

BRANDS: THE OPIATE OF THE
NON-RELIGIOUS MASSES?

by

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Abstract

Many researchers have suggested that people often form relationships that are religious in nature with brands. The *popular* press has even proclaimed brands as the “new religion”. With such implied associations between brands and religion as inspiration, this research aims to understand whether or not there is a significant relationship between consumers’ religiosity and their reliance on brand name products (i.e. the degree to which they prefer branded goods over non-branded goods). First, the authors examine the relationship between religiosity and brand reliance in the U.S. at a macro level, using state level data. Next, they adopt a more micro-level analysis and examine the relationship between individual levels of religiosity and brand reliance using measures of behavior. The results of both studies suggest that non-religious consumers rely on brands to a much greater degree than do religious consumers, particularly when income is high. The article concludes with a discussion of the potential mechanisms driving this relationship.

I. INTRODUCTION

Brands have become a ubiquitous presence in today's world, affecting the everyday lives of consumers in many ways. Beyond providing general product benefits, brands maintain unique personalities (Aaker 1997) that consumers often capitalize on to express who they are to themselves and others in their lives (Aaker 1999). The personalities of brands also seem to enable their ascent to cult-like, or even religious, status in the lives of their consumers, supporting the notion that the sacred realm of religion and the secular world of consumption are often intertwined (e.g. Belk, Wallendorf and Sherry 1989). Belk and Tumbat (2005), for example, argue that the Macintosh brand has a community following that is equivalent to a religion in many ways. It can be characterized by a strong network of adherents, a belief in a "savior" in the form of Steve Jobs, as well as general enmity toward a common evil (IBM, Microsoft, etc.). Such relationships with brands have even led the *popular press* to proclaim brands as the "new religion".

While a relationship between religion and brands has been acknowledged, no systematic study of the relationship between religion or religious practice, and the importance of brands in consumers' lives has taken place. Yet, it seems natural given the apparent overlaps between religion and brands that as religiosity varies across individuals, so too will the weights they as consumers will place on brands in their lives.

In this paper, we focus on the relationship between religiosity and one indicator of the importance of brands in consumers' lives that we refer to as "brand reliance". We define brand reliance as the degree to which consumers prefer branded goods over goods without a well known national brand (e.g., store brands). As this is the first time the potential relationship between religiosity and brand reliance behaviors has been explored, our objective is simply to

establish that a relationship exists whereby individuals with different levels of religious commitment (religiosity) differ systematically in their brand reliance. We explore this potential relationship in two ways.

First, we examine the relationship between religiosity and brand reliance in the US at a macro level, using state level data. We operationalize brand reliance as the relative concentrations of stores that are brand oriented. We operationalize religiosity in three different ways: number of congregations, self-reported regular attendance to religious activities and self-reported adherence to any religion. Second, we adopt a more micro-level analysis by developing a measure of brand reliance at the individual level using direct behavioral measures. We sample a relatively nationally representative population and explore the relationship between their religious practices and the degree to which they rely on brands.

Both our examinations yield highly consistent results. We conclude that consumers that are non-religious rely on brands to a much greater degree than do consumers that are religious. We will present the results of both our macro and micro investigation, speculate as to the cause of this stronger brand reliance amongst the non-religious, and discuss future research directions.

II. GOD, BRANDS, AND RELATIONSHIPS

II.1. Brands as Self-Expression Tools and Relationship Partners

Brand names, as we have come to know them, first appeared in the early 16th century on whiskey distillers' barrels (Farquhar 1989). Since then, researchers have found that brands enhance the value of products in many ways. Of course, one major function of a brand name is to simplify decision making (i.e. reduce risk, reduce search costs, provide a signal of quality, and allow for identification of the product source; Keller 2003). However, brands also provide self-

expressive benefits (Grubb and Grathwohl 1967; Sirgy 1982; Belk 1988). For example, Aaker (1999) demonstrated that attitudes toward a brand are more favorable when the brand's personality is congruent with the traits that are most descriptive of and important to an individual than when incongruent; Kleine, Kleine and Kernan (1993) demonstrated that people are attracted to products that are consistent with the various social identities of the self; and Escalas and Bettman (2003) demonstrated that consumers construct their self identities and present themselves to others through brand choices based on the congruency between brand-user and self-image associations. Given that brands can aid in self-expression, researchers have found that people often form meaningful relationships with brands. For example, Fournier (1998) noted that consumers form different types of relationships with brands depending on how one's experiences with the brand add structure and meaning to one's life.

II.2. Brands and Religious Themes

Numerous authors suggest that when people have strong relationships with brands, they often resemble religious-like relationships. One major area of research in support of this notion is that of brand communities, which are defined as "specialized, non-geographically bound communities, based on a structured set of social relations among admirers of a brand" (Muniz and O'Guinn 2001, p. 412). Brand communities have strong cultures that include complex rituals, traditions, and behavioral expectations, as do religions. Consumers seek and create meaningful connections and affiliations via brand communities, as demonstrated for demonstrated this among Saab, Macintosh, and Ford Bronco communities Muniz and O'Guinn (2001), Star Trek (Kozinets 2001), X-Files (Kozinets 1997), Star Wars (Brown, Kozinets and Sherry 2003), and Xena: Warrior Princess (Schau and Muniz 2004).

