Tipping; A Reward for Quality of Service?
An Internal Review

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in Economics

By
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December, 2014
THE GRADUATE SCHOOL

We recommend that the thesis prepared under our supervision by

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Entitled

Tipping: A Reward For Quality Of Service?

be accepted in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

Dr. Mark Pingle, Advisor

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December, 2014
ABSTRACT

Tips or gratuities in the service industry are often viewed as a mechanism by which a guest exchanges a voluntary sum of money for quality of service. If this assumption is valid, consumers should leave larger tips to elicit better service and provide smaller tips to show dissatisfaction when worse service is provided. There are several published studies that focus on the correlation between the level of service and the tip size. The majority of these studies use the professed opinion of the consumer regarding the preferred tip size as it relates to level of service, friendliness of server, total expense of final bill, etc. This paper, in contrast, reports the results of a field study of the observed behavior of (N=152) valet patrons at a 3.5 star rated casino hotel located in Northern Nevada. The valet service is free, but tips are allowed. Data was collected on patrons with varying characteristics, across multiple time frames and multiple valet servers, allowing us to investigate which of the varying factors, if anything, influences a large or small tip. Our primary finding is that, on average, the typical service enhancement may not affect the actual tip provided, and the contributing variables to an increased tip are not what one would expect.
Introduction

Consumers in the United States have largely become accustomed to providing “tips” for service providers in several aspects of their everyday lives. These tip decisions occur when the consumer feels as though it is necessary to provide a supplement greater than the cost of the service. In particular, quality of service provided is generally assumed to influence the amount tipped.

This paper considers the contributing factors to the tipping behavior presented in the valet parking sector. It establishes that tipping behavior in the United States has a long and robust history in which several industries have engaged over time. It examines tipping behavior and the influences that motivate individuals to provide larger or smaller sums. Importantly, there are distinctive differences within industries towards the total tip provided which vary and may rely on diverse factors such as quality of service, socio economic status, or amount of bill. Assuming this to be consistent we will investigate the motivating factors that drive consumers to utilize and reward valet attendants for their services. Lastly, we will show that within the valet industry certain attributes may supersede levels of service as the primary motivator when consumers determine the tip size.

Literature Review

Economists have long been interested in tipping and the behaviors that surround it. It has been theorized that tipping is the most efficient way to provide service workers with incentives for better performance. The primary focus of examining tipping behavior has been empirical and has been focused on the restaurant industry. In order to understand the custom we must develop a basis of how this became a societal norm and the overall effects it has had on our economy.
A Brief Historical reference

The act of tipping in the United States which we are accustomed to, happens to have been borne sometime during the 16th century in England. When entering a local pub it was commonplace to find a brass urn with the inscription “to insure promptitude” (Margalioth 2013). Another form of tipping was also found in private homes in Tudor England where servants were paid extra for their work in accommodating visitors (Segrave 1998). A level of uncertainty accompanied the act of tipping and it was perceived as a nuisance to some and received by others.

In due course, these practices made their way to the United States and were discarded as the practice was viewed as aristocratic and that the act supported class separation. Equality rights were the motive for organization as the free world formed, and some US citizens felt the act of tipping did not belong in an emerging democratic society.

Tipping was such a social issue that several states had passed anti-tipping laws from 1909 to 1918 and as William R Scott points out “If a "gentleman" would not accept a tip, is it gentlemanly to give a tip? If a "gentleman's" self-respect would rebel at the idea of accepting a gratuity, why should not a waiter's self-respect rebel at the idea?” (Scott, 1916). The ideas and concepts regarding tipping practices were varied as some were viewed that if an individual was familiar with the tipping practice it was assumed that they had been abroad and hence were more sophisticated than those who did not understand the practice (Azar 2004).

Ultimately anti-tipping laws were repealed in 1926 and the practice began to gain traction as a way for low wage earners to increase their income. As business owners became aware of the benefit of tipping practices they responded by lowering wages for the types of positions that would benefit from the practice (Crespi 1947). The basic assumptions of a market equilibrium are
shown by the practice of tipping and it is evident that the emerging service industry would begin attracting new types of employees, which were incentivized by the additional income.

Interestingly, as the United States shifted to accept the practice, European business owners began to impose service fees opposed to promoting tips. This action aims to benefit the business and raise the hourly wages, essentially removing the tipping practice.

**Tipping in the United States Today**

The basic theories of a consumer's willingness to substitute goods for services seem to allude the tipping behavior altogether. Are we to believe that consumers are maximizing their utility by leaving a tip for a service provider and this sum of money replaces the needs for purchasing other services or goods? The first theorem of Welfare Economics states that any competitive equilibrium is Pareto efficient. Therefore we must assume that the value of the tip holds true to both the service provider and the guest or consumer.

The ideology behind this voluntary behavior has had a tremendous influence on certain service industries in the US and is thought to “efficiently allocate workers into and away from the service industry in a self-selecting manner and, in addition allows customers to maximize their utility” (Schotter 1979). Interactions by both parties have sparked several interesting concepts of social norms that are intriguing in the field of economics. In 2011, the United States service industry was estimated to have received over $40 billion dollars in gratuities (Azar, 2011). How do we begin to understand the purpose, motivation, execution, and outcome of these behaviors is relevant for both employers whom wish to increase the volume and levels of guests served, while retaining motivated employees who want to maximize their gratuity received.

Social norms play a crucial role within professed and observed tipping behaviors and societal pressures are an intriguing factor worth mention. Tipping behavior may reach past the
appeal for social acceptance and conformity. For instance, individuals may tip based on the experience of working in a similar industry. Tips may reflect a knowledge of the provider being observed by others. There could also be a difference between political views as conservatives tend to value equity (vs equality) based distributions of more resources than do liberals (Farwell et al, 2000). The impacts of social norms may span countless attributes. Efforts have been made to derive a general consensus on the societal pressures to provide tips, but the fact remains that tips are an individual behavior and may rely mostly on personality.

Along the lines of social norms, racial discrimination has a long history within our society. In particular studies have shown distinct differences within the service industry and the tipping behaviors of white and black patrons. One study found that on average a black taxi-cab driver will receive approximately one-third less in tips than a white taxi-cab driver and that black passengers are 3.7 times more likely to leave no tip at all (Ayres et al 2005). The valet industry is no exception to these differences. When interviewed the majority of valet attendants provided information that contributes to negative stereotypes in tipping behaviors from non-white guests. One valet in particular mentioned his dislike of gypsies. This was an interesting racial category which is worth future examination.

Psychological motivations are particularly worth mention. Evidence suggests that such motivations as the desire to reward good service, help servers, and gain social approval or status (Lynn, 2006; Saunders and Lynn 2010) heavily influence the tipping behavior. Studies have found that prevalence of tipping increased with the average level of extraversion from the individual level (Lynn, 2000). These findings are consistent with the attention and interaction between guests whom enjoy the act of gift giving and conversation with others. In the case of introversion it was found that the tipping behavior was based on conformity and the ability to avoid a negative comparison on an individual level, due to these personality types being
specifically sensitive to scrutiny from others (Christensen, Danko & Johnson, 1993). While examining personality differences is important, further research is encouraged within this category. Using professed tipping data it seems as though an equilibrium may be established, however these analysis allow for an inquiry into observed behaviors.

