Grocery Shopping for America: Terrorism, National Identity, and Consumer Behavior

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Abstract

Does national identity have a causal effect on economic behavior? Survey experiments in International Relations provide causal estimates of preference with a high degree of internal validity. These results' value as theoretical microfoundations however depends on the correlation between survey responses and behavior, and the consistency of preferences across contexts and over time. Supermarket purchases are a frequent, consistent, and universal type of economic behavior. We analyze weekly supermarket sales following the 9/11 terrorist attacks to show an increased market share for American-sounding brands, brands consumers perceive to be American by virtue of nationality branding cues. The attacks increased the salience of national identity to American consumers. Findings are robust to controls for price, product availability, seasonality. Experimental results show national identity correlates with American-sounding brand preferences more than product price and other subject demographic characteristics. 9/11's effect on brand preference does not persist in 2014. These findings suggest supermarket sales are a rare behavioral correlate of international political preferences.

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1 Introduction

Scholars continue to debate the relative importance of individual and group identity in shaping preferences for global economic integration. The turn towards survey experiments in political economy subjects long-held assumptions to vigorous empirical scrutiny. A large and growing body of evidence suggests emotions such as empathy (Naoi and Kume 2011) and xenophobia (Mansfield and Mutz 2013) as well as norms like fairness (Lü et al 2012) trump simple utility maximization. Through the random assignment of treatments and control within representative samples, experiments pinpoint causal effects with a high degree of internal validity.

While debate centers on the relative importance of economic self-interest, existing research overlooks a more fundamental question: does actual behavior correlate with expressed preferences? If actions do not reflect beliefs, the microfoundations of political and economic behavior are undermined. Survey responses may fail to discriminate between self-reported attitudes or behaviors and real-world actions: social-desirability effects bias answers on a host of sensitive political issues, especially when people are asked to evaluate social groups or report socially desirable forms of behavior (Tourangeau and Yan 2007, Blair and Imai 2012). For example, questions about vote intention are poor predictors of actual voting behavior (Rogers and Aida 2012), while survey respondents are also likely to over-report church attendance (Brenner 2011) and news exposure (Prior 2009). This disconnect is especially concerning if we want to understanding how highly emotional issues and norms drive preferences. If there are large inconsistencies between survey self-reports and actual behavior, existing empirical accounts of economic policy preference formation may not accurately answer important research questions. At the same time, these inconsistencies can emerge due to peripheral processing, the influence of factors outside of respondents' conscience awareness (Kahneman 2003).

The second outstanding puzzle is how preferences vary due to context. Put differently, extant research asks *if* self-interest matters but is silent on *when* self-interest is relatively more important. Experiments, including lab-based behavioral experiments, cannot verify the consistency of preferences across changing contexts. Actors remember salient information more readily when making decisions (Gennaioli and Schleifer 2010, Bordalo et al 2013). For example, Chetty et al 2009 shows that when supermarket shelf price labels include tax, sales decline as compared to when tax information is absent. Additionally, contexts that cue specific dimensions of identities systematically produce individual choices congruent with that identity (Akerloff and Kranton 2000, LeBouef et al 2010). If the ultimate objective is developing strong theoretical microfoundations, we need to know if and how context magnifies the salience of certain emotions and norms. This is especially true in the settings most central to political economy (for example, terrorism, war (Fehr and Hoff 2011), and economic crises). For this reason, we need to measure observable behaviors over time and across changing political and economic circumstances. At stake are the external validity and

generalizability of our inferences.

In this paper, we combine analysis of observational data with an experiment to demonstrate that national identity drives universal economic behavior: grocery purchases. Supermarket purchases are consistent and frequent, which allows us to detect changes in behavior within days of a triggering event. Supermarket consumption is as close to a universal form of consumption as exists in the US, providing the sort of external validity missing from survey-based studies. The average US household purchases groceries at least once per week (Kahn and Schmittlein 1989). Consumers rely most heavily on heuristics such as brand name for low-cost purchases because the cost of acquiring information exceeds the expected utility of consumption (Maheswaran 1994). Thus, supermarket purchases are more likely to reflect implicit attitudes that operate outside of consumer' conscience awareness. Brand nationality is a cue that operates outside of consumers' conscious awareness in a manner analogous to social stereotypes (Liu and Johnson 2005, Martin et al 2011). Supermarkets sell an array of widely consumed products and provide a broad, representative sample of American consumers. Finally, scanner data provide detailed information about the context of consumption decisions including price and the variety of brands stocked. Extensive time series data allow us to model change in behavior while holding constant time invariant characteristics.

We exploit the common use of nationality in product marketing to measure fluctuation in consumers' preference for American-sounding products in response to the September 11th terror attacks and heightened terrorist threats in 2003. Terror events raised the relative salience of national identity in American consumers' consumption choices. We link consumers' sense of national identity to their brand choices via brand names that evoke American national identity as an element of marketing strategy. Brands like Sam Adams beer, Uncle Sam cereal, and Cape Cod potato chips explicitly cue American national identity. We take advantage of the fact that consumers frequently express and reinforce national identity through their brand choices (Escalas and Bettman 2005; White and Dahl 2006, 2007). For example, brand choice is an expression of consumers' self-image, including their political ideology (Khan et al 2013), self-worth (Shachar et al 2011), and social beliefs and values (Muniz and O'Guinn 2001).[1] Our identifying assumption is that these terrorism events influenced brand choice only by altering consumers' associations to American national identity.

We analyze fluctuations in American-sounding brands' market share after the September 11th terrorist attacks for over 5000 brands sold in a nationwide sample of US supermarkets. In the week following the attacks the most American-sounding brands saw an average 29% increase in market share over the previous week. This estimate accounts for changes in price, product availability, and seasonal demand. By way of comparison, the average price discount generates a 4% increase in market share over the previous week (Asmus et al 1984, Ataman et al 2009). Market share rose particularly in supermarkets with a higher proportion of customers employed in the US armed forces, a group with particularly strong attachments to US national identity.

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[1]Sources of ex-ante brand preferences include product characteristics like price and quality (Zeithaml 1988), early life exposure (Bronnenberg et al 2012), advertising (Bagwell 2007), and peer influence (Villanueva et al 2008).

While 9/11 was highly salient, the chance of unobserved, confounding factors such as supply chain disruptions is large. We confirm our baseline finding holds by examining the US Department of Homeland Security's elevated terror threat level in February 2003. The event conveyed increased terrorist threat but did not systematically influence other dimensions of supply and demand. Market share of American-sounding brands increased more in stores with higher proportions of US citizens and more blue-collar workers as customers.

Finally, we conduct an online survey experiment to verify the internal validity of our claim and to measure the persistence of terror threat on behavior. For a set of three invented, American-sounding brands subjects evaluated the brand and reported their willingness to purchase. The treatment group wrote a brief summary of their 9/11 recollections. Subjects who self-reported as nationalistic were approximately 50% more positive towards to American-sounding brands and more likely to purchase these brands than subjects who self-report as not nationalistic. Nationalism's effects are larger than brand price and subjects' education level, partisanship, and ideology. We find no treatment effect, indicating no enduring effect of 9/11 on the salience of national identity.

This research demonstrates national identity does influence everyday behavior but in a manner that varies over time and across contexts. Supermarket purchases can be used to study a wide range of topics by linking individual preferences/beliefs to the psychological underpinnings of product marketing strategies. Our novel use of nationality-based brands to measure the causal effects of national identity is particularly useful for International Relations research. Whereas in some topic areas preferences have clear corresponding behaviors, such as expressed candidate preference and voting/campaign contributions, we lack universal, behavioral correlates to expressed preferences about issues like war and international economic integration. Our insights can strengthen the behavioral microfoundations across these vital research questions.

The remainder of this article is organized into six sections. Section 2 briefly reviews key concepts in our analysis: threat, nationalism, and ethnocentrism, and develops a theory of how threat affects the salience of social identities. Section 3 describes our measures of key concepts including product sales, perceived American brand nationality, and perceived terror threat. Section 4 outlines our estimation strategy, baseline findings, and cross sectional results. Section 5 provides a robustness check, using an alternative shock to evaluate consumer responses. Section 6 describes our experimental analysis and results. Finally, Section 7 concludes by discussing the consequences of nationalistic consumption for global market integration and political behavior.