As a part of the process of creating these meaningful connections, brands can be embodied with religious themes. For example, Belk and Tumbat (2005) found that the Macintosh community is equivalent to a religion in many ways because it can be characterized by a strong faith in “savior” Steve Jobs and enmity towards a common “satanic” enemy. Similarly, Muniz and Schau (2005) found that the Newton community (centered around PDAs discontinued by Apple) reflects five key themes: (1) tales of persecution, (2) tales of faith being rewarded, (3) survival tales, (4) tales of miraculous recovery, and (5) tales of resurrection. The authors argued that these religious themes reflect the human need for community and religious affiliation. Echoing this sentiment, Sherry (2005) commented:

“As a nation of unchurched seekers for whom denominational religion has become increasingly unsatisfying and yet for whom the idea of a spiritual quest continues to provide direction to life, Americans have elevated the brand to the status of fetish. Consumers employ brands to achieve the experience both of transcendence and immanence, to infuse their lives with a lived experience of the sacred.”

Similar themes and observation are found in the *popular press*, including the assertion by Young and Rubicam (one of the world’s largest marketing agencies) that brands are the new religion, and that brand builders are similar to missionaries of Christianity and Islam (Financial Times, 2001). Fitch London Design Consultancy suggested that brands have become part of our most sacred rituals, as demonstrated by the Harley Davidson fans that are buried in their Harley Davidson gear in Harley Davidson coffins and the thousands of people who marry at Disney world every year (British Design Innovation News Service 2003).

Finally, even our everyday consumption venues have been said to resemble religious environments and experiences:

“This appropriation of the religious by the market is evident in the shopping center, as has been so well criticized by José Saramago in his "La Caverna." Almost all shopping centers have architectonic lines in the style of cathedrals. They are temples of the market god. In some, you don't enter in just any garb ——— something like Sunday best clothing is required. You walk through their imitation marble cloisters to those post-modern Gregorian sounds, something akin to dentist's office muzak. There, everything evokes heaven: no beggars or street kids, poverty or misery. With a devoted gaze, the consumer contemplates the chapels which show off, in sumptuous niches, the venerable objects of consumption, surrounded by pretty priestesses. Those who can pay the bill feel like they're in heaven; those buying on credit, in purgatory; those without resources, in hell. Upon leaving, however, all come together in brotherhood at the "eucharist" table of McDonald's.” Betto (2001) in panamanews.com.

II.3. Brand Reliance and Religiosity

If people have religious-like relationships with brands, how does one’s religious commitment to God (religiosity) impact decisions to use or not use brands as a source of relationships? That the two concepts might be related seems quite likely, given that brands and religion may serve similar functions for some consumers. The previous discussion suggests that brands provide meaning, and religion is certainly a major influence on how people evaluate and make sense of the world (Peterson and Roy 1985; Belzen 1999; Worthington et al. 2003).

Despite the likely connection, to our knowledge, researchers have not systematically explored the relationship between religiosity and brand reliance. Some prior research has, however, studied the relationship between religiosity and other aspects of consumption behavior.

For example, Wilkes, Burnett and Howell (1986) found that religiosity was correlated, although not significantly so, with credit usage and private brands. Delener (1990) determined that level of religiosity affected risk perceptions (regarding previous car and microwave purchases) among Catholic and Jewish households. The more religious people were, the more likely they were to view a decision as risky. The author speculated that this risk could be managed through a variety of strategies (i.e. brand loyalty, choosing the most expensive brand, choosing the least expensive brand, etc.). Sood and Nasu (1995) were interested in shopping behavior differences between devout and casually religious Protestants. After asking several questions about the attributes one would consider in purchasing a radio for the home, they concluded that devout Protestants preferred to buy products on sale vs. when they wanted them, were open to purchasing foreign-made products, shopped in all kinds of stores rather than only the better stores, preferred stores with the lowest prices vs. stores with the best assortment, and believed there was very little relationship between price and quality. Essoo and Dibb (2004) also found that casually religious respondents had different shopping behaviors compared to devout respondents (based on several questions about how important different attributes were in a previous TV purchase and other general shopping behavior questions). Casually religious respondents were trendier (i.e. attached more importance to brand names in their self-reports of preferences) and more innovative (i.e. would try any new product once). However, contrary to Sood and Nasu's (1995) results discussed above, Essoo and Dibb (2004) found that casually religious consumers reported being more practical in their shopping behavior than devout consumers (i.e. attached more importance to price deals and credit availability).

Given the religious-like relationships that people have with brands and research indicating some connection between religiosity and consumption, our current research is

designed to systematically study the relationship between religiosity and brand reliance.

Specifically, we seek to establish that a relationship exists and to articulate the direction of this relationship in light of two competing alternatives. While the research which follows will focus on the detection of this relationship (versus exploring its underlying cause), one might speculate about why a positive versus a negative relationship might be observed. A positive relationship might be observed if there is an individual trait that drives people to seek certain characteristics common to religion and brands. For example, people who are high in risk avoidance or have a strong need for belonging may prefer the predictability and community associated with both religion and brands. Alternatively, there may be a negative relationship between brands and religion if they serve as substitutes for one another. For example, religious people may have less of a need to avoid risks or belong to communities through brands if this need is met through their religious affiliations. The purpose of the two studies presented here is to define which of these relationships exists (positive vs. negative), using both macro and micro-level measures. We leave to future research the exploration of the specific mechanisms driving the relationship, although we will speculate further in the general discussion.