To better understand the interactions between guest and employee we must examine certain attributes of the types of industry in which these practices are common. The US has largely become a service society and in 2013 79.4% of employment was based within the service sector (CIA, 2013). Pre-normative tipping behavior has been established within services provided by: waiters, waitresses, bartenders, concierges, delivery drivers, doormen, exotic dancers, golf caddies, maids, parking valets, and taxicab drivers. While this list is not exclusive to all service positions that may receive tips, it represents very commonly known tipping industries.

Within each segment of employment there are certain anomalies that only the service providers are familiar with. According to a study on female attractiveness and tipping behavior “waitresses in their 30’s and those with large breasts, blond hair, and/or slender bodies received larger average tips than their counterparts without these characteristics” (Lynn, 2009). This concept remains true for the valet service industry. If a guest arrives driving a nice brand new car does this affect the amount of tip received by the valet? What if the guest just hit a jackpot in the casino, does this mean good news for the valet? If Brad Pitt becomes your co-worker will this increase the amount of tips he receives?

Methodology

To examine tipping behavior within the valet parking industry, I assumed the role of observer, examining the transactions between guests and valet attendants. As an insider in the industry with 12 years’ experience, I was able to earn the trust of the valet attendants. This allowed me to collect data on the transactions between the valets and the guests behind the
scenes. My experience also provided me with insights into the transactions I observed that might not be obtainable by an inexperienced individual performing the same analysis.

In order to derive a base assumption of salary earned by Nevada valet attendants I conducted a brief survey of 20 employees from 5 different local casinos. Importantly, valet attendants who work in Nevada casinos generally have a Gaming Tip Compliance Agreement which establishes set tip rates with the Internal Revenue Service (IRS) (American Gaming Association 2012). This compliance states that they are tipped at an average rate depending on casino, job, work shift, and outlet worked for all gaming employees. Using this data we estimate the average Northern Nevada valet attendant works 32.5 hours a week, earns on average $7 an hour, and registers a tip compliance with the IRS of $3.25 an hour. Assuming the valet works 50 weeks per year, this constitutes an estimated $11,375 in hourly wages, and reports tip income of $5274 annually.

The gathered information shows that on average Full Time Equivalent (FTE) valets professed approximately $41,750 in gross annual income, working on average 38.67 hours weekly, and Part Time Equivalent (PTE) valets professed approximately $22,125 in gross annual income working on average 26.25 hours weekly. Comparing these estimates with the mean annual income for waiters and waitresses of $20,880 we see similarities within the average income between the two industries (Bureau of Labor Statistics 2013). However, a waiter or waitress must provide service in a much different environment then a valet attendant and the tip is dependent on several factors that may not be applied to the valet industry. Some brief examples would be time spent with the customer, repeated interactions, percentage of bill, etc. Given these assumptions, it is worthwhile to further examine the tipping behaviors that are present within the valet industry in Northern Nevada, where these services are provided free of charge to guests at casinos.
Sample

Experimenting with tipping behaviors in a real world environment allows for an actual quantification of these behaviors. For this study I spent approximately 60 hours observing valet interactions, over the span of 3 months, and obtained 152 fully completed surveys. The location of the surveys must remain anonymous as the hotel and casino industry in Nevada has strict policies that do not allow any type of survey to be completed on property.

Method

Information was recorded on three levels. The first level was to derive information on the guest or consumer. In this instance the opinions of the combined staff at time of service was taken into context. Given there may be certain discrepancies regarding actual age, race, etc. combining the analytical skills of the valet attendants provides insight for the purpose of this study. The second level was information on the valet parking attendant, which have been identified in previous studies and papers on tipping as relevant. This information specifies the value of these factors within this study. The third level, was to take actual observations regarding the exchange in an attempt to derive any exclusive behaviors within good and bad tippers.

Description of variables

Gender: The person providing the ticket or claim voucher is generally assumed to be the individual whom is responsible for the actual tip. In some instances this would not be the case however they are extremely rare and only occurred 3 times during this study. Guests were coded as either male or female.

Region: An inference on the guests residence was made based on the following assumptions; identification of rental car or not based on keys, use of license plate state, and
knowledge of local guests that frequent the establishment by valet workers. Guests were coded as either local or tourist.

*Time of Day:* A record of time of day the exchange occurred was kept in order to distinguish any variance within the tip amounts and time of day. As with most industries the level and volume of guests at any particular time may vary significantly. In order to maximize my time efficiently I scheduled observations at times that had high volume. Time was coded in military time.

*Race:* An inference on race was made as a united agreement among all workers at time of exchange. Given that the majority of the time, there were 2-6 other employees present and the collective amount of experience of the valet workers exceeded 10 years, this is assumed to be the best possible outcome without using actual guest surveyed data. Guests were categorized as white/Caucasian, Hispanic/Latino, Middle Eastern, Asian/pacific islander, or African American.

*Age Group:* An inference on age was made as a united agreement among all workers at time of exchange. This also holds true to the previous comment.

*Vehicle Age:* An inference on vehicle age was made as a united agreement among all workers at time of exchange. There are certain attributes to various car makers model age of a vehicle. The most important factor is the keys used. For example, a 2006 BMW uses a different type of key then a 2007, and the 2012 has yet another type of key. Also, the age of a vehicle may be known as to the interior door handles or power window switches. GM used a poor design for their interior door handles from the early nineties until mid-two thousand. The reason this is of special notation is that as a valet parker these door handles were often broken or did not work properly so the valet would have to climb over the passenger seat in order to exit the vehicle. This leaves an impression on seasoned valets. The vehicle age was estimated within a 5 year window.
and only 3 categories were derived; 2013-2008, 2007-2002, and 2001 or older, this is reflected within the data set

*Vehicle Type:* The actual vehicle maker was taken down for each individual exchange. There was no distinction between SUV, passenger car, or truck taken in an attempt to define a foreign or domestic preference among consumers. Vehicles were coded domestic or import.

*Wait Time:* This variable was observed when the key person or dispatch that resides within the booth to greet and serve the guests would take the actual ticket from the guest. An important distinction is that the general wait time at this particular valet tends to average under 3 minutes. If there were an extremely large volume of vehicles leaving at the same time data was unable to be retrieved, as the valet workers would need to focus on being as fast as possible with no time for filling out the surveys. Time was coded as 1=1-3 minute wait, 2=3-5 minute wait, and 3= >5 minutes.