2 Terror Threats, Nationalism, and Ethnocentrism

Threats can refer to any anything with the potential to inflict harm. The September 11, 2001 terror attacks dramatically increased perceptions of threat across the US (Huddy et al 2005; Merolla and Zechmeister 2009). In general, most individuals overestimate the likelihood of terrorist threats: indeed, political agents may have incentives to overstate potential risks (Mueller 2006). As a result, we are most interested in the effects of *perceived* threat.

Since absolute measures of risk are impossible to estimate, we rely upon clear messages about threats as an indicator of perceived threats, regardless of whatever actual threat may have existed.

Since threats are both potentially harmful and outside the control of individual citizens, we expect that individuals will engage in 'coping strategies' when confronted with increased threat (Merolla and Zechmeister 2009).[2] We focus on two such coping strategies: expressing nationalism and ethnocentrism. National identity is one of many social group identities (Tajfel 1982, Tajfel and Turner 1986): in this case, it refers to affective attachment to the group of other Americans. We define nationalism as a very strong identification with the nation, which leads to "hostility toward outsiders, feelings of superiority... and uncritical support for the policies and actions of one's government" (Schildkraut 2014, 444). When threatened, nationalistic individuals are more likely to feel positively about their own nation and its government and more hostile toward other nations. Ethnocentrism, a tendency to divide the world into 'us' vs. 'them,' is another consequence of threat: the perception of danger leads individuals to more clearly demarcate the boundaries between ingroups and threatening outgroups. Survey evidence suggests that increased terror threat directly increases nationalism and ethnocentrism: As Huddy et al explain, "One of the most pervasive and powerful effects of threat is to increase intolerance, prejudice, ethnocentrism, and xenophobia" (2005, 594). Actual terrorist attacks strongly increase ethnocentrism (Kam and Kinder 2007). Nationalism and ethnocentrism are coping strategies in the sense that they provide an expressive means for responding to threats beyond one's control. We expect that increased threat directly increased nationalism, leading consumers to buy more brands that they associated with the US. At the same time, threat increased consumer ethnocentrism, the rejection of all brands perceived as foreign (Klein 2002).

At the same time, there are other potential mechanisms by which thread changes behavior. Huddy et al (2005; 2007) find that threat increases anxiety, which leads individuals to seek information and avoid risk. The perception of threat could increased individuals' sense of 'linked fate' with other members of their group, which might increase the social pressure to act in ways consistent with the group as a whole. Threat could also lead individuals to make decisions that they perceive as beneficial for all group members, rather than express nationalism for its own sake. While we cannot distinguish among these psychological mechanisms using observational data, we expect that threat will have predictable, positive effects on the expression of nationalism. We evaluate this claim with an original experimental analysis.

3 Data

Our central claim is that, when threatened by terrorism, American consumers chose brands they *perceived* to be American. Since threat increases nationalism and ethnocentrism, consumers chose to buy more brands they associated with America than those they associated with other countries. As we suggested, our identification strategy rests on the assumption

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[2]Other coping strategies include increasing support for elected leaders and supporting policies that empower leaders, even if those policies infringe on civil rights.

that increased terror threat in the wake of the 9/11 attacks represented an exogenous shock to American consumers' purchasing decisions and that the shock influenced brands' market share exclusively through its effects on consumers' changed associations with America and foreign nations. Our tests require three types of information: supermarket sales data, a measure of perceived brand nationality, and measures of terror threat increase.

3.1 Supermarket Scanner Data

We measure consumer response to terror threats using weekly supermarket sales data supplied by Information Resources Inc. (IRI), a leading source of US supermarket scanner data (Bronnenberg, Kreuger, and Mela 2008).[3] These data cover a representative sample of 1145 supermarkets across 50 geographic markets designated by IRI.[4] The 135 supermarket chains represented in our data collectively accounted for 79% of US supermarket sales in 2003 (Market Share Reporter 2004).[5]

Figure 1 About Here

We construct our store-level measure of consumer response using weekly unit sales for 5184 brands across 21 categories of grocery products.[6] Major supermarket chains stock mature brands and maintain a relatively stable portfolio of brands within each store. We aggregate data across multiple stock keeping unit (SKU) codes of a single brand-product category (e.g. 6 pack of Coke, 2 liter bottle of Coke).[7] We however do not aggregate across distinct but related brands (e.g. Coke and Diet Coke appear separately in our data). In addition to unit sales, our data reports price and size of selection, which we use as control variables in our analysis.

For each brand-product category-store in our data set we model the weekly change in the brand's market-share growth rate. Our outcome of interest is indexed by:

i: 5184 brands
j: 1154 supermarkets
k: 22 product categories
t: 156 weeks

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[3]Other studies that use IRI data include Ailawadi et al 2007, Ashenfelter, Ciccarella, and Shatz 2007, Nijs, Srinivasa, and Pauwels 2007, Pauwels, Srinivsan, and Franses 2007, Sriram, Balachander, and Kalwani 2007, and Chavis and Leslie 2009.

[4]IRI set its market definitions in 1987 to achieve a representative sample of US consumers making it unlikely that our findings are artifact of sample selection. See online appendix for a list of IRI geographic market names.

[5]In 2003, 70% of all US grocery purchases occurred in supermarkets. Of the remaining 30%, 20% were at "big box" retailers and 10% at specialty retailers (Market Share Reporter Vol. 2 2004, 681).

[6]Product categories: beer, blades, carbonated beverages, cigarettes, cold cereal, diapers, facial tissue, frozen dinners, hot dogs, laundry detergent, margarine/butter, mayonnaise, mustard/ketchup, paper towels, peanut butter, photography supplies, razors, spaghetti sauce, sugar substitutes, toilet tissue, toothbrushes, and toothpaste. IRI classifies brands into categories.

[7]A small number of brands appear in multiple product categories.

A brand's weekly store market share is the number of product units of the brand sold as a percent of all units in the product category sold in that store-week. For example, if brand i in product category (k) hot dogs had a .5 market share in a given store (j)-week (t), half of all units of hot dogs sold in that store in that week were of brand i.[8]

For every brand-product category-store in our sample we calculate both the 2001 weekly growth in market share ($Share01_{ijkt}$) and the 2003 annual growth in market share: the change in market share between 2002 and 2003 ($Share03\text{-}02_{ijkt}$). The IRI data does not include the year 2000, so our analysis of consumer responses to 9/11 relies upon weekly changes rather than annual changes. These values can be either positive or negative depending on a brand's relative sales in its product category. Measuring brand's market share, as opposed to the total number of units sold, allows us to scale that store's sales of a brand relative to overall demand for that product category in that store-week. Changes in market share also capture shifts in demand for brands as distinct from changes in demand for a particular category of product.

Analysis of brands' weekly growth rates has many desirable inferential properties. Measuring weekly change in demand within each store allows us to hold constant all time-invariant baseline characteristics of the store's customer base that influence sales, especially ex-ante customer preferences.[9] For instance a store may have never had high demand for American-sounding brands. If we were to observe sales only at time t, we could not differentiate between a change in demand and pre-existing low demand. For both analyses, we retain only brands that were sold in all weeks of 2001 or all brands sold in all weeks of 2002 and 2003, so our results are not biased by attrition and entry. We also hold constant seasonal fluctuations in brands' market share by comparing shares to the same week in the prior year for the 2003 analysis and including controls for each calendar month in the 2001 analysis.

For the 2001 analysis, we generate our dependent variable by calculating the weekly change (between week t and week $t-1$) in market share growth rate:

$\Delta Share01_{ijkt} = Share01_{ijkt} - Share01_{ijkt-1}$

3.2   Perceived Brand Nationality

We measure perceived brand nationality using the product brand names supplied in our sales data. We rely on brand name to indicate nationality because it is a highly salient, readily available cue (Usunier and Shaner 2002).[10] Survey and experimental evidence shows

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[8]We include a separate index for product category because a few brands appear in multiple product categories.

[9]It is a standard assumption in marketing that in well-established product categories, a store's customer base and its preferences are stable and any change is gradual and long term.