III. EMPIRICAL ANALYSIS:

IS THERE A RELATIONSHIP BETWEEN RELIGIOSITY AND BRAND RELIANCE?

III.1. Macro-level Analysis: State by State Evidence

III.1.1. Data Description and Collection

We conduct a preliminary analysis of the relationship between brand reliance and religiosity through a simple analysis based on secondary “macro” data. A significant challenge

was to create a measure of brand reliance at the macro-level, given such a measure has not been previously constructed in the literature. To do so, we collected data on a number of department stores (Macy*s, Gap, Banana Republic) that operate nationally (with very few exceptions) and specialize on brand names (Gap and Banana Republic sell only their brand name clothing lines, and Macy*s, as opposed to department stores such as Sears and JC Penny, focuses also on better known brand names). We also collected data on a number of stores that focus on unbranded or generally lower brand equity brands (Costco, K-Mart, Target, Wal-Mart and Sam's).

From these data, we constructed two separate brand reliance indices. The first brand reliance index, Brand Reliance 1, was the number of Macy*s, Gap and Banana Republic¹ stores in each state in the US, divided by population and multiplied by 1 million. We also constructed a second brand reliance index, Brand Reliance 2, which is the number of the three department stores used for Brand Reliance 1 divided by the number of discount stores (Costco, K-Mart, Target, Wal-Mart and Sam's) in each state. These are obviously very crude measures of brand reliance. Nevertheless, our aim was to provide preliminary support that there may be a link between religiosity and brand reliance; many of the objections one can mount to our macro analyses will be corrected in the subsequent individual level analysis.

To measure religiosity, we collected data on the number of congregations per thousand people in each state (Religiosity 1), percentage of self-declared adherents of any religion (Religiosity 2) and percentage of self-reported church and synagogue attendance in each state (Religiosity 3).² We studied both the pair-wise correlations among these measures, as well as conditional correlations. While Religiosity 1 and Religiosity 3 were highly correlated to and

¹ Number of various department stores: Annual reports and corporate fact books, 2005 and 2006

² Number of Congregations and Number and % of Total Adherents: American Religion Data Archive. 2000. Church/Synagogue Attendance (%): the Gallup Organization - Special report by Frank Newport, Apr.27, 2006.

were statistically significantly related to brand reliance, Religiosity 2 did not have any statistically significant explanatory power so we do not present results associated with Religiosity 2. It is interesting to note, however, Religiosity 1 and Religiosity 3 are behavioral measures of religiosity, whereas Religiosity 2 is not. The insignificance may be due to high heterogeneity in how people interpret “being an adherent to a religion.” Finally, we also collected data on median income and education (% of college educated people in the state), which in the subsequent analysis we use as controls, as well as retail sales in each state. Descriptive statistics associated with these data are given in Table 1.

-----Insert Table 1 here-----

We should note that the data we collected are cross-sectional (across states) and the data for various variables come from different years during the period 2000-2006 since some of these data are not collected every year. However, the time period of interest is small enough such that the changes in variables are small from year to year (as seen when comparing the data that are available for multiple years).

III.1.2.Results

The pair-wise correlation between Brand Reliance 1 and Religiosity 1 was -0.62, between Brand Reliance 1 and Religiosity 3 was -0.58 , between Brand Reliance 2 and Religiosity 1 was -0.51 and between Brand Reliance 2 and Religiosity 3 was -0.53 (while the correlation between Brand Reliance 1 and Religiosity 2; and, Brand Reliance 2 and Religiosity 2, were -0.15 and -0.18, respectively).³ Table 2 below summarizes the results obtained from simple

³ The t-statistics for these are the following: -5.48 for the correlation between B1 and R1, -4.96 for B1 and R3; -4.16 for B2 and R1; -4.06 for B2 and R3. The t-statistic for the correlation between B1 and R2 is -1.08 and the t-statistic for the correlation between B2 and R2 is -1.29.

cross-sectional regressions, where brand reliance indexes are dependent variables and religiosity measures are independent variables.

----- Insert Table 2 here -----

The results clearly suggest that there is a negative relationship between religiosity and brand reliance. For example, the coefficient of Religiosity 1 in the regression in which the dependent variable is Brand Reliance 1 implies that an increase of 1000 in the number of congregations is associated with a decline of 4.3 brand intensive stores (i.e., each store “equals” 231 congregations). In terms of elasticity, an increase of 1 percent in religiosity is associated with a 0.6 percent decrease in brand reliance. The relationship between Brand Reliance 1 and Religiosity 3 can be described as follows: an increase of five percentage points in the church and synagogue attendance is associated with a decrease of one store for every million people in the state (e.g., about eight stores in North Carolina).