Each contributor to the study was interviewed upon agreement to participate in the survey. This allowed for rapid distinction between valet attendants and the data was coded with a particular number and entered in to the data set accordingly. The following describes the information observed and recorded on valet attendants;

*Length of Time employed:* information was recorded on the length of time each individual had spent as a valet attendant and rounded to the nearest year. Values ranged from 1= 0-2 years, 2 = 3-4 years, 3 = 5-6 years, 4 = 7-8 years, and 5 = > 8 years.

*Race:* Each individual answered questions regarding their race. Data was compiled using 1=white/Caucasian, 2=Hispanic/Latino, 3=Middle Eastern, 4=Asian/pacific islander, or 5=African American.
Gender: For this study all participants were male and there were no female valet attendants employed at the location of the survey.

Age: Each individual answered a question regarding their age. Data was compiled using the following scale; 1=18-27, 2=28-37, and 3=38 or older.

Level of Service Provided: Service was rated on a 5 point scale with 5 being excellent and 1 being terrible. The exchange was viewed by myself and the valet and an inference was made on the level of service in post interviews. Importantly the level of service was consistently rated between average and excellent. Data was coded as average=1, very good=2, and excellent=3.

Attractiveness: Each participant was asked to rate how attractive they felt they are. Data was coded as 3=average, 4= above average, and 5=Brad Pitt. It is worth mention that all participants rated themselves as average or Brad Pitt with only one participant rating themselves as above average.

Each exchange provided an actual example of observation of certain behaviors known by valet attendants to be present when “stiffs” occur. A stiff is defined by a sum of zero given as an exchange for the service provided. After interviewing the valet attendants I chose six different behaviors to look for during the exchange. The following describes the final observations of the exchange.

Amount of tip actually received by Valet: This number is the exact outcome of the exchange and was coded accordingly.

Eye Contact: This variable was the most consistent among interviews with the valet attendants in situations when they get stiffed. Data was coded as either a no eye contact =0 or eye contact =1.
Verbal Exchange: The valet attendant generally makes an attempt of some kind to initiate some form of verbal communication during the exchange. During this observation any verbal communication outside of the valet thanking the guest is noted as an exchange. Data was coded as either no verbal exchange=0 or verbal exchange=1.

Was Guest in a Hurry: Non-verbal cues tend to explain a lot about an interaction between two parties. It is fairly easy to tell if the guest was in a hurry by the nature in which they provide the ticket to claim their vehicle or the way they swiftly exit the parking area upon completion of the exchange. Data was coded as either guest was not in a hurry=0 or guest appeared to be in a hurry=1.

Was Guest Irritated: since we are conducting this survey at a casino it is highly likely that the guest may have lost some amount of money during their visit and this tends to lead to irritated guests? Upon surveying the valet attendants this was a common complaint that their tips are somewhat dependent on the guests “luck” when gambling inside the casino. It is also worth mention that the valet attendants did not believe, for the majority of the time, that if the guest was particularly “lucky” within the visit that this impacted the amount of their tip significantly. The common opinion was that only the “bad luck” affected their tips in a negative manner. Data was coded as either the guest did not appear irritated=0 or the guest appeared to be irritated=1.

Did Valet Thank the Guest: The valet attendant is required to thank the guest upon departure. The purpose of this variable is to provide a secondary chance for any verbal exchange between the two parties. Since the valet always thanked the guest in every exchange observed this variable was dropped for the data analysis.
Results

Table 1 provides summary statistics for variables consistent with the guest, valet attendant, exchange, and level of service. The mean represents the number of observations identified with the variable. Of the 152 observations 65% were male and 35% were female. Most (65%) of the guests were white, followed by Asian (14%), Hispanic (11%), Black (6%), and Middle Eastern (4%). The highest frequency of guests were aged 49-59 (34%), followed by 38-48 (30%), 27-37 (20%), 60 and older (13%), and 16-26 (3%). Most vehicles (44%) fell within the 5 years or older category followed by 5-10 years (34%), and over 10 years old (22%). Most vehicles were not a luxury brand (84%) followed by luxury brand vehicles (16%). Imported vehicles were slightly higher (53%) than domestic vehicles (47%).

**TABLE 1. Descriptive statistics which are distinctive to the guest.**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VARIABLE</th>
<th>MEAN</th>
<th>STD. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>MALE</td>
<td>0.65</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>FEMALE</td>
<td>0.35</td>
<td>0.48</td>
</tr>
<tr>
<td>RACE</td>
<td>WHITE</td>
<td>0.65</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>HISPANIC</td>
<td>0.11</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td>MIDDLE EASTERN</td>
<td>0.04</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>ASIAN</td>
<td>0.14</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>BLACK</td>
<td>0.06</td>
<td>0.24</td>
</tr>
<tr>
<td>GUEST AGE</td>
<td>16-26</td>
<td>0.03</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>27-37</td>
<td>0.20</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>38-48</td>
<td>0.30</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>49-59</td>
<td>0.34</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>60 AND OVER</td>
<td>0.13</td>
<td>0.34</td>
</tr>
<tr>
<td>VEHICLE AGE</td>
<td>2013-2008</td>
<td>0.44</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>2007-2002</td>
<td>0.34</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>2001 OR OLDER</td>
<td>0.22</td>
<td>0.42</td>
</tr>
<tr>
<td>LUXURY BRAND</td>
<td>LUXURY</td>
<td>0.16</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>NON-LUXURY</td>
<td>0.84</td>
<td>0.37</td>
</tr>
<tr>
<td>IMPORT VEHICLE</td>
<td>IMPORT</td>
<td>0.53</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>NON-IMPORT</td>
<td>0.47</td>
<td>0.50</td>
</tr>
</tbody>
</table>
Table 2 provides summary statistics for variables consistent with the valet attendant. The mean represents the number of observations identified with the variable. Of the 11 surveyed valet attendants (50%) were over 33 followed by (30%) between the ages of 28-32, and (20%) were 18-22. Most (72%) self-rated their attractiveness as average followed by (26%) most attractive and (1%) above average. Expereince levels varied with (67%) of valets having 8 years or more followed by 0-2 years (17%), 3-4 years (9%), 5-6 years (3%), and 7-8 years (1%).