[10]We performed a trial experiment to test whether additional brand information influenced perceived nationality. For a random sample of brands we surveyed a randomly selected group on the nationality of brands based on the brand name, product category, and logo. A control group scored the same brands based only on brand name and product category. Answers were not statistically distinguishable between the two

that consumers systematically misidentify the national origin of products because they infer nationality from marketing cues, rather than searching for actual country of origin information (Samiee et al 2005; Balabanis and Diamantopoulos 2011). Brand nationality is a cue that operates outside of consumers' conscious awareness in a manner analogous to social stereotypes (Liu and Johnson 2005, Martin et al 2011). Consumers draw inferences based on prior associations between the implied country and the product. We use online labor market workers to assess the perceived nationality of brands.

We administered a brand coding task via Amazon.com's Mechanical Turk service (MTurk), an online marketplace for repetitive human tasks paid by piece rate. Our task presented coders with the brand name of a product and its product category, and asked the coder to select the most relevant from a set of brand nationalities.[11] Seven individuals independently coded each brand.[12] Across a range of disciplines, including Psychology (Paolacci et al 2010, Buhrmester et al 2011), Linguistics (Schnoebelen and Kuperman 2010, Sprouse 2011), and Political Science (Berinsky, Huber, and Lenz 2012) MTurk often produces more accurate results than lab-based alternatives.[13]

A possible measurement concern is that we administer the coding task in 2011 to approximate consumer perceptions in 2003. In the intervening years marketing strategies may have changed such that coders have brand associations created by post-2003 marketing. While some elements of marketing strategies could have changed the basic feature of nationality marketing would not have changed owing to the stickiness of basic brand characteristics.

AmericanScore$_i$ takes values between 0 and 7 corresponding to the number of brand coders who deemed brand *i* to be American. Brands with *AmericanScore$_i$* = 7 exhibit very strong cues of American nationality, including direct references to America or American places (All American Lights Cigarettes, American Heritage Mustard, Alaskan Pale Ale, Cape Cod Cuisine Frozen Fish, Kentucky's Best Hot Dogs, Tom's of Maine, Hollywood Mayonnaise), nationalistic figures (Sam Adams Light Beer, Uncle Sam Cereal, George Washington Carver Peanut Butter), or iconic American brands (Coca Cola, Ball Park Hot Dogs, Pabst Blue Ribbon beer). Table 1 shows example brands at each level of *AmericanScore$_i$*, while Table 2 shows the distribution of American brands across our 22 product categories.

Table 1 About Here

Table 2 About Here

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groups. This test confirms that brand names alone are sufficient nationality cues.

[11]Nationality options are French, English, Spanish, Italian, German, Chinese, Japanese; "American"; "none"; and "other." We choose this set of countries to capture the full range of countries commonly invoked in marketing strategies.

[12]After the coder submitted an answer, we were able to review the selection and choose to "accept" or "reject." Almost all rejections were for blank responses. We rejected the work of two coders who appeared to provide random responses.

[13]To enhance the likelihood that responses were in good faith and reflective of US consumers, we restricted the survey to US workers who had a high work-acceptance rate from previous MTurk employers. MTurk workers are not a random sample of the U.S. population but we have no theoretical reason to expect their perceptions of product nationality would systematically differ from the general population.

3.3 Increased Terrorism Threat

The 9/11 terrorist attacks provide an extremely salient signal of potential threat. The attacks were widely covered by all major media outlets for several days after they occurred and dramatically reshaped individuals' political preferences (Huddy et al 2005). In the weeks after September 11, 2001, about half of the US population reported that they feared being the victim of a future terrorist attack, while support for the president surged to 90% (Merolla and Zechmeister 2009, 7-9). For our primary analysis, we focus on the first full week of data available after the September 11, 2001 attacks: September 16 - 23, 2001.

4 Empirical Model and Results

4.1 2001 Empirical Model

We estimate a difference-in-difference ordinary least squares model of weekly change in each brand's rate of market share growth, $\Delta Share01_{ijkt}$ across 52 weeks:

$$\Delta Share01_{ijkt} = \beta_1 TerrorAttack_t + \beta_2 AmericanScore_i + \beta_3 \Delta Price01_{ijkt-1}$$
$$+ \beta_4 \Delta NumVariants01_{ijkt-1} + \beta_5 TerrorAttack_t * AmericanScore_i$$
$$+ \beta_{6-15} MonthIndicators + \varepsilon_{ijkt-1}$$

where

$\Delta Share01_{ijkt}$	$=$	difference in weekly share growth from t to $t-1$ for brand i-product category k in store j,
$TerrorAttack_t$	$=$	an indicator that takes the value of 1 for the week of September 16-23, 2001.
$AmericanScore_i$	$=$	number of coders that deemed brand i to be American,
$\Delta Price01_{ijkt-1}$	$=$	difference in price growth between week $t-1$ and $t-2$ for brand i-product category k in store j,
$\Delta NumVariants01_{ijkt-1}$	$=$	difference in number of variants between week $t-1$ and $t-2$ for brand i-product category k in store j,
$MonthIndicators$	$=$	indicator variables for each month,
ε_{ijkt}	$=$	normally distributed random error term.

As is standard in empirical marketing analyses, we control for two time-varying brand-store characteristics that influence fluctuations in market share (Ataman, Van Heerde, and Mela 2010). $\Delta Price01_{ijkt-1}$ is the difference between share of product price for brand i in product category k in store j between week $t-1$ and week $t-2$. This variable controls for exogenous price changes and the effect of promotional, time-limited price discounts. Non-pricing responses, such as advertising, were less likely because they require longer lead times

to implement. Price promotions are retailers' fastest response to negative demand shocks.[14] Retailers' contracts with manufacturers forbid changes to products' shelf space allocation and location so no retailer-driven change in product supply or location was possible.[15]

We also control for weekly changes in the number of varieties of a brand that a store stocks in that product category.[16] For example, Coca-Cola brand soda is available in different sizes (12, 16, 24 ounces) and packaging (aluminum cans, plastic bottles). All else equal, consumers are more likely to purchase a brand if a store stocks more varieties of it. $\Delta NumVariants01_{ijkt-1}$ is the annual change in the share of brand i's-product category k product line length in store j from a year prior in week $t-1$.

4.2   2001 Baseline Model Results

Column 1 in Table 3 summarizes our baseline model results. The coefficient on the interaction term $TerrorAttack_t * AmericanScore_i$ is the estimated causal effect of the 9/11 attack on sales of American-sounding brands. For the first full week after the attack, the growth rate of American-sounding brands' market share increases 0.0006% on average.

Table 3 About Here

Figure 2 About Here

We plot the estimated median weekly market share change for brands with $AmericanScore_i$ values above and below 3 in Figure 2. After September 11, American-sounding brands sharply increase in market share relative to less American-sounding alternatives, which experience declining marketshare. The average increase in market share change for the most American-sounding brands is 29%, relative to consumption the previous week. As the figure shows, the estimated effect of the terror attack on American brand consumption is dramatic, but short lived. In the weeks following the attack (including the weeks that the US began to invade Iraq), we estimate no comparable changes in market share for American-sounding brands.

4.3   2001 Cross-sectional Model Results

Threat has heterogenous effects on different individuals: some perceive it more acutely than others, and various social identities moderate the perception of threat (Huddy et al 2005). In particular, we suggest that those with formal membership in the nation (via birth and citizenship) will be more likely to express nationalism than non-citizens. We expect that

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[14]Manufacturers provide retailers with a trade allowance from which to finance price promotions.

[15]Manufactures negotiate with retailers for specific shelf locations for their products. Local distributors stock shelves and can monitor compliance. These agreements are negotiated chain wide and renegotiated at fixed intervals.

[16]Specifically, by counting all unique SKUs associated with the brand-product category.

less educated individuals will be more ethnocentric than more educated and cosmopolitan individuals. We evaluate the relative salience of these identities using cross-sectional data.