Of course, one simple explanation for this empirical result is that income may be the driving force behind this correlation: high income individuals may rely on brands more and consume (or practice) religion less (although that in itself would be an interesting finding). To test for this possibility, we obtained data on median household income in each state.⁴ Indeed, the correlations between income and Brand Reliance 1 and Brand Reliance 2 were 0.64 and 0.57, and between income and Religiosity 1 and Religiosity 3 were -0.65 and -0.53. This means that the estimated relationship between religiosity and brand reliance in Table 2 is indeed partly explained by income, and leads to two questions: (a) why is it that consumers with lower income

⁴ Census variables, U.S. Census Bureau: State and County Quick Facts (<http://quickfacts.census.gov/qfd/>) These data were collected between 2000 and 2003.

levels (who perhaps cannot afford to purchase branded products) resort to a higher “consumption” of religion? And, (b) does the relationship between religiosity and brand reliance remain statistically significant even after accounting for the effect of income on brand reliance? We return to the first question in the general discussion and address the second question in Table 3 which reports the results from the multiple regressions with religiosity measures and income as independent variables.

----- Insert Table 3 here -----

As it can be seen from Table 3 adding income as a covariate improves the fit and makes the constant term statistically insignificant. However, while the negative relation between brand reliance and religiosity is smaller, it continues to hold. Thus, although higher income is associated with more brand reliance, even after controlling for income, there is a negative relationship between religiosity and brand reliance and income does not explain the entire relationship between religiosity and brand reliance.

To further explore the role of income in the relationship between religiosity and brand reliance, we re-ran the simple regressions, where brand reliance is the dependent variable and religiosity is the independent variable, as well as the multiple regressions with both income and religiosity as independent variables, on two sub-samples of our data. More specifically, we employed a median-split analysis by classifying states into high versus low income states; and ran these regressions separately on each of the two sub-samples. We report here only simple regression results with Brand Reliance 1 as the dependent variable but the overall picture has been consistent across the regressions: we find that the magnitude and statistical significance of

the religiosity and brand reliance relationship is higher in high income states.⁵ We return to this interesting finding in our second empirical analysis and in the general discussion.

-----Insert Table 4 here-----

As a final specification test in regard to the role that income may play in the relationship between religiosity and brand reliance we checked whether religious people simply consume less than their non-religious counterparts. To explore this possibility, we created an adjusted brand reliance index, that is, Brand Reliance 1 and Brand Reliance 2 divided by per capita retail sales in each state. We then regressed this new dependent variable on religiosity measures. If more religious people just simply buy and consume less, then the religiosity variables in these regressions should come out as insignificant. However, in these regressions run, the Adjusted R squared varied between 0.19 and 0.33 and the t-statistics for the religiosity coefficients varied between -3.51 and -5.01. Thus, the negative relationship between brand reliance and religiosity holds, even when brand reliance is normalized by per capita retail sales.

Another potential covariate in the relationship between brand reliance and religiosity is education. As with income, more educated people *may* rely more heavily on brands and consume less religion. To use education as a covariate, we used again census data, this time on the percentage of persons with at least a bachelor degree in each state. The pair-wise correlations between education and Brand Reliance 1 and Brand Reliance 2 were 0.57 and 0.47, respectively. The pair-wise correlations between education and Religiosity 1 and Religiosity 3 were 0.58 and 0.54, respectively; whereas the pair-wise correlation between education and income was 0.72.

⁵ The complete set of results can be obtained from the authors. We should also note that besides the median-split analysis, we also run the same regressions on the complete data set but this time adding religiosity slope and intercept dummies for high income states. We obtained quite a few statistically insignificant estimates but the overall emerging picture was consistent with the median-split analysis: there is a negative interaction between income and religiosity, that is, the negative relationship between religiosity and brand reliance is more pronounced in high-income states.

We ran multiple regressions with both income and education and found that education increases brand reliance. However, the results obtained revealed the same basic picture: there is a statistically significant negative relationship between religiosity and brand reliance, after controlling for both income and education.

Overall, the results based on secondary aggregate data provide preliminary support for a negative relationship between religiosity and brand reliance. However, the brand reliance measure in this macro-level study is very crude, which may limit the conclusions we draw from this analysis. In the next study, we utilize individual measures of both brand reliance and religiosity and examine whether the relationship observed in the macro-level analysis is replicated using an entirely different method. This approach will allow us to more closely explore the relationship by examining how individual levels of religiosity are related to individual levels of brand reliance.

III.2. Micro-level Analysis: Individual Level Evidence

The principle aim of this section is to determine whether religiosity is a significant predictor of brand reliance at the individual level. We construct a novel measure of individual brand reliance that focuses on the degree to which consumer's choices reflect preferences toward national versus store brands, and relate that measure to the consumer's religious behavior. We also measure individual income as basic economic theory suggests that an individual's choices should depend on income and price. Furthermore, given the state-by-state findings, we expect that the religiosity-brand reliance relationship should be strongest for those with higher incomes and thus allow for an interaction between religiosity and income in our analysis.

III.2.1.Data Description and Collection

In order to explore the relationship between religion and brand reliance at the individual level, we conducted an Internet-based survey. Respondents were recruited to complete the survey through an online database of participants in exchange for online credits that could be redeemed for cash at anytime. The population of the database is intended to roughly approximate the US population, although Hispanics are slightly under-represented on a systematic basis. 204 participants completed the survey (124 females), with ages ranging from 20 to 65 (median=43). Participants identified themselves as Christian (67.6%), Non-Religious (26.0%), Jewish (2.0%), Buddhist (1.5%), Muslim (1%), Hindu (1%) and other (1%). Participants were White (83.8%), Hispanic (7%), Asian (6.8%) and Black (5.8%).

The questions used to construct our three variables of interest – brand reliance, religiosity and income – are described next.