**TABLE 2. Descriptive statistics which are distinctive to the valet attendant.**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VARIABLE</th>
<th>MEAN</th>
<th>STD. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>MALE</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>AGE</td>
<td>18-22</td>
<td>0.20</td>
<td>0.399</td>
</tr>
<tr>
<td></td>
<td>28-32</td>
<td>0.30</td>
<td>0.458</td>
</tr>
<tr>
<td></td>
<td>OVER 33</td>
<td>0.50</td>
<td>0.502</td>
</tr>
<tr>
<td>ATTRACTIVENESS</td>
<td>AVERAGE</td>
<td>0.7237</td>
<td>0.4487</td>
</tr>
<tr>
<td></td>
<td>ABOVE</td>
<td>0.0132</td>
<td>0.1143</td>
</tr>
<tr>
<td></td>
<td>BRAD PITT</td>
<td>0.2632</td>
<td>0.4418</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>0-2 YEARS</td>
<td>0.1776</td>
<td>0.3835</td>
</tr>
<tr>
<td></td>
<td>3-4 YEARS</td>
<td>0.0921</td>
<td>0.2901</td>
</tr>
<tr>
<td></td>
<td>5-6 YEARS</td>
<td>0.0395</td>
<td>0.1954</td>
</tr>
<tr>
<td></td>
<td>7-8 YEARS</td>
<td>0.0132</td>
<td>0.1143</td>
</tr>
<tr>
<td></td>
<td>8+ YEARS</td>
<td>0.6776</td>
<td>0.4689</td>
</tr>
</tbody>
</table>

Table 3 provides summary statistics for variables consistent with the actual exchange. The mean represents the number of observations identified with the variable. Of the 152 observations eye contact was provided (91%) of the time and was avoided (9%) of the time. Guests spoke with the valets upon delivery (90%) of the time and avoided any verbal communication (10%). Guests were observed in a hurry (13%) of the time and were not in a hurry (87%) of the time. Guests appeared irritated (13%) of the time and did not appear irritated (87%) of the time.
TABLE 3. Descriptive statistics which are distinctive to the actual exchange.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VARIABLE</th>
<th>MEAN</th>
<th>STD. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYECONTACT</td>
<td>EYE-CONTACT</td>
<td>0.91</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>NO EYE-CONTACT</td>
<td>0.09</td>
<td>0.29</td>
</tr>
<tr>
<td>VERBAL EXCHANGE</td>
<td>VERBAL</td>
<td>0.90</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>NO VERBAL</td>
<td>0.10</td>
<td>0.29</td>
</tr>
<tr>
<td>HURRY</td>
<td>HURRY</td>
<td>0.13</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>NO HURRY</td>
<td>0.87</td>
<td>0.34</td>
</tr>
<tr>
<td>IRRITATED</td>
<td>IRRITATED</td>
<td>0.13</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>NOT IRRITATED</td>
<td>0.87</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Table 4 provides summary statistics for variables consistent with the service level. The mean represents the number of observations identified with the variable. Of the 152 observations (95%) of guests waited less than 3 minutes and (5%) waited over 3 minutes. Guests were provided the added service of the valet opening all the doors (86%) of the time and were not provided this service (14%) of the time. The service level was excellent (52%) of the time followed by an average service level (26%) of the time, and very good service (22%) of the time.

TABLE 4. Descriptive statistics which are distinctive to the service level.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VARIABLE</th>
<th>MEAN</th>
<th>STD. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAIT</td>
<td>1-3 minutes</td>
<td>0.95</td>
<td>0.2103</td>
</tr>
<tr>
<td></td>
<td>3+ minutes</td>
<td>0.05</td>
<td>0.2103</td>
</tr>
<tr>
<td>OPEN DOOR</td>
<td>Doors held open</td>
<td>0.86</td>
<td>0.3530</td>
</tr>
<tr>
<td></td>
<td>Doors closed</td>
<td>0.14</td>
<td>0.3530</td>
</tr>
<tr>
<td>THANK YOU</td>
<td>Guest was thanked</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SERVICE LEVEL</td>
<td>Average</td>
<td>0.26</td>
<td>0.4418</td>
</tr>
<tr>
<td></td>
<td>Very Good</td>
<td>0.22</td>
<td>0.4136</td>
</tr>
<tr>
<td></td>
<td>Excellent</td>
<td>0.52</td>
<td>0.5013</td>
</tr>
</tbody>
</table>

To examine the effects of an individual factor on the tip level, a simple linear regression can be used. Data were analyzed using statistical means testing and regression to provide within subjects estimation of the independent variables difference in means. Equation 1 provides detail
on the actual base tip and serves as a reference point for further analysis. The average tip was $2.66 with a standard deviation of (0.18).

\[
\text{Tip} = 2.663 \\
(0.175)***
\]

A histogram of the tip data is provided below as Figure 1. Analyzing the histogram we see a skewness towards the average tip size along with the frequency or percentage of amounts of tip. The outliers of a tip above $5 were very rare and occurred a total of 7 times within 152 observations.

**Figure 1: Histogram of tip data**

Examining the general statistics of the entire data set allows for us to build a base level for the indicator variables we will examine throughout this analysis. Equation 1 shows us that the mean tip, holding all other variables constant, was $2.66 per transaction with a standard deviation
of 0.175, and a probability of the valet receiving a tip 85% of the time for all observations. Upon interviewing the valet staff they said the average was most likely $2-3 a car, but they preferred getting $5 per transaction. One valet in particular mentioned that it would be nice if guests would consider the value of their vehicle when considering the tip amount similar to the way guests tip in other situations such as restaurants. It is also worth mention that the tip generally occurs when the guest is picking up their vehicle and only about 20% of the time when dropping off the car. The end result of the base value is that the average tip doesn’t appear low for these valet attendants, whom may provide service for 30-100 guests on any shift.

**Gender:** Regressing the variable Tip on the female dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
\text{Tip} = 2.53 + 0.21(\text{male})
\]

\[
(0.368) \quad (0.217)
\]

Results indicate no significant difference between male and female guests. That is, Male guests tend to be marginally better tippers, but not different enough to be confident that there is a distinction. Female guests had a mean of 2.53 and male guests had a mean of 2.74. T-test results show the difference crosses zero in the 95% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable gender does not prove significant differences within tip amounts.

---

1 Standard errors with *** represent a p-value within a confidence interval range of \( p<0.01 \) or we can say that the true value of the parameter is within a 99% statistically significant realm. Standard errors with ** represent a p-value within a confidence interval range of \( p<0.05 \) or we can say that the true value of the parameter is within a 95% statistically significant realm. Standard errors with * represent a p-value within a confidence interval range of \( p<0.1 \) or we can say that the true value of the parameter is within a 90% statistically significant realm.
**Region:** Regressing the variable Tip on the regional dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
Tip = 2.70 - 0.04(tourist)
\]

\[
(0.377) \quad (0.426)
\]

Results indicate no significant difference between local and tourist guests. That is, Local guests tend to be marginally better tippers, but not different enough to be confident that there is a distinction. Tourist guests had a mean of $2.60 and local guests had a mean of $2.64. T-test results show the difference crosses zero in the 95% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable region does not prove significant differences within tip amounts.

**Time of Day:** Regressing the variable Tip on the time dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
Tip = 2.16 + 0.44(time_{mid}) + 0.88(time_{am})
\]

\[
(0.2988) \quad (0.5079) \quad (0.3884)**
\]

Results indicate a difference between the tip amount and the time of day. That is, mean Tip in morning is significantly greater $3.04 than tips in the evening $2.16. This variance is interesting as what motivating factors would cause morning guests to provide a better tip then evening guests. Given our distinctions between the tourist and local category we saw very little difference in the average amount tipped by these distinctions. Since at no time was data recorded at a busy time the concept of distinguishing this as a contributing factor hold no merit. One theory as to the variance in tip size is due to casino guests departing for the day may be tipping better because they may be returning later that day. Morning guests could also be more prepared to tip
than evening guests. Another theory as to why the tips size was significantly different is that valet attendants who had been employed the longest and had the most experience all chose to work day shift leaving the swing shift to the employees who had the least experience. Intuitively, we may also find that the valets with the most experience choose to work this time of day because they have knowledge that the tips are better between these hours.