We obtained a supplemental IRI data set containing select demographic information for a two-mile radius around each supermarket in our sample in order to test how preexisting social identities moderate responses to threat.[17] This radius is the standard definition of a supermarket's catchment area from which it draws its customers. Due to the cross-sectional nature of these data we cannot estimate a difference-in-differences model as in the previous section. Instead we model the same outcome as in the previous analysis, weekly change in annual growth share rate, for a single week.[18] As in the previous analysis, this outcome measure holds constant the full range of time-invariant characteristics including the ex-ante preference for and availability of American-sounding brands. Thus our analysis reveals the correlation between demographics and the propensity to increase purchase of American-sounding brands.

We seek to test how preexisting social identities mediate the propensity to rely on nationalism and ethnocentrism under threat. In order to approximate the national ingroup, we use the percent of US citizens in the 2 mile radius around each store ($\%USCitizens_{jt}$) as an indicator of those most likely to express nationalism. While this measure is imperfect, it provides an estimate of formal national homogeneity: areas that have a high percentage of US citizens have high levels of formal national group membership. We expect nationalism and ethnocentrism to vary by education, which is negatively correlated with ethnocentrism (Kinder and Kam 2007, 65). While there are no measures of educational attainment in the IRI data, as a proxy we use the percent of blue collar workers near each store to estimate educational attainment ($\%BlueCollar$). We expect that stores with many blue collar shoppers will report increased American brand consumption, as those shoppers should be relatively more likely to express nationalistic identification. Our third measure of how strongly consumers identify with the US, $\%ArmedForces_{jt}$, is the percent of store j's customers employed in the US armed forces. We expect that communities with closer ties to the armed forces should exhibit stronger attachments to US national identity. Military training inculcates national identity and enlisted members pledge to sacrifice their lives if necessary in defense of the country.[19] In our sample, the average store had only .72% of its customers employed in the armed forces. Stores in four Virginia counties/independent cities are the top end of the distribution: Hopewell City (61%), Newport News (29%), Norfolk City (29%) and Virginia Beach City (32%), followed by stores in San Diego County, California (28%). Seventeen percent of the stores in our sample had no customers employed in the armed forces. Although armed forces employment is highly concentrated in our sample, this variable controls for a subpopulation of consumers most likely to have exceptionally strong attachments to US national identity.

Table 4 shows summary statistics for each cross sectional variable.

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[17]IRI derived these data from the 2000 decennial US census. The data set includes a handful of other demographic characteristics, many of which are not directly relevant such as household appliance ownership.

[18]Throughout this section "market share" refers to the weekly change in annual growth rate of a brand's market share.

[19]Arguably, even civilian armed forces employees would have a heightened sense of US national identity.

Table 4 About Here

We estimate the model:

$$
\begin{aligned}
\Delta Share01_{ijkt} = {} & \beta_1 AmericanScore_i + \beta_2 \%USCitizen_{jt} + \beta_3 \%USCitizen_{jt} * AmericanScore_i \\
& + \beta_4 \%BlueCollar_{jt} + \beta_5 \%BlueCollar_{jt} * AmericanScore_i + \beta_6 \%ArmedForces_{jt} \\
& + \beta_7 \%ArmedForces_{jt} * AmericanScore_i \beta_8 \Delta Price01_{ijkt-1} + \beta_9 \Delta NumVariants01_{ijkt-1} \\
& + \varepsilon_{ijkt-1}
\end{aligned}
$$

where $t =$ the week of September 16-23, 2001.

Table 5 About Here

The full results appear in Table 5, with both the complete model (column 5) and individual models for each cross sectional variable (columns 1-4). As expected, the percent of individuals serving in the armed forces *ArmedForces$_{jt}$* predicts increased American brand consumption, but surprisingly, we find a nonsignificant relationship for both the percent of US citizens *%USCitizen$_{jt}$* and the percent of blue collar workers *%BlueCollar$_{jt}$* with increased American brand market share.[20] These suggestive results indicate that for at least members of the armed forces, 9/11 increased nationalistic consumption, especially for brands most likely to be perceived as American.

5   Robustness Test: 2003 Terror Threat

While 9/11 was an extremely salient threat, it may have affected the availability of products in unobserved ways. While we control for changes in the price and availability of each item in our sample, the supply of a subset of brands may have been systematically more likely to be affected by the attacks than others. We also lack comparable data from 2000, so we cannot estimate annual average changes in market share against baseline consumption in the previous year.

As a result, we conduct an additional analysis using data from 2003, when the Department of Homeland Security first raised the terror threat level in the lead-up to the war in Iraq. This threat level increase conveys increased risk but did not directly affect the supply of goods and services available to consumers. Unlike 9/11, the DHS threat increase only changed the formal procedures of law-enforcement and national security agencies (Klick and Tabarrok 2005). Grocery stores and product distributors were not affected by the change, so consumers were as likely to have the same level of access to their usual range of brands. The threat level increase should also have relatively constant effects on individuals across the full US: since the warning was not region or city specific, we expect that all Americans perceived some degree of increased risk after exposure to the threat. The 2003 analysis also incorporates

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[20]In a supplementary analysis (available upon request), we find that the percent of foreign born US citizens has a statistically significant positive relationship with increased American-sounding brand market share change.

annual changes in market share, price, and product availability thanks to the availability of year 2002 data.

In order to assess when terrorism was most salient and threatening across 2003, we focus on the first week in 2003 in which the Department of Homeland Security raised the official terror threat level (part of the Homeland Security Advisory System) from yellow to orange: February 3-9. According to the DHS, code orange suggested high risk of a terrorist strike, while yellow refers to elevated risk. While the threat level alert system was abandoned in 2010, changes were widely reported in the US media at the time and there were four such increases in 2003. We examine the first, which occurred on February 7, because it was only the second time that the threat level was raised since the system's introduction in March 2002.

While there is unambiguous evidence that 9/11 raised public perceptions of threat across the US, we argue that a similar process occurred in March of 2003, as the Bush administration made its case for the invasion of Iraq. Opinion surveys suggest that the public was aware of potential terror threats in 2003: a Gallup poll conducted February 22 found that 85% of the public paid as much or more attention to threat changes as they did the previous year. However, publicized threats were unlikely to dramatically change behavior: only 10% of Americans said they planned to avoid public spaces in response to the February 7 threat change, while 15% said they planned to fly commercial airlines less often.[21] We do not expect that terror threats in 2003 dramatically reshaped individuals' day-to-day behavior: since there were no major terror attacks on US soil, it is unlikely that individuals would change routines due to an increased terror threat warning. However, brand choice offers a less costly and perhaps less conscious way to express both nationalism and ethnocentrism.

While individuals may have perceived the threat represented by the warning level shift in different ways, on average we expect that these messages were an unambiguous signal of increased risk. In a Gallup poll conducted February 7-9 found that fully 48% of US adults were 'very' or 'somewhat' worried that they or someone in their immediate family would be a victim of a terrorist attack.[22] The threat level increase should also have relatively constant effects on individuals across the full US: since the warning was not region or city specific, we expect that all Americans perceived some degree of increased risk after exposure to the threat. The DHS subsequently lowered the threat level and raised it again on March 17, May 20, and December 21. However, we expect that these additional alerts were weaker signals of potential threat. Shapiro and Cohen (2007) suggest that over time, "the system became increasingly perceived as politically manipulated" (121).[23]

As before, we estimate a difference-in-difference ordinary least squares model of weekly change in each brand's rate of market share growth. However, thanks to increased data availability, we can estimate the annual difference in market share growth between 2003 and year 2002:

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[21]*Los Angeles Times* Poll N=1385, February 7-8, 2003

[22]N=1000. Women were more likely than men to report worry, but there are almost no differences by party, ideology, or region.

[23]In Table 6, we estimate a version of the baseline model with indicators for each additional week in 2003 that the DHS raised the threat level but do not observe an effect for any of the subsequent weeks.

$$\Delta Share03\text{-}02_{ijkt} = Share03\text{-}02_{ijkt} - Share03\text{-}02_{ijkt-1}$$

Taking the annual difference in annual share growth controls for variation across product categories in the frequency of purchase. For instance, consumers typically purchase toothpaste less frequently than frozen dinners. Annual difference also controls for any systematic correlation between the propensities to consume a particular type of product and to change consumption behavior (e.g. if the preference to purchase frozen dinners and the propensity to buy American-sounding frozen dinners are different manifestations of the same underlying consumer characteristic). By estimating a model of annual change we control for unit roots that may arise with inclusion of lagged growth rates.

