-subjects, repeated-measures analyses. Those coefficients with different alphabetic superscripts significantly differ from one another at the .05 level.

[z] All models include the following unreported terms: Constant, Worked for Tips, Age, Female, Education, Income, White, Christian, and Conservative.