Race: Regressing the variable Tip on the race dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
\text{(5) } \text{Tip} = 1.78 + 1.20(\text{white}) + 0.28(\text{hispan}) - 0.11(\text{mid}) + 0.56(\text{asian}) \\
(0.71) \quad (0.74)^* \quad (0.881) \quad (1.126) \quad (0.851)
\]

Results indicate a difference between the tip amount and race. The p-value for the variable white was (0.11) indicating the average tip level of white guests was nearly statistically different (greater) than black guests. There is a variance among amount tipped and racial categories.

Interestingly, we observe a low probability of receiving a tip from either a Middle Eastern or African American guest, at 67% and 78% respectively while a white guest is 87% likely to provide a tip. We must also consider low number of total observations for the Middle Eastern and African American variables.

A similar study on the differences in tipping behaviors of African Americans distinguished by socio-economic status found that in general “Both upper and lower class Blacks leave smaller tips than do Whites, so tipped workers can be expected to deliver poorer service to black customers even in upscale restaurants and neighborhoods” (Rusche & Brewster, 2008). This theory and discussion leads us to believe that there is a psychological connection with the valet attendant and guests that are perceived to be poor tippers and that the overall guest experience is somehow altered within the transaction. As an observer to these events I must admit that they all
occur on a very rapid basis and any distinct behaviors from the guest's angle were excluded as variables. Although further analysis should be provided to obtain higher observation numbers, the data presented within this paper shows a distinct difference in the tipping behaviors of different races.

*Guest Age:* Regressing the variable Tip on the guest age dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
\text{(6) } \text{Tip} = 2.40 + 1.10(16 - 26) - 0.11(27 - 37) + 0.51(38 - 48) + 0.31(49 - 59) \\
(0.485) \quad (1.187) \quad (0.622) \quad (0.581) \quad (0.572)
\]

Results indicate no significant difference between age levels of guests. That is, guests aged 38-49 tend to be marginally better tippers, but not different enough to be confident that there is a distinction. Guests aged 16-26 had a mean of $3.50, guests aged 38-49 had a mean of $2.91, guests aged 49-59 had a mean of $2.71, guests over 60 had a mean of $2.40 and guests aged 27-37 had a mean of $2.29. Overall results show that the variable guest age does not prove significant differences within tip amounts.

*Vehicle Age:* Regressing the variable Tip on the vehicle age dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
\text{(7) } \text{Tip} = 2.29 + 0.52(\text{under 5}) + 0.44(6 - 10) \\
(0.371) \quad (0.455) \quad (0.478)
\]

Results indicate no significant difference between vehicle age levels. That is, vehicles from 2008 or newer tend to be marginally better tippers $2.81, but not different enough to be confident that there is a distinction. Vehicles aged 10 years or more had a mean of $2.29 and vehicles from
2002-2007 had a mean of $2.73. Worth mention is the probability of a tip occurring from new car owners of 90% as opposed to a cars aged 5-10 years old or 10 years or greater probabilities of 80% and 85%, respectively. Overall results show that the variable vehicle age does not prove significant differences within tip amounts. Although statistically insignificant, the data is consistent with our discussion of socio-economic status and that as ones income level raises the amount they are willing to provide as a tip may be correlated. Further research is recommended.

*Luxury Vehicle:* Regressing the variable Tip on the luxury vehicle dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
(8) \quad \text{Tip} = 2.55 + 0.69(\text{luxury}) \\
(\text{0.191}) \quad (\text{0.470})
\]

Results indicate a difference between the tip amount and luxury vehicle owners. The p-value for the variable luxury vehicle was (0.14) indicating the average tip level of luxury vehicle owners was nearly statistically different (greater) than non-luxury vehicle owners. For the purpose of this study this variable is the best candidate for judging Socio-Economic status.

Consistent with our assumptions of socio-economic status guests who own or drive luxury brand vehicles tend to provide a larger tip. Luxury vehicle drivers had a mean of 3.24 and non-luxury vehicle drivers had a mean of 2.55. Results indicate that there is some evidence in tipping behavior between luxury vehicle owners and non-luxury vehicle owners.

*Imported Vehicle:* Regressing the variable Tip on the import vehicle dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
(9) \quad \text{Tip} = 2.46 + 0.38(\text{import}) \\
(\text{0.256}) \quad (\text{0.350})
\]
Results indicate no significant difference between import and domestic vehicle owners. That is, import vehicle owners tend to be marginally better tippers, but not different enough to be confident that there is a distinction. Import vehicle owners had a mean of $2.84 and domestic vehicle owners had a mean of $2.46. T-test results show the difference crosses zero in the 95% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable import does not prove significant differences within tip amounts.

*Valet length of time employed:* Regressing the variable Tip on the length of time the valet was employed dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
\begin{align*}
\text{Tip} &= 1.83 + 0.46(0 - 2) - 0.12(3 - 4) - 0.45(7 - 8) + 1.13(8 +) \\
(0.871) & \quad (0.963) \quad (1.041) \quad (1.742) \quad (0.896)
\end{align*}
\]

Results indicate no significant difference between valets that had the most experience and those whom did not. That is, valet attendants with 8 years or more of experience tend to be receive marginally better tips, but not different enough to be confident that there is a distinction. Valets with 8 years or more experience had a mean of $2.96, 0-2 years' experience had a mean of $2.29, 3-4 years' experience had a mean of $1.71, 5-6 years' experience had a mean of $1.83, and 7-8 years' experience had a mean of $1.38. A second look at the data set we found that the 3-4 years of experience had 14 observations, 5-6 had 6 observations, and 7-8 had 2 observations. Overall results show that the variable valet experience does not prove significant differences within tip amounts.

*Valet Age:* Regressing the variable Tip on the valet age dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.
\begin{align*}
    Tip &= 2.17 + 0.45(28 - 32) + 0.72(32 \text{ or older}) \\
    &\quad (0.393) (0.508) (0.463)
\end{align*}

Results indicate no significant difference between valets age. That is, valet attendants aged 33 or older tend to receive marginally better tips, but not different enough to be confident that there is a distinction. Valets 33 or older had a mean of $2.89, 28-32 years old had a mean of $2.62, and 18-27 years old had a mean of $2.17. Overall results show that the variable valet age does not prove significant differences within tip amounts.