We estimate the model:

$$\Delta Share03\text{-}02_{ijkt} = \beta_1 TerrorThreat_t + \beta_2 AmericanScore_i + \beta_3 \Delta Price03\text{-}02_{ijkt-1}$$
$$+ \beta_4 \Delta NumVariants03\text{-}02_{ijkt-1} + \beta_5 \Delta Share03\text{-}02_{ijkt-1}$$
$$+ \beta_6 TerrorThreat_t * AmericanScore_i + \varepsilon_{ijkt-1}$$

As before, we control for time-varying brand-store characteristics that influence fluctuations in market share. These include both price: $\Delta Price03\text{-}02_{ijkt-1}$ and product availability: $\Delta NumVariants03\text{-}02_{ijkt-1}$. Since we obtained year 2002 data, we calculate annual average changes in price and availability, rather than weekly differences as in the 9/11 analysis. On average, brand shares changed little from 2002 to 2003, indicating overall market stability. Our controls for prices and number of product varieties stocked were similarly stable as is characteristic of sales in well-established grocery retailers. We lag both variables one week in case weekly fluctuations in price or number of varieties are caused by fluctuations in market-share. Finally, we include lagged market share, $\Delta Share03\text{-}02_{ijkt-1}$, to control for unobserved factors that affect product sales beyond price and product line length.

5.1   2003 Baseline Model Results

Column 1 in Table 6 summarizes our 2003 baseline model results. The coefficient on the interaction term $TerrorThreat_t * AmericanScore_i$ is the estimated causal effect of the increased terror threat that took place February 7 on sales of American-sounding brands. For the week that the threat level was increased, the growth rate of American-sounding brands market share increases 0.0002% on average. Across all other weeks that the DHS raised the threat level (March 17, May 20, December 21), we observe no effect. A model with indicators for each additional week appears in column 2 of Table 6.

Table 6 About Here

Figure 3 About Here

We plot the estimated median weekly market share change for brands with $AmericanScore_i$ values above and below 4 in Figure 3. As the figure shows, the estimated effect of terror threats on American brand consumption is dramatic, but short lived. In the weeks fol-

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lowing the threat (including the weeks that the US began to invade Iraq), we estimate no comparable changes in market share for American-sounding brands. The magnitude of the change following the initial threat level change is large: the average predicted market share change for all brands across all weeks in the sample is -0.00002. But for brands with an $AmericanScore_i > 3$ we predict an increase in market share of 0.00028. For brands with $AmericanScore_i > 5$ in our test week, we predict a mean increase of 0.00051. No other events in 2003 caused similar changes in the market share of American-sounding brands.

5.2 2003 Cross-sectional Model Results

As before, we conduct a cross-sectional analysis using demographic information for each store in order to test the relationship between increased American market share and other salient identities. Table 4 shows summary statistics for each cross sectional variable, which are also used in the 2001 analysis. We estimate the model:

$$
\begin{aligned}
\Delta Share03\text{-}02_{ijkt} = {} & \beta_1 AmericanScore_i + \beta_2 \%USCitizen_{jt} + \beta_3 \%USCitizen_{jt} * AmericanScore_i \\
& + \beta_4 \%BlueCollar_{jt} + \beta_5 \%BlueCollar_{jt} * AmericanScore_i + \beta_6 \%ArmedForces_{jt} \\
& + \beta_7 \%ArmedForces_{jt} * AmericanScore_i + \beta_8 \Delta Price03\text{-}02_{ijkt-1} \\
& + \beta_9 \Delta NumVariants03\text{-}02_{ijkt-1} + \beta_{10} \Delta Share03\text{-}02_{ijkt-1} + \varepsilon_{ijkt-1}
\end{aligned}
$$

where $t =$ the week of February 7, when the DHS first increased the threat level in 2003.

Table 7 About Here

The full results appear in Table 7, with both the complete model (column 5) and individual models for each cross sectional variable (columns 1-4). As expected, the percent of US citizens near each store predicts increased American brand consumption, as does the percent of blue collar workers. Both interaction terms are positive and statistically significant: stores in the top quartile of $\%USCitizen_{jt}$ feature an average market share change of 0.00292 for $AmericanScore_i > 3$ brands, while stores in the top quartile of $\%BlueCollar_{jt}$ feature a share change of 0.00252 for the same brands. By contrast, stores in the lowest quartile of $\%USCitizen_{jt}$ and $\%BlueCollar_{jt}$ feature predicted share change values of 0.00104 and 0.00173 for the same category of brands. Surprisingly, the percent of individuals employed by the armed forces has a negative and statistically insignificant relationship with increased American brand choice.

6 Experimental Evidence: Nationalistic Consumption

In order to identify the mechanisms by which nationalism shapes brand preference, we conduct a 2x2 online survey experiment with subjects recruited from Amazon's Mechanical Turk. From November 5-7, 2014, we recruited a total of 276 participants based in the U.S. with favorable past performance on MTurk with an invitation to take part in a short survey. Participants were paid $0.25 for their participation and the average completion time was 3

minutes and 45 seconds. Like most samples drawn from Mechanical Turk, ours is younger, more liberal, and more educated than a simple random sample of the U.S. population. As a result, we are limited in our ability to generalize from these findings to the population of all U.S. consumers. However, these results provide strong evidence that, for this sample of consumers, nationalism is the only important predictor of American brand preferences.

First, subjects were randomly assigned to one of two conditions: one in which they were asked to write a brief statement about personal memories of September 11th, 2001 or a control group in which they were asked to write about memories of New Year's Eve, 2000. Participants then answered several demographic items and were again randomly assigned to evaluate three fictitious brands. Half of participants were asked to evaluate brands that contained geographic or symbolic references to America, while the other half were asked to evaluate brands with other national cues. We adapted actual brands that were rated as very American-sounding in the original coding task for these treatments, but chose to create fictional alternatives so that the participants would not be affected by prior associations with each brand. Participants were asked to evaluate how positive or negative they felt toward each brand and asked to indicate on a 1-5 scale how likely they would be to purchase the brand in question. We also randomly assign item prices, including a baseline price and high and low prices that are 10% more or less expensive than each baseline.

Table 8 shows each possible treatment combination and the number of respondents assigned to each condition. Each of the four main treatment combinations also includes three price randomizations, which had no statistically significant effect on either dependent variable. After evaluating the fictional brands, participants completed a three-item nationalism questionnaire (ANES 2004) that serves as a manipulation check.

Table 8 About Here

First, we tested which exposure to the 9/11 memory task increased expressed nationalism relative to the Y2K control condition. While those exposed to the treatment were marginally more likely to express nationalistic sentiment (.04 on a 0-1 scale), a difference in means test shows that the effect is not statistically significant (p = .17, N=293). We find no significant effects for exposure to the 9/11 memory task on brand preference or evaluation, across both American and non-American brands. This suggests that our experimental manipulation failed to evoke nationalistic sentiment and thus had no meaningful effect on brand choice or preference.

However, by exploring cross sectional variation in American brand evaluations by self-reported nationalism, we can still assess the relationship of interest. To start, we limit our analysis to the 151 respondents who were exposed to the American brands. For this subset of the sample, the 9/11 treatment again had no significant effect on expressed nationalism. The average score on the three-item nationalism scale (recoded 0-1) is .60, so we group respondents above and below this cutoff for an initial analysis. We find that those who expressed above average nationalism were more likely to feel positively toward American brands. On average, nationalistic participants rated the three American-sounding brands

19% more positively than less nationalistic participants (p = .001, two-sided test) and were 24% more likely to indicate that they would purchase the products (p = .005, two-sided test).

We estimate two OLS regression equations to summarize these results, alongside controls for randomized item price, political ideology, partisanship, income, and education. Nationalism here is the 0-1 continuous measure, rather than the dichotomous version. All variables are recoded 0-1 to aid interpretation. The full results appear in Table 9:

Table 9 About Here

The only significant predictor of positive American-sounding brand evaluation is expressed nationalism, though increased price has an expected negative effect. The effect of nationalism is large and statistically significant in the expected direction: moving from the lowest value of expressed nationalism to the highest is associated with a 0.26 point increase in American product evaluation and a 0.21 percent increase in expressed willingness to purchase the brand. These reflect overall evaluation shifts of 48% and 50% relative to baseline preferences, respectively.