Brand Reliance: As no measure exists to capture individual brand reliance, we created a behavioral measure to do so. Participants were provided with 12 scenarios designed to refer to everyday shopping activities and increase participant's interest level with the survey. Within each scenario, participants chose between a well-known national brand and a complementary generic product (with real pictures of the products and real prices). The categories included were: over-the-counter medication, shampoo, batteries, disposable cameras, soft-drinks, cereal, tires, jeans, khakis, shoes, coats, and bath robes. As an example question, one of the scenarios participants read was as follows: "*You are on your way home from work when you all of a sudden get a piercing headache. You realize that you don't have any medicine with you or at home, so you stop at the nearest CVS drug store to pick some up. What do you choose?*" Their

options were TYLENOL Extra Strength Caplets (100 CP, \$8.89) and CVS/pharmacy Extra Strength Caplets (100 CP, \$6.64). Participants made 12 such choices.

On average, respondents selected the national brand over the store brand in 38.6% of the scenarios. Seven respondents (3.4%) chose the national brand in each one of the scenarios, and 24 (11.8%) in none. Fifty five respondents (27%) picked up the national brand in most of the scenarios (i.e., in at least seven scenarios).

After describing the survey's questions about religiosity and income, we will present our measure of brand reliance.

Religiosity: Our primary means of assessing religiosity was through self-reported religious behavior, specifically attendance at religious services. Participants were asked “*Apart from weddings, funerals and christenings, about how often do you attend religious services these days?*” Response options included: More than once a week, Once a week, Once a month, Christmas/Easter day, Other specific holy days, Once a year, Less often, Never/practically never. A dummy variable was then as coded “1” for attending church at least once a week and “0” otherwise. This variable was defined as such in an attempt to compare those for whom religion is very important vs. others, while still maintaining sizable groups of comparison. Given our relatively small sample size, a more detailed level of analysis would likely have significantly affected our ability to detect meaningful differences. As 27.5% of the sample attended religious services at least once a week, we believe the selected dummy variable definition allows for appropriate comparisons.

Income: At the end of the survey, respondents provided information regarding income. Specifically, respondents answered whether their household income is below, equal to, or above the U.S. average of \$48,000 per year⁶. Seventy respondents (34%) reported that their income level is below the average, 50 (25%) selected the “average” option, and 84 (41%) have a higher than average income. Three dummy variables were then created to represent each level of income. The number of dummy variables (three) is equal to the number of categories for reasons discussed below.

III.2.1.a. The brand reliance measure

To compute a measure of brand reliance from the twelve choices participants made between branded and non branded goods, a number of options are available. The first, and simplest measure, would simply be to add up all the branded choices and call that the index.

Unfortunately, what such an index gains in simplicity, it lacks in terms of being open to counter explanations.⁷ The most obvious is that the prices of the twelve pair wise choices vary, as do the differences between the branded and non branded good in each choice scenario. As a result, a measure that explicitly accounts for price would be desirable. Next, we describe a very simple choice model that permits us to isolate brand reliance at the individual level, while appropriately accounting for prices and income in the choices made.

III.2.1.b. A simple choice model

In each of the twelve product choices participants made, each individual is facing two alternatives denoted by j , where $j \in \{b, g\}$ (i.e., the individual is choosing between a

⁶ Average income was defined as ~\$48,000 per year based on the 2007 Current Population Survey.

⁷ The results of using such an index are consistent with those reported in this subsection.

brand, $j = b$, and a generic product, $j = g$). The (indirect) utility of individual i from choosing product j in shopping scenario k is: $u_{i,j,k} = \alpha_{i,j} + \beta_j y_i + \gamma p_{j,k} + \varepsilon_{i,j,k}$, where y_i is the income of the individual, $p_{j,k}$ is the price of product j in scenario k , $\varepsilon_{i,j,k}$ is a random variable unobserved by the researcher (but observed by the individual), β_j and γ are parameters ($\beta_b > 0, \beta_b > \beta_g$ and $\gamma < 0$) and $\alpha_{i,j}$ is an individual specific parameter which reflects her taste for products of type j . Note that, as will be soon explained, $\alpha_{i,b} - \alpha_{i,g}$ would be our parameter of interest. The assumptions that $\beta_b > 0$, and $\beta_b > \beta_g$ imply that the higher the income, the higher the probability that the individual chooses a brand product rather than a generic one.

The decision rule of the individual is: $d_{i,k} = 1 \Leftrightarrow u_{i,b,k} \geq u_{i,g,k}$ and $d_{i,k} = 0$ otherwise, where $d_{i,k}$ is a binary variable that is equal to one if the individual chooses the brand alternative in scenario k and zero otherwise. The decision rule can be rewritten as:

$$d_{i,k} = 1 \Leftrightarrow \alpha_i + \beta y_i + \gamma p_k + \varepsilon_{i,k} \geq 0, \text{ where}$$

$$\alpha_i \equiv \alpha_{i,b} - \alpha_{i,g}, \beta \equiv \beta_b - \beta_g, \gamma \equiv \gamma_b - \gamma_g, \text{ and } \varepsilon_{i,k} \equiv \varepsilon_{i,b,k} - \varepsilon_{i,g,k}$$

Our measure of brand reliance is the individual specific parameter α_i . Notice that the higher α_i the more likely individual i is to select the alternative $j = b$ in each one of the k scenarios. It is important to note that, in each scenario, the description of both alternatives was the same, other than the name of the product and its price. In other words, since we account for the price difference, the only systematic difference between the alternatives is the name of the product (brand versus generic). Thus, the parameter α_i captures exactly the reliance on a brand. Importantly, in defining α_i as brand reliance, we embrace important sources of heterogeneity in

why people differ in this regard as part of our definition of brand reliance, including 1) systematic differences in quality perceptions of brands vs. generics and 2) systematic differences in the weights attributed to brand equity.