*Valet Attractiveness*: Regressing the variable Tip on the valet attractiveness dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\begin{align*}
    Tip &= 2.80 - 0.53(BradPitt) \\
    &\quad (0.2503) (0.396)
\end{align*}

In order to simplify this category valets were separated into two groups as either average or Brad Pitt (meaning extremely attractive). Results indicate no significant difference between valets attractiveness. That is, valet attendants whom rated themselves as average attractiveness tend to receive marginally better tips, but not different enough to be confident that there is a distinction. Average looking valets 33 or older had a mean of $2.80, and the most attractive valets had a mean of $2.27. T-test results show the difference crosses zero in the 95% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable valet attractiveness does not prove significant differences within tip amounts. Although it is worth mention that the employees self-selected their own attractiveness and therefore this variable is problematic.
Eye Contact: Regressing the variable Tip on the eye contact dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
(13) \quad Tip = 1.99 + 0.86(eye \ contact) \\
(0.585) \quad (0.557)^* 
\]

Results indicate a difference between the tip amount and guests whom provide eye contact during the exchange. The p-value for the variable eye contact was (0.13) indicating the average tip level of guests whom provide eye contact during the exchange was nearly statistically different (greater) than guests whom avoided eye contact. Importantly, eye contact in two person encounters is a popular topic in psychological analysis and “functions to provide information, regulate interaction, express intimacy, exercise social control, and facilitate service and task goals” (Klieinke, 1986). Interestingly, out of the 14 guests whom avoided eye contact only 8 “stiffed” the valet. This variable was the most popular in pre interviews with the valets as to what the most common trait observed was during a stiff event and as we see here 57% of the time this was true. There is some evidence that eye contact may have an effect on a tip.

Verbal Exchange: Regressing the variable Tip on the verbal exchange dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
(14) \quad Tip = 2.27 + 0.44(Verbal \ exchange) \\
(0.558) \quad (0.587) 
\]

Results indicate no significant difference between verbal exchanges. That is, valet attendants whom exchanged small talk with the guest tend to be receive marginally better tips, but not different enough to be confident that there is a distinction. Verbal exchanges had a mean of $2.71, and no verbal exchange had a mean of $2.27. T-test results show the difference crosses
zero in the 95% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable verbal exchange does not prove significant differences within tip amounts. Worth mention is that at times the guest will remain silent and almost completely ignore the valet attendant leading to an awkward situation for the exchange. Interestingly, although statistically insignificant, assumptions on levels of introversion and extraversion are shown within this variable.

*Guest in a Hurry:* Regressing the variable Tip on the hurried guest dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
(15) \quad \text{Tip} = 2.81 - 1.12(\text{Hurried Guest}) \\
(0.185) \quad (0.511)**
\]

Results indicate a difference between the tip amount and guests whom appeared in a hurry during the exchange. The p-value for the variable eye contact was (0.03) indicating the average tip level of guests whom provide eye contact during the exchange was statistically different (greater) than guests whom did not appear in a hurry. This variable is of particular interest of the time factor that was attributed to all transactions. Further investigation reveals that out of the 20 observations in which the guest was observed in a hurry, only one individual waited longer than the 3 minute standard, was not local, was driving a luxury vehicle and tipped $0 for the transaction. Evidence suggests that this variable may have a statistically significant impact on overall tip.

*Guest Appears Irritated:* Regressing the variable Tip on the irritated guest dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.
\[ \text{Tip} = 2.76 - 0.72(\text{Irritated Guest}) \]
\[
\begin{array}{ll}
(0.187) & (0.516)
\end{array}
\]

Results indicate a difference between the tip amount and guests whom appear irritated during the exchange. The p-value for the variable irritated was (0.17) indicating the average tip level of guests whom appear irritated during the exchange was nearly statistically different (greater) than guests whom did not appear irritated. Particularly, guests within this category all waited within the 3 minute average yet provided a total of 4 stiff s in 20 observations. Evidence suggests that this variable may have a significant impact on overall tip.

\textit{Thanks:} There were no reported instances in which the valet attendant did not thank the guest.

\textit{Open Door:} Regressing the variable Tip on the open door dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[ \text{Tip} = 2.64 + 0.03(\text{Open door}) \]
\[
\begin{array}{ll}
(0.461) & (0.499)
\end{array}
\]

Results indicate no significant difference between guests that had doors opened for them and those whom did not. That is, valet attendants whom opened the doors for the guest tend to be receive marginally better tips, but not different enough to be confident that there is a distinction. Open doors had a mean of $2.67, and no open doors had a mean of $2.64. T-test results show the difference crosses zero in the 95\% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable open doors does not prove significant differences within tip amounts. Interestingly, guests whom did not have the doors opened for them tipped consistently more often 91\% than
guests whom doors remained unopened 85%. This is counterintuitive as to the tip being a reward for good service or provides an intuition on the average levels of expected quality of service.

**Service level:** Regressing the variable Tip on the service level dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
Tip = 2.84 - 0.75(\text{good service}) - 0.03(\text{average service})
\]

\[
(0.340) \quad (0.505) \quad (0.417)
\]

Results indicate no significant difference between service levels. That is, valet attendants whom provided excellent service tend to receive marginally better tips, but not different enough to be confident that there is a distinction. Excellent service had a mean of $2.84, very good service had a mean of $2.09 and average service had a mean of $2.06. Overall results show that the variable service level does not prove significant differences within tip amounts.

**Female and Attractiveness:** Regressing the variable Tip on the female and valet attractiveness interaction dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
Tip = 2.73 - 0.61(\text{BradPitt})
\]

\[
(0.185) \quad (0.555)
\]

Results indicate no significant difference between female guests and the valet attractiveness. That is, valet attendants whom are average level of attractiveness tend to receive marginally better tips, but not different enough to be confident that there is a distinction. Females that tipped average attractive valets had a mean of $2.73, and females whom tipped the most attractive valets had a mean of $2.12. T-test results show the difference crosses zero in the 95% confidence interval along with significant p-values, therefore we fail to reject the null. Overall the difference of means test or t-test results show that the variable female and attractiveness does not
prove significant differences within tip amounts. Although the valets self-rated themselves there is a level of personal confidence within the most attractive valets that is worth mention. Does this imply that self-confident valets make worse tips? Further research is recommended and it would benefit the research if the attractiveness was not self-rated.

**Race and Luxury Vehicle:** Regressing the variable Tip on the race and luxury vehicle interaction dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.

\[
\text{Tip} = 2.55 + 1.74(\text{white}_{lux}) - 1.55(\text{hispanic}_{lux}) + 0.45(\text{mideastn}_{lux})
\]

\[
(0.59)*** \quad (1.49) \quad (1.49)
\]

\[
-1.22(\text{asian}_{lux}) + 5.00(\text{black}_{lux})
\]

\[
(0.876) \quad (2.11)
\]

Results indicate a difference between the tip amount and guests whom resemble a racial distinction and drive luxury vehicles. The p-value for the variable white*luxury was (0.004) indicating the average tip level of white guests whom drive luxury vehicles was statistically different (greater) than guests whom were not within these distinctions. Results indicate that the race and luxury vehicle interaction is valid when we combine the white_luxury and asian_luxury categories in particular. The other variables suffer from very low observation levels and are therefore insignificant. The white_luxury variable had 14 total observations with a significant p-value of 0.004 which tells us we have a statistical significance within a 99% confidence interval. The Asian_luxury interaction is our second highest in observation numbers with 6 total and has an almost significant p-value of 0.167. Interestingly is the tip difference in white and asian luxury vehicle owners. Although we have low observation numbers the difference is evident.