We view the analysis above as preliminary but suggestive. Our 9/11 memory task did not increase reported nationalism and may be a weak proxy for the key explanatory variable in the larger project: perceived threat. However, this secondary analysis shows that nationalistic individuals are more likely to prefer American-sounding brands, even when those brands are invented. This effect is robust to the inclusion of controls for partisanship, ideology, income, education, and most importantly, price. We plan to build on this analysis by priming more salient national threats, including recent terrorist statements and public health crises. We also intend to replicate the findings reported here with a more nationally representative sample to better generalize to the population of American consumers.

7   Conclusion

We have provided evidence that national identity has a causal effect on observable consumer behavior. While existing research proposed a link between expressed nationalism and expressed policy preferences, the survey context is an imperfect tool for measuring behavioral changes. By identifying an exogenous change in perceived threat, we estimate that nationalistic identification led Americans to choose brands that reinforced their own national identity. After exposure to the threat, American consumers chose to buy more brands they perceived as American. Controlling for price, availability, and preexisting levels of consumption, we estimate that the most American-sounding brands enjoyed a substantively meaningful market share increase relative to brands that lacked American cues in both 2001 and 2003.

This result suggests that other-regarding preferences are an important determinant of observable economic behavior. Consumers who perceived that their national group was under threat chose to express affinity for that group by purchasing brands that cue American identity. This form of expressive political behavior suggests that national identification

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has far-reaching effects on real-world behavior, and illuminates an important theoretical microfoundation in political economy: the relative importance of national group identity and self-interest.

We also demonstrate that preexisting social identities moderate the relationship between threat and expressed nationalism. Those who are predisposed to national identity, including US citizens and members of the armed forces, were more likely to want to purchase American brands than those who were not formal citizens. Our proxy measure of education suggests that less educated consumers were more likely to express nationalistic sentiment in their purchasing decisions. At the same time, our experimental analysis strongly suggests that nationalism is the most important determinant of American brand choice. Indeed, the effect of self-expressed nationalism on brand evaluation and willingness to purchase is much larger than item price, respondent education, partisanship, and other rival explanations.

Future research should focus on both the mechanisms by which international conflicts shape behavior and a engage a larger set of behavioral responses to political events. Opinion surveys may not predict political behavior: even emphatic answers to survey questions may ultimately consist of little more than cheap talk. We have argued that consumer brand choice reveals the importance of nationalism and demonstrated that international conflicts affect consumption behavior in predictable ways. Nationalism has far-reaching effects on political behavior and its consequences may appear in unexpected places - including the checkout line.

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Table 1: Brand Examples across *AmericanScore$_i$* Values

AmericanScore$_i$ Values	Brand Example (Product Category)
7	Sam Adams Boston Lager (beer)
	Coca Cola (carb. beverages)
6	Land O' Lakes (margarine/butter)
	Phillies (hot dogs)
5	Olde Cape Cod (spaghetti sauce)
	Swanson American Recipes (frozen dinners)
4	New England (ketchup/mustard)
	Dad's Root Beer (carb. beverages)
3	Maple Leaf (hot dogs)
	Van De Kamps (frozen dinners)
2	Life in Provence Aioli (mayonnaise)
	Dietz & Watson (ketchup/mustard)
1	Royal Scot (margarine/butter)
	World Trend (toothbrushes)
0	König Ludwig Weiss (beer)
	Cucina Antica (spaghetti sauce)

AmericanScore$_i$ =Number of coders that deem brand *i* to be "American"

Table 2: Distribution of Perceived American Brands

Category	Total Number of Brands	Number of Brands with $AmericanScore_i > 3$	Percent of Brands with $AmericanScore_i > 3$
Beer	1207	229	19 %
Blades	58	39	67 %
Carb. Beverages	505	213	42 %
Cigarettes	277	86	31 %
Cold Cereal	227	104	46 %
Diapers	53	21	40 %
Facial Tissue	79	41	52 %
Frozen Dinners	321	126	39 %
Hot Dogs	450	192	43 %
Laundry Det.	168	78	46 %
Margarine/Butter	101	50	50 %
Mayonnaise	139	39	28 %
Mustard/Ketchup	518	189	36 %
Paper Towels	37	15	41 %
Peanut Butter	76	33	43 %
Photo Supplies	46	28	61 %
Razors	8	6	75 %
Spaghetti Sauce	461	65	14 %
Sugar Substitute	71	35	49 %
Toilet Paper	50	22	44 %
Toothbrushes	218	63	29 %
Toothpaste	114	59	52 %

Table 3: 2001 Weekly Change in American Brands' Share Growth

	(1)
$AmericanScore_i$	**-0.00016**
	(0.00011)
$TerrorAttack_t$	**-0.00334**
	0.00083
$TerrorAttack_t * AmericanScore_i$	**0.00070**
	(0.00013)
$\Delta Price01_{ijkt-1}$	**-0.00904**
	(0.00006)
$\Delta NumVariants01_{ijkt-1}$	**0.00095**
	(0.00001)
R^2	0.0205
Observations	102,223,802

Standard errors in parentheses; coefficients significant at (two-tailed) p < 0.01 are in **bold**. The results reported here omit the coefficients for eleven monthly indicator variables; full results are available from the authors upon request. These results are robust to the omission of monthly controls and the inclusion of an indicator variable for the week of 9/11.

Table 4: Cross-section Variable Summary Statistics (2001 and 2003)

Variable	Mean	Std. Dev.	Min	Max
$\%USCitizen_{jt}$	93.2%	6.8	50.6%	100%
$\%BlueCollar_{jt}$	17.0%	4.5	3.4%	30.8%
$\%ArmedForces_{jt}$	0.7%	3.0	0%	60.6%

Table 5: Consumer Demographics and Cross-sectional Variation - 2001 Analysis

	(1)	(2)	(3)	(4)	(5)
$AmericanScore_i$	**0.00339**	0.00098	**0.00044**	**0.00102**	0.00409
	(0.00172)	(0.00050)	**(0.00013)**	**(0.00015)**	(0.00179)
$\%USCitizen_{jt}$		0.01397			0.01644
		(0.01147)			(0.01163)
$\%USCitizen_{jt}*AmericanScore_i$		-0.00309			-0.00347
		(0.00185)			(0.00186)
$\%BlueCollar_{jt}$			0.01661		0.01539
			(0.01786)		(0.01786)
$\%BlueCollar_{jt}*AmericanScore_i$			-0.00277		-0.00254
			(0.00287)		(0.00287)
$\%ArmedForces_{jt}$				-0.15074	**-0.15886**
				(0.06675)	**(0.06708)**
$\%ArmedForces_{jt}*AmericanScore_i$				0.02307	**0.02478**
				(0.01074)	**(0.01079)**
$\Delta NumVariants_{ijkt-1}$	**0.00118**	**0.00118**	**0.00118**	**0.00118**	**0.00112**
	(0.00000)	**(0.00001)**	**(0.00001)**	**(0.00001)**	**(0.00001)**
$\Delta Price_{ijkt-1}$	**-0.01123**	**-0.01123**	**-0.01123**	**-0.01124**	**-0.01123**
	(0.00173)	**(0.00038)**	**(0.00038)**	**(0.00038)**	**(0.00038)**
R^2	0.0284	0.0284	0.0284	0.0284	0.0284
Observations	2,064,406	2,064,406	2,064,406	2,064,406	2,064,406

Standard errors in parentheses; coefficients significant at (two-tailed) $p < 0.05$ are in **bold**. t = the week ending September 24, 2001

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Table 6: 2003 Weekly Change in American Brands' Share Growth

	(1)	(2)
$AmericanScore_i$	-0.00001	-0.00001
	(0.00001)	(0.00001)
$TerrorThreat_t$	**-0.00064**	-0.00062
	0.00029	(0.00029)
$TerrorThreat_t * AmericanScore_i$	**0.00020**	**0.00019**
	(0.00006)	**0.00006**
$TerrorThreat2_t$		-0.00004
		(0.00028)
$TerrorThreat2_t * AmericanScore_i$		0.00002
		(0.00006)
$TerrorThreat3_t$		-0.00003
		(0.00029)
$TerrorThreat3_t * AmericanScore_i$		-0.00003
		(0.00006)
$TerrorThreat4_t$		0.00047
		(0.00028)
$TerrorThreat4_t * AmericanScore_i$		-0.00010
		(0.00006)
$\Delta Price03\text{-}02_{ijkt-1}$	**-0.01467**	**-0.01467**
	(0.00006)	**(0.00006)**
$\Delta NumVariants03\text{-}02_{ijkt-1}$	**0.85408**	**0.85408**
	(0.00052)	**(0.00052)**
$\Delta Share03\text{-}02_{ijkt-1}$	**-0.09614**	**-0.09614**
	(0.00024)	**(0.00024)**
R^2	0.1591	0.1682
Observations	1,772,762	1,772,762

Standard errors in parentheses; coefficients significant at (two-tailed) $p < 0.01$ are in **bold**.
$TerrorThreat2_t - TerrorThreat4_t$ are indicators for subsequent increases in DHS threat level, which occurred March 17, May 20, and December 21.