III.2.1.c. Brand reliance and religiosity: the research hypothesis

We expect α_i to vary in the population for various reasons. The main point of this study is that one of the factors that contribute to the variation in the reliance on brands is the individual's religiosity. Specifically, based on our findings in the macro study, we expect people's reliance on brands to decrease as their degree of religiosity increases.

The following equation captures both the heterogeneity in the population with respect to the reliance on brands and the role of religiosity: $\alpha_i \sim N(\alpha_0 + \alpha_1 r_i, \sigma_\alpha^2)$, where the variable r_i measures individual i 's degree of religiosity, α_0 , α_1 , and σ_α^2 are parameters. The main parameter of interest in this study is α_1 . Our hypothesis is that $\alpha_1 < 0$ -- i.e., the higher the degree of individual's religiosity, the lower her tendency to rely on brands. Furthermore, following our state-by-state findings, we will allow α_1 to differ across the income categories. The parameter σ_α^2 represents the unobserved heterogeneity in α_i -- i.e., the heterogeneity left after accounting for the relationship between brand reliance and religiosity.

III.2.2. Results

We start by estimating the model under the assumption that $\alpha_1 = 0$ and $\beta = 0$ (i.e., $d_{i,k} = 1 \Leftrightarrow \alpha_i + \gamma_k + \varepsilon_{i,k} \geq 0$ where $\alpha_i \sim N(\alpha_0, \sigma_\alpha^2)$). This will allow us to focus first on describing our measure of brand reliance. In other words, in our model there are three sources for

differences (i.e., variation) across people in their brand reliance: (a) their income level, (b) their degree of religiosity, and (c) some additional unobserved sources. By excluding income ($\beta = 0$) and religiosity ($\alpha_1 = 0$) from the analysis, we attribute all the variation in the sample to unobserved sources (i.e., our estimate of σ_α^2 will include all sources of variation). This will be our benchmark estimate. Results for this analysis are show in Table 5 (where $\varepsilon_{i,k}$ is assumed to be drawn from independent and identical Weibull distributions).

----- Insert Table 5 here -----

The results shown in Table 5 imply that: (a) as expected, price has a negative effect on the utility ($\gamma = -.0229$ with a standard error of .0023), and (b) there is a significant variation in the population in their reliance on brands -- σ_α^2 is statistically different from zero (even at the one percent level) and is quite large. Thus, our measure of brand reliance is meaningful.

This leads us to testing our main hypothesis – that $\alpha_1 < 0$. Recall that (1) following the state-by-state findings we want to allow α_1 to differ across the income categories, (2) our measure of individual i 's degree of religiosity, r_i , is a binary variable that is equal to one if the individual attends a religious services at least once a week and is equal to zero otherwise, and (3) we use three dummy variables (denoted by $I_{L,i}$, $I_{A,i}$, and $I_{H,i}$) to represent the three income level (below average, average, and above average). Thus, we include a specific α_1 and β for each income category, and our model is

$$d_{i,k} = 1 \Leftrightarrow \alpha_0 + \alpha_1 r_i + \beta_i + \gamma_k + \varepsilon_i^\alpha + \varepsilon_{i,k} \geq 0$$

where (a) $\alpha_{1i} = \alpha_1^{LI} I_{L,i} + \alpha_1^{AI} I_{A,i} + \alpha_1^{HI} I_{H,i}$, (b) $\beta_i = \beta^{LI} I_{L,i} + \beta^{AI} I_{A,i} + \beta^{HI} I_{H,i}$, (c)

$\varepsilon_i^\alpha \equiv \alpha_i - \alpha_0 - \alpha_{1i} r_i$, (d) α_1^{LI} , α_1^{AI} , and α_1^{HI} represent the effect of religiosity on brand reliance for each income category, and (e) β^{LI} , β^{AI} , and β^{HI} represent the effect of income on brand reliance. Notice that since our model includes a dummy for each income category, we need to normalize α_0 , and thus we set it at zero.

Results of this analysis are shown in Table 6.⁸

----- Insert Table 6 here -----

The results support our hypothesis for the high income people. Specifically, we find that among the respondents whose income is higher than the average, the brand reliance level is a decreasing function of the degree of religiosity. In other words, among the high income people, those who attend a religious service at least once a week are much less likely to rely on a brand. We also find that for the other income levels no such relationship exists. Recall that using the state-by-state data we have shown that the effect of religiosity on brand reliance is higher for high income states than for low income states. Our findings with the individual level data are consistent with these results. In other words, it seems that the lack of effect we find here for low and average income people is due to the combination of a small sample and a smaller effect of religiosity on brand reliance for these income levels.