**Race and eye contact:** Regressing the variable Tip on the race and eye contact interaction dummy variable, we obtain the following estimated model. The standard error for each estimated coefficient is shown in parentheses underneath the coefficient.
(21) \[ \text{Tip} = 0.86 + 2.31(\text{white}_{\text{eyes}}) + 1.14(\text{hispanic}_{\text{eyes}}) + 1.14(\text{mideastrn}_{\text{eyes}}) \\
(0.59)^{***} \quad (0.75) \quad (1.07) \]
\[ + 1.75(\text{asian}_{\text{eyes}}) + 1.14(\text{black}_{\text{eyes}}) \]
\[ (0.73)^{**} \quad (0.91) \]

Results indicate a difference between the tip amount and guests whom resemble a racial distinction and provide eye contact during the exchange. The p-value for the variable \text{white*eyecontact} was (0.000) indicating the average tip level of white guests whom drive luxury vehicles was statistically different (greater) than guests whom were not within these distinctions. The \text{Asian*eyecontact} interaction has a significant p-value of 0.167. The other variables suffer from very low observation levels and are therefore insignificant. Interestingly, when we run a multiple linear regression these p-values become obsolete in the process.

**Linear Regression Model**

Separately, indicator variables have their own sets of significance. As you combine the variables, within a linear regression model, the levels of significance have a large amount of variance and several become obsolete in the process. We will use observed significant variables in a hedonic multiple regression Model 1 that will follow the form of:

Model 1: \[ \text{Tip} = \beta(\text{eyecontact}) + \beta(\text{luxury}) + \beta(\text{race}_{\text{white}}) + \beta(\text{empBplus}) + \beta(\text{age}_{38_{to48}}) + \beta(\text{carage}_{\text{over10}}) + \beta(\text{irritate}) + \beta(\text{asian}_{\text{luxury}}) + \varepsilon \]

Viewed in a multiple linear regression model we see a significant deviation from our base assumptions. Table 5 provides the results of a multiple regression with the Stata regression output provided in the appendix. The regressions reported in this section allow us to report mean tip for each characteristic and do a simple test on significance. We have a goodness of fit with \(R^2\) of 0.206 or approximately 21% of the data. Almost all of our p-values are within a 90% confidence interval with the outliers within an acceptable range.
### Table 5. Multiple linear regression results

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Tip (1)</th>
<th>Standard Error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact during exchange</td>
<td>1.672</td>
<td>(0.565)</td>
<td>0.004***</td>
</tr>
<tr>
<td>Luxury vehicle designation</td>
<td>1.302</td>
<td>(0.496)</td>
<td>0.010***</td>
</tr>
<tr>
<td>Guest race white</td>
<td>0.768</td>
<td>(0.351)</td>
<td>0.030**</td>
</tr>
<tr>
<td>Employee w/ 8 years or greater experience</td>
<td>0.701</td>
<td>(0.352)</td>
<td>0.048**</td>
</tr>
<tr>
<td>Guest age 38-48</td>
<td>0.506</td>
<td>(0.360)</td>
<td>0.162</td>
</tr>
<tr>
<td>Vehicle aged Over10 years</td>
<td>-0.646</td>
<td>(0.388)</td>
<td>0.098*</td>
</tr>
<tr>
<td>Guest appears irritated</td>
<td>-0.768</td>
<td>(0.480)</td>
<td>0.112</td>
</tr>
<tr>
<td>Race Asian * luxury vehicle</td>
<td>-1.840</td>
<td>(0.973)</td>
<td>0.061*</td>
</tr>
<tr>
<td>Constant</td>
<td>0.121</td>
<td>(0.604)</td>
<td>0.842</td>
</tr>
</tbody>
</table>

**Observations**: 152  
**R-squared**: 0.206

### Discussion of Results

Model 1 predicted amount of tip (in dollars) from use of valet service, eye contact, white guest, luxury vehicle, Asian guest with a luxury vehicle, guest aged 38-48, employee with 8 years or greater experience, irritated guest, and vehicles over 10 years old as main effect predictors ($R^2$ within =0.206, $F_{model} (8,143) = 4.64$). The results of this analysis indicated that tip amounts varied depending on attributes or similarities within these distinctive variables. These effects are all very interesting and on a service oriented level, the only attribute we may find correlating with service level is the experience of the valet and the possibility of a guest being irritated with the services provided. Otherwise the tip indicators are related to the individual guest. All results are worth further discussion.
Results from this regression indicate that eye contact is the most significant variable within our data set. Studies reveal that a lack of eye-contact correlates with the feelings of embarrassment and inadequacy (Modilglani 1971). Relevant for our purposes this behavior could be a form of the guest avoiding judgment from others witnessing the event or participating. Eye contact may also serve as an individual behavior which may foretell an outcome for a valet attendant. Importantly, we find that for our purposes eye contact acts as the best indicator on an interaction between a guest and valet attendant.

Regression results for the luxury vehicle indicator variable tell us that guests whom fall within this distinction tend to tip on average greater than those whom do not. This effect makes sense and confirms previous studies on socio-economic status. We also find our previous assumptions on an individual’s social status may alter or influence the amount they tend to provide for services.

Regarding our previous discussion in differences in race and tipping, we find that there is a correlation with white guests that is distinctively different than other racial categories. Previous studies have discussed the correlation with this behavior and socio-economic status or adaption of social norms. This effect makes sense as to the low number of white individuals within poverty level incomes along with a high number of observations we found within the white race distinction. Given the total number of white patrons was 99 out of 152 observations.

Results indicate guests who resemble the ages of 38-49 tip on average the best out of all age categories (removing the 16-26 category due to low observation numbers (4)). This effect makes sense if we examine the population frequency and also the elevated socio-economic status within this age range. This would be considered to be a normal “prime”age for income levels to be at their highest in an individual’s career. Considering we identified guests out of the typical
range of “Median Real Household Incomes” (Advisor Perspectives, 2013) our estimates are
within the range of the highest level of median income for this age group.

Results indicate valet attendants with the most experience receive the best tips. This effect
makes sense with our original discussions on waiters and waitresses whom receive the best tips.
Generally there is certain knowledge that an employee may gain over their tenure as a valet and
they may learn certain tricks as to receiving a tip in a case when they may otherwise receive
nothing. One valet provided information that he would always ensure that he requested the ticket
while looking the guest in the eye. Another claimed that when he would welcome the guest he
would have several ways of showing that he had money in his hand to remind the guests that they
were in a tipping scenario.