Table 7: Consumer Demographics and Cross-sectional Variation - 2003 Analysis

	(1)	(2)	(3)	(4)	(5)
$AmericanScore_i$	**0.00014**	**0.01948**	-0.00047	**0.00015**	**-0.00516**
	(0.00006)	(0.00442)	(0.00025)	(0.00006)	(0.00095)
$\%USCitizen_{jt}$		**-0.02136**			**-0.02105**
		(0.00474)			(0.00477)
$\%USCitizen_{jt} * AmericanScore_i$		**0.00545**			**0.00519**
		(0.00099)			**(0.00100)**
$\%BlueCollar_{jt}$			-0.01398		-0.01076
			(0.00670)		(0.00151)
$\%BlueCollar_{jt} * AmericanScore_i$			**0.00361**		**0.00262**
			(0.0010)		**(0.0013)**
$\%ArmedForces_{jt}$				0.00331	0.00138
				(0.00979)	(0.0056)
$\%ArmedForces_{jt} * AmericanScore_i$				-0.00060	-0.00186
				(0.00204)	(0.00505)
$\Delta Price03\text{-}02_{ijkt-1}$	-0.00042	-0.01535	-0.01536	-0.01533	**-0.01587**
	(0.00048)	(0.00048)	(0.00048)	(0.00048)	**(0.00052)**
$\Delta NumVariants03\text{-}02_{ijkt-1}$	0.84953	0.89552	0.84955	0.84956	0.84960
	(0.00384)	(0.00385)	(0.00385)	(0.00384)	(0.00387)
$\Delta Share03\text{-}02_{ijkt-1}$	-0.08116	-0.08121	-0.08119	-0.08116	-0.08122
	(0.00173)	(0.00173)	(0.00173)	(0.00173)	(0.00173)
R^2	0.1526	0.1527	.1526	0.1526	0.1528
Observations	294,562	294,562	294,562	294,562	294,562

Standard errors in parentheses; coefficients significant at (two-tailed) $p < 0.05$ are in **bold**. t = the week ending February 9, 2003

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Table 8: 2x2 Experimental Design

	American Brands	Non-American Brands
9/11 Threat Condition	N=84	N=66
Y2K New Years Condtion	N=67	N=59

Table 9: Nationalism's Effect on American Product Evaluation and Willingness to Purchase

	American Product Evaluation	American Product Willingness to Buy
Nationalism	**0.256**	**0.213**
	(0.067)	**(0.067)**
Price	-0.094	-0.087
	(0.058)	(0.059)
Ideology (1=Very Conservative)	-0.013	0.003
	(0.015)	(0.015)
Republican	0.016	-0.006
	(0.063)	(0.063)
Democrat	0.041	0.037
	(0.055)	(0.055)
Income	0.008	0.052
	(0.065)	(0.064)
Education	-0.161	-0.125
	(0.093)	(0.091)
Constant	**0.446**	**0.355**
	(0.094)	**(0.090)**
R^2	0.14	0.10
Observations	146	150

Standard errors in parentheses; coefficients significant at (two-tailed) $p < 0.01$ are in **bold**.
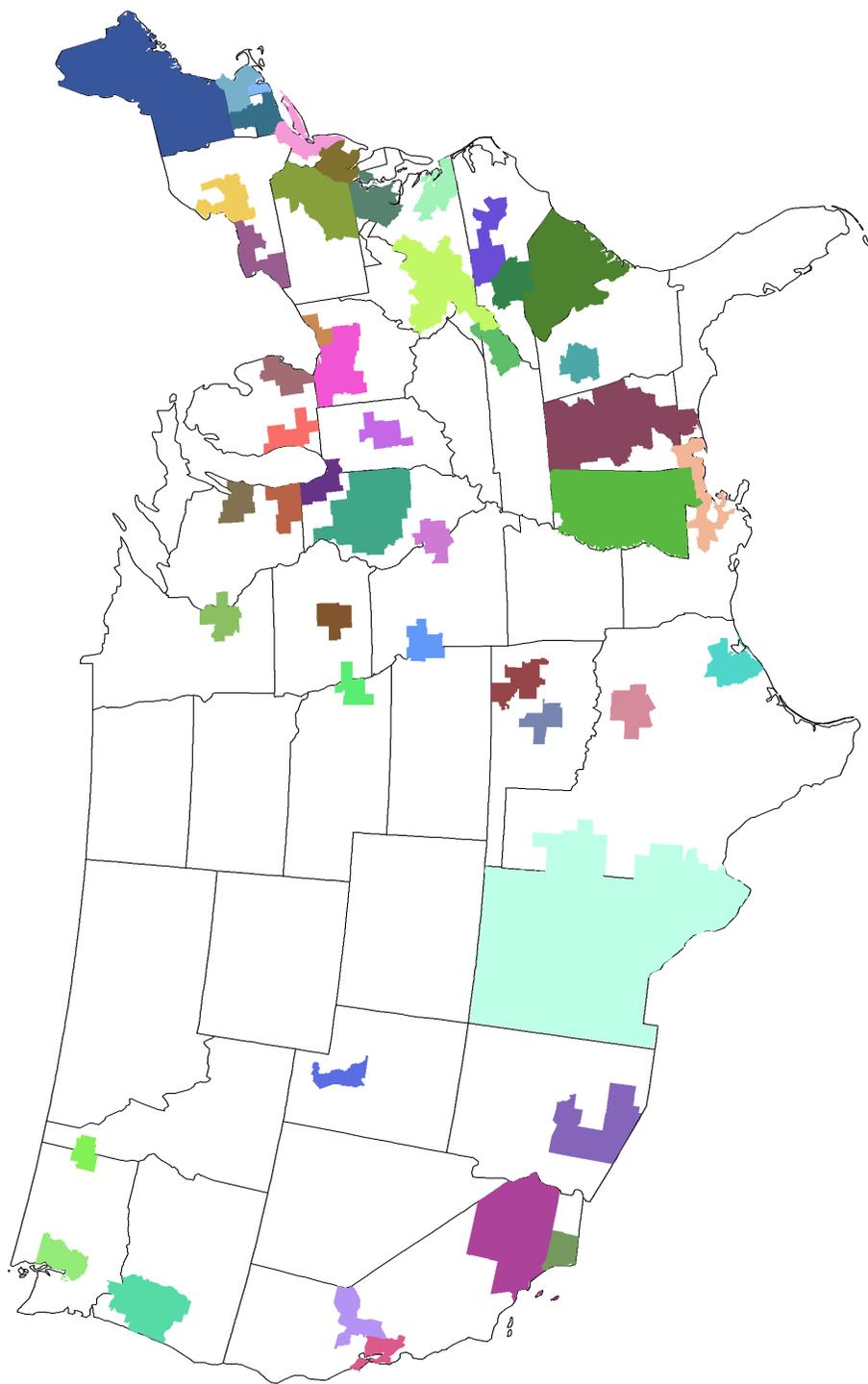
Figure 1: Geographic Coverage of Weekly Supermarket Sales Data