To assess the impact of religiosity on brand reliance we conducted the following counterfactuals. First, we calculated the probability that a high income consumer will choose a

⁸ The likelihood is based on the probability (for each individual) of a series of 12 choices, where the individual specific ε_i^α is integrated out.

brand if he/she does not attend religious services at least once a week. We find that this individual will choose a brand in 50 percent of the scenarios and a non-brand in the other 50 percent. Next, we calculated the probability that a high income consumer will choose a brand if he/she does attend religious services at least once a week. Our model predicts that this individual will select a brand in only 33 percent of the scenarios. Thus, the impact on brand reliance (i.e., the difference between 50 percent and 33 percent) is quite substantial. We also compared these two individuals (who differ only in religious service attendance) in the probability that they will buy a brand in *each one* of the 12 scenarios. We find that there is a 3.5 percent probability that a person who does not regularly attend religious services will choose a brand in each of the 12 scenarios, but only a .7 percent probability for a person who regularly attends services.

The other results shown in Table 5 are also consistent with our expectations. First, by including the income level and the degree of religiosity in our analysis the unexplained heterogeneity in α_i decreased from 1.394 to 1.342. Second, we also find that the higher the income level, the more likely the individual to select a brand rather than a generic product (β is the highest for the high income respondents and the lowest for the low income people).

IV. GENERAL DISCUSSION

This research has identified an interesting relationship between religiosity and brand reliance using two distinct approaches. First, we examined the relationship at a macro level, using state level data. We found that higher religiosity, as measured by the number of congregations and self-reported church attendance, is associated with lower levels of brand reliance (as measured by 2 separate indexes reflecting the relative presence of brand focused vs.

non-brand focused retailers). Further, we found that this result is strongest in high income states. Next, we completed a micro-level analysis. We measured brand reliance through individual choices among a series of scenarios and related the responses to an individual's reported church attendance. Consistent with the macro-level analysis results, we found that higher religiosity is associated with lower brand reliance, but only among high income individuals.

Why do the non-religious rely on brands?

Given the results we have documented, it is interesting to speculate as to the factors underlying the relationship between religiosity and brand reliance. There are several potential mechanisms that could be leading to these effects. We most strongly speculate that religion and brands satisfy a common need, and it is this underlying need that links religiosity and brand reliance. For example, our findings may reflect differential strategies for maintaining a sense of belonging between religious and nonreligious individuals. For the religious, this need may be fulfilled through attendance at religious services. For the nonreligious, this need may be fulfilled by belonging to brand communities. Similarly, people may develop their identities and fulfill their sense of belonging by adopting certain groups of people, and will consequently choose to rely on brands (or not) based on the social pressure to follow the norms of the group. For example, some people may adopt a group of people that builds its identity around God, while others may adopt a group of people that builds its identity around brands. Such groups are increasingly common in today's consumer world (Muniz and O'Guinn 2001), making such a search for belonging through "joining" a brand community a relatively easy proposition for consumers.

Alternatively, instead of satisfying a need for belonging, brands and religion may satisfy a common need for managing risk. In other words, our findings may suggest that people can only tolerate limited amounts of risk in their lives and will employ different mechanisms to manage risk. To draw an analogy, researchers studying depletion mechanisms (e.g. Baumeister et al., 1998) have argued that consumers have a limited self-control resource, which must be spread and utilized across tempting scenarios. Similarly, consumers may find that they only have limited resources for managing uncertainty or risk in life, and thus one risky behavior must be traded off against another. As a result, religious consumers may believe that God will protect them in risky situations (e.g. everyday uncertainties, afterlife, etc.) and can therefore afford to take more risks in a consumption setting (i.e. buy more store brands) than their nonreligious peers.

Finally, the relationship between religiosity and brand reliance could simply be the result of religious traditions that teach against materialistic values. Branded goods may be viewed as a greater reflection of materialism than non-branded goods. Were this to be true, then religious consumers might be expected to be less brand reliant than non-religious consumers, as we have observed. Such a result would also suggest that the religious consumer makes fewer purchases overall than the religious consumer, a result that our data do not directly speak to.

While speculating about the underlying mechanism leading to our effects, it is worth briefly discussing why we observe the link between brand reliance and religiosity largely for high income consumers. A number of plausible explanations are possible for this finding, but perhaps the most intuitive and parsimonious is that high income consumers have larger consideration sets. In other words, their income allows for the consideration of a much broader range of products than that of low income consumers. This leaves room for factors such as

religiosity to influence their choices. Alternatively, low income and high-income individuals may have qualitatively different consumption goals. Low-income individuals may use consumption as largely a means of survival. Conversely, high-income individuals may use consumption to serve higher-order goals (e.g. need for belonging, risk compensation) that can also be achieved through religion. Future research might examine these potential differences between low-income and high-income consumers.

Implications and future directions

In addition to exploring the psychological explanations for the observed effects, future research might also explore the implications to firms. For example, retailers who are interested in promoting their store brands (versus the national brands) might consider using physical cues that remind shoppers of their religious beliefs in the store (e.g. dramatic cathedral ceilings at the entrance, religious-like music). Similarly, they might consider advertising their store brands through media that attract a greater percentage of religious consumers, or using spokespersons that are associated with strongly held religious beliefs. Conversely, retailers that focus on national brands or place lower strategic importance on their store brand lines should probably avoid such cues and outlets.