Results indicate irritated guests provide a negative t value, which validates that on average
guests whom identify with this variable tip $1.60, less than the average guest. This effect makes
sense and contributes to our assumptions of guests whom gamble at a casino may be more likely
to provide a small tip as a result of losing any amount of money. This could also be due to several
other factors that contribute to a guest becoming irritated and further research is needed.

Results indicate guests whom drive older vehicles provide a negative t value, which
validates that on average guests whom identify with this variable vehicle tip $1.66 less than the
average guest. This effect makes sense and contributes to our assumptions of socio-economic
status and the effects it has on tipping behavior.

When we combine the luxury/race category results indicate Asian luxury vehicle owners
tipped significantly less than the average guest. This effect is interesting and defies explanation
for our purposes and shows an interesting insight worth further investigation. Are we to believe
that socio-economic status is only applicable when it is elevated for an individual whom affiliates
best with the white race distinction? Explanation of this effect could be due to a high frequency of
Asian guests whom travel from the bay area to gamble at this particular casino, may have an unknown set of social norms in which they adopt. More data would need to be generated to investigate the value of the socio-economic bias mentioned previously.

In an effort to provide a statistically significant model all variables were tested for significance. Results provided insignificant values across the entire spectrum. On the high end of insignificance the indicator variables of average service (0.962), guests aged 27-37 (0.819), guests aged 50-60 (0.932), and valet employees who had 0-2 (0.996) and 3-4 (0.933) years’ experience. Many of the indicator variables fell within the middle such as guests with imported vehicles (0.541), guests whom appeared in a hurry (0.451), guests who had a verbal exchange with the valet (0.620), guests with the newest vehicles (0.665), and valets who were as attractive as Brad Pitt (0.404). There were a few variables on the cusp of significance worth mention. In particular guests who received very good service (0.173), guests whom appeared Asian (0.171), and guests whom appeared between the ages of 16-26 (0.212). As these variables were close to significance once combined in our multiple linear regression model they altered the significance of other variables and effected the model negatively. Regressions were run replacing the significant variables and results were inconsistent to the point where the multiple model would lose significance on many levels.

**Direction for further research**

Throughout our discussion we have discovered that some correlation exists between our indicator variables. One extension of research could be to conduct another batch of surveys for comparison to our data set in another location. Another extension could focus on professed opinions of valet services and what guests believe to be the motivating factors for their tip amount. There could also be seasonal variation in observations worth discussion.
Individuals for this study had all signed a tip compliance with the IRS and yet still were dishonest in answering some of the questions. Utilizing the indicator variables we found significant within this particular setting may also prove un-worthy in another location. In order to benefit future research within this arena, the secrecy behind the valet veil must be addressed and overcome. This would allow for extension of the research and provide insight into the rational or irrational behavior of consumers in this realm.

**Conclusion**

Overall, we have utilized multiple variables, 21 equations, and a multiple linear regression in an attempt to detect the influences of tipping behavior in a valet parking setting. Based on the normative behavior attributed to quality of service and amount of tip provided we found that for our purposes this assumption is vague and may not hold true in its entirety. The tipping behavior observed in this setting may not be explained completely, and evidence suggests that socio-economic status may explain motivations in which a tip is derived. Existing literature supports the variance of reasoning that goes into the calculation of a good tip. Lynn found that on average the waitresses that received the greatest amounts of tips were “in their 30’s and those with large breasts, blond hair, and/or slender bodies received larger average tips than their counterparts without these characteristics” (Lynn, 2009). Does the common assumption of valet attendants hold true that they are all racing your vehicle around as portrayed in “Ferris Bueller’s Day Off”? If this were the common view then why would anyone choose to valet his or her vehicle?

One simple theory is that the service is valued differently by societal norms adopted by the various guests whom utilize the service. This might also explain why we found such subtle differences in so many variables given we had such a wide range of individual guests observed.
Another explanation may be that guests may feel as though since they are visiting a casino they are entitled to the spoils of valet parking services. Since these services are provided free of charge the guest values the service as a perk of visiting the casino and may derive a sum simply by evaluating whatever change they have in their pockets.

Other studies have shown that a tip “can be driven by any of our fundamental behavioral dispositions” (Gambetta 2006). A view from the inside of the valet booth provides us insight into the observed behavior of the relationship between the guest and the valet attendant. Mixed results lead us to assume that each individual tip has its own set of circumstances that influence the total amount tipped, although there are some variables worth further investigation.
References


Lynn, Michael and Andrea Grassman (1990), “Restaurant Tipping: An Examination of Three ‘Rational Explanations’,” *Journal of Economic Psychology*, 11 (June), 169-181


Margalioth, Yoram 2013. The Case Against Tipping, 9 J. Bus. L. 117. Available at: http://scholarship.law.upenn.edu/jbl/vol9/iss1/4


Scott, William R. The Itching Palm, A Study of the Habit of Tipping in America (The Penn Publishing Company Philadelphia) ©1916


Online Resources

American Gaming Association http://www.americangaming.org/government-affairs/key-issues/gaming-tip-compliance-agreement


### Appendix Stata regression output

```stata
reg tip elec0tct race_white luxury asian_lux age_38to49 emp8plus irritate Carage_Over10
```

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 152</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>144.71954</td>
<td>8</td>
<td>18.0899424</td>
<td>F( 8, 143) = 4.64</td>
</tr>
<tr>
<td>Residual</td>
<td>557.526828</td>
<td>143</td>
<td>3.89878901</td>
<td>Prob &gt; F = 0.0000</td>
</tr>
<tr>
<td>Total</td>
<td>702.246368</td>
<td>151</td>
<td>4.6506382</td>
<td>R-squared = 0.2061</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Adj R-squared = 0.1617</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Root MSE = 1.9745</td>
</tr>
</tbody>
</table>

```
tip
Coef.  Std. Err.  t     P>|t|  [95% Conf. Interval]
etc
```

| Coef.        | Std. Err. | t     | P>|t| | 95% Conf. Interval |
|--------------|-----------|-------|------|-------------------|
| elec0tct     | 1.67194   | .5647958 | 2.96 | .004  | .5555122 2.788367 |
| race_white   | .7680713  | .3512574 | 2.19 | .030  | .0737437 1.462399 |
| luxury       | 1.302397  | .4960153 | 2.63 | .010  | .3219272 2.282866 |
| asian_lux    | -1.839636 | .9725313 | -1.89| .061  | -3.762031 .0827592|
| age_38to49   | .5059314  | .3599461 | 1.41 | .162  | -.2055713 1.217434|
| emp8plus     | .7009304  | .3517781 | 1.99 | .048  | .0055734 1.396287|
| irritate     | -.767666  | .4798303 | -1.60| .112  | -1.716143 .1808107|
| Carage_Over10| -.6460225 | .3881836 | -1.66| .098  | -1.413342 .1212971|
| cons         | .1205957  | .6040942 | 0.20 | .842  | -1.073512 1.314704|