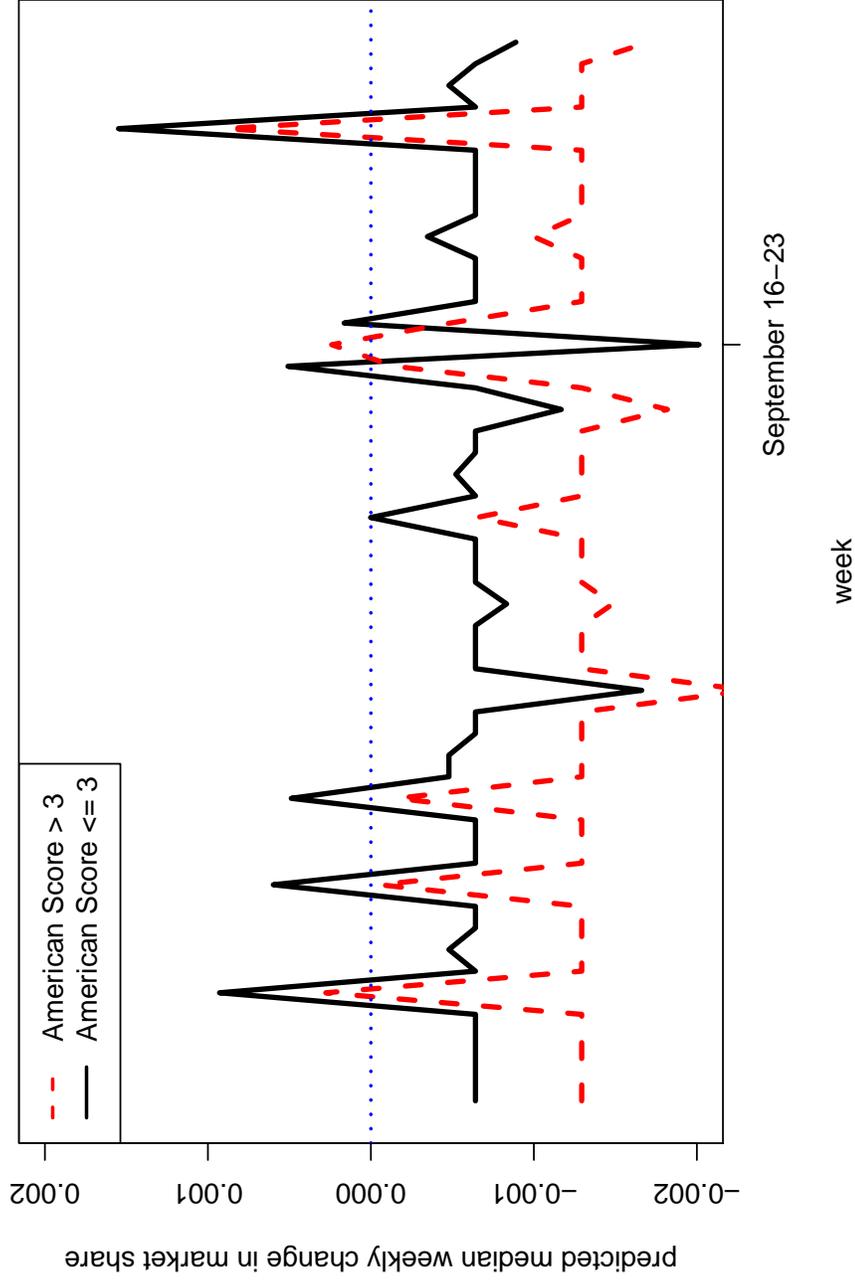Market boundaries as defined by IRI Inc. Colors distinguish adjacent markets.

Figure 2: Predicted Market Share of Foreign and American-Sounding Brands - 2001

The red dashed line plots weekly fluctuation in weekly brand market-share growth for brands that consumers perceive to be American. The black line plots the weekly fluctuation in annual brand share growth of the other brands in the sample, many of which are foreign-sounding. The figure illustrates that the increased market share for American brands corresponds with our test week: September 16-23.
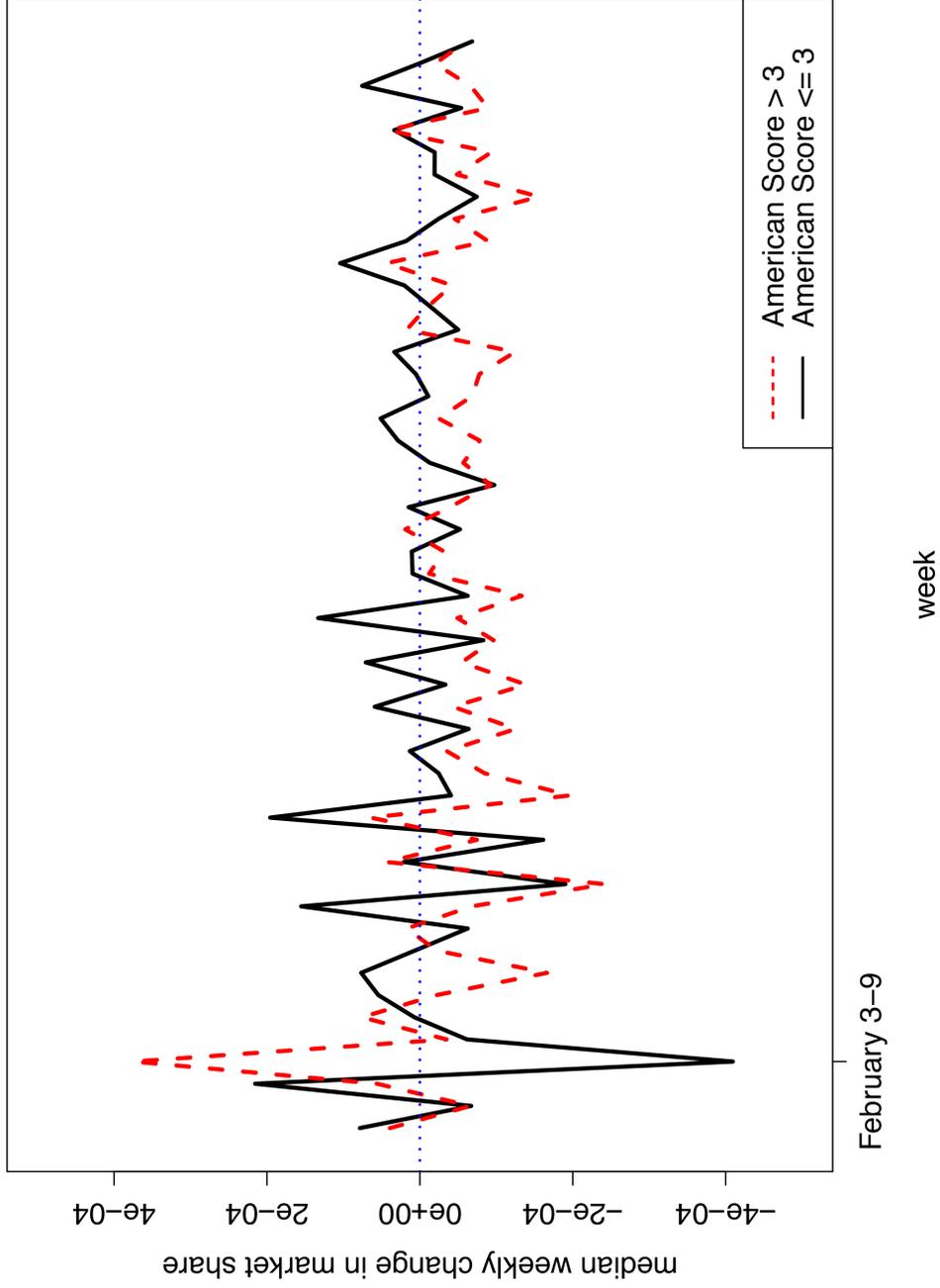
Figure 3: Predicted Market Share of Foreign and American-Sounding Brands - 2003

The red dashed line plots weekly fluctuation in annual brand market-share growth for brands that consumers perceive to be American. The black line plots the weekly fluctuation in annual brand share growth of the other brands in the sample, many of which are foreign-sounding. The figure illustrates that the increased market share for American brands corresponds with our test week: February 3-9.