In terms of what implications our results may have for consumers, one could argue that our findings should not promote any changes in their behaviors if the status quo leads to the greatest consumer satisfaction. Thus, future research should determine whether or not the nonreligious are more satisfied after buying a brand, while the religious are more satisfied after buying a store brand.

Beyond the many opportunities for future research related to the specific relationship between religiosity and brand reliance, we hope that the current research will also encourage research related to the religiosity and brand reliance constructs independently of one another. For example, future research might investigate how religiosity is related to other aspects of brands, including brand loyalty, receptiveness to different brand personalities, etc. Alternatively, future research could investigate what other factors lead to differences in brand reliance. Both of these directions may lead practitioners to interesting new consumer segmentation strategies.

In conclusion, this research has identified what we hope the reader will find to be a very interesting empirical phenomenon, supported by two distinct methodological approaches. We hope that the provocative result will prompt future research that will provide an understanding of why there is a relationship between religious practices and brand reliance, as well as how an understanding of this relationship might best be applied.

TABLE 1: DESCRIPTIVE STATISTICS

	Mean	Median	Standard Deviation	Minimum	Maximum
Brand Reliance 1	8.5989	8.0426	3.7022	2.0252	22.2857
Brand Reliance 2	0.3434	0.2667	0.2652	0.0000	1.3500
Religiosity 1	1.1804	1.0671	0.5267	0.4694	2.3466
Religiosity 2	0.5055	0.4937	0.1101	0.3131	0.7473
Religiosity 3	0.4160	0.4300	0.0940	0.2400	0.5800
Median Income	43172.4902	42649.0000	6205.2983	32397.0000	56409.0000
% of College Educated	0.2408	0.2350	0.0475	0.1480	0.3910
Per capita Retail Sales	10807.5098	10686.0000	1494.6458	5422.0000	16330.0000

Brand Reliance 1: number of Macy*s, Gap and Banana Republic stores in each state, divided by population and multiplied by 1 million.

Brand Reliance 2: number of the three department stores used for Brand Reliance 1 divided by the number of discount stores (Costco, K-Mart, Target, Wal-Mart and Sam's) in each state.

Religiosity 1: number of congregations per thousand people in each state

Religiosity 2: percentage of self-declared adherents of any religion in each state

Religiosity 3: percentage of self-reported church and synagogue attendance in each state

TABLE 2: SIMPLE REGRESSIONS (ALL STATES)

	DV: Brand Reliance 1 Estimate (t-statistic)	DV: Brand Reliance 2 Estimate (t-statistic)
Religiosity 1 Constant	-4.33 (-5.48) 13.71 (13.44) R-Squared: 0.38 Adj R-Squared: 0.37	-0.26 (-4.12) 0.65 (8.11) R-Squared: 0.26 Adj R-Squared: 0.25
Religiosity 3 Constant	-22.77 (-4.96) 18.07 (9.23) R-Squared: 0.33 Adj R-Squared: 0.32	-1.42 (-4.06) 0.93 (6.27) R-Squared: 0.25 Adj R-Squared: 0.24

TABLE 3: MULTIPLE REGRESSIONS (ALL STATES)

	DV: Brand Reliance 1 Estimate (t-statistic)	DV: Brand Reliance 2 Estimate (t-statistic)
Religiosity 1	-2.42 (-2.52)	-0.12 (-1.61)
Income	0.25E-03 (3.069)	0.18 (2.706)
Constant	0.66 (0.15)	- 0.27 (-0.78)
	R-Squared: 0.48 Adj R-Squared: 0.46	R-Squared: 0.36 Adj R-Squared: 0.33
Religiosity 3	-13.02 (-2.72)	-0.78 (-2.07)
Income	0.28 E-03 (3.85)	0.18 E-04 (3.15)
Constant	1.98 (0.44)	-0.11 (-0.31)
	R-Squared: 0.49 Adj R-Squared: 0.47	R-Squared: 0.38 Adj R-Squared: 0.35

TABLE 4: MEDIAN-INCOME SPLIT ANALYSIS WITH Brand Reliance 1 AS DV

	HIGH-INCOME STATES	LOW-INCOME STATES
	Estimate (t-statistic)	Estimate (t-statistic)
Religiosity 1 Constant	-4.99 (-2.51) 14.90 (8.03) R-Squared: 0.24 Adj R-Squared: 0.21	-2.44 (-2.77) 10.31 (8.87) R-Squared: 0.24 Adj R-Squared: 0.21
Religiosity 3 Constant	-27.60 (-3.22) 20.93 (6.39) R-Squared: 0.31 Adj R-Squared: 0.28	-10.06 (-2.05) 11.28 (4.94) R-Squared: 0.15 Adj R-Squared: 0.11

TABLE 5

	Estimate	Standard Error	t statistic
α_0	-.6598	.1233	-5.350
γ	-.0229	.0023	-9.768
σ_a^2	1.3940	0.0919	15.176

TABLE 6

	Estimate	Standard Error	t statistic
β [Low Income]	-1.2945	.2225	-5.817
β [Average Income]	-.4437	.2868	-1.547
β [High Income]	.0019	.1799	.011
γ	-.0231	.0024	-9.783
α_1 [Low Income]	.005	.4636	.011
α_1 [Average Income]	.2675	.3953	.677
α_1 [High Income]	-1.0164	.4229	-2.403
σ_α^2	1.3422	.1020	13.160

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