## WAR ON AISLE 5: CASUALTIES, NATIONAL IDENTITY, AND CONSUMER BEHAVIOR<sup>\*</sup>

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#### Abstract

A growing body of research argues that external threats from the international system strengthen ethnocentrism and authoritarianism, personal values anchored in national identity. We evaluate a necessary implication of this argument, that threat-driven value change manifests in broader social behaviors. Specifically, we analyze revealed value change in a non-political setting: American consumers' choice of supermarket brands that symbolize national identity. Our empirical analyses leverage US counties' quasirandom exposure to US Iraq War casualties to identify the effects of local casualties on the weekly market share growth of "American" supermarket brands. Using weekly supermarket scanner data for a representative sample of over 1,100 US supermarkets and 8,000 brands, we find that the weekly market share of American brands grew in fallen soldiers' US hometowns. Variation in share growth across store demographics is consistent with the external threat mechanism. We rule out several alternative mechanisms including partial cues, other product characteristics of American brands, and animosity towards other countries. These findings strengthen IR's theoretical microfoundations by showing that international politics reshapes values enough to change broader social behavior.

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## 1 Introduction

International relations (IR) scholars theorize that personal values shape foreign policy attitudes (Hurwitz and Peffley 1987; Herrmann et al. 1999; Rathbun et al. 2016). These scholars treat personal values as exogenous, relatively stable traits that underpin perceptions and behavior beyond the political sphere. Recent scholarship challenges these assumptions. External threats from the international system can strengthen ethnocentric and authoritarian values, which privilege the superiority of one's own social group (Mansfield and Mutz 2009; Ballard-Rosa et al. 2021a).<sup>1</sup> Current research explains value change as a psychological response to external threats such as terrorism (Berrebi and Klor 2008; Getmansky and Zeitzoff 2014) and foreign economic competition (Colantone and Stanig 2018).

In this article, we probe the scope of value change by analyzing how threats from the international system drive non-political behavior. If international politics reshapes core personal values, changed values should manifest in broader patterns of behavior. Current research focuses on explicitly political behaviors such as voting and infer value change from vote shares for far-right parties, but vote choice is complex and multi-dimensional, limiting our ability to directly infer value change. Empirically, demonstrating value change over time in response to external threats proves difficult, and identifying a consequential non-political behavior that reveals broader value change is challenging.

Our study focuses on behaviors associated with national identity, a particularly salient group identity that underpins ethnocentrism and authoritarianism (Kunovich 2009; Vargas-Salfate et al. 2020). If external threat strengthens ethnocentric and authoritarian values, individuals necessarily deepen attachments to group identities underlying these values. Furthermore, we draw on the insight that people express their identity and values through what they buy (Belk 1988). We develop a theoretical framework that builds upon a well-

<sup>&</sup>lt;sup>1</sup>Ethnocentrism is a tendency to parse the world into "superior" in-groups and "inferior" out-groups (Kinder and Kam 2009). Authoritarianism is a preference for order and conformity, which should be achieved by force if necessary (Altemeyer 1981).

documented pattern in American consumer behavior: Americans express their national identity by purchasing brands that symbolize American identity (hereafter: American brands) (Shimp and Sharma 1987). Brands cue national identity through names, logos, advertising, and other brand characteristics. For example, Sam Adams, a brand of beer, invokes a prominent figure in American colonial history.

We argue that, if external threats reshape values in ways that make national identity more important, Americans exposed to threats will switch to American brands. We analyze the effect of local US Iraq War casualties on the local weekly market share of American brands during 2003-2006. Casualties threaten the symbolic meaning of national identity (Althaus and Coe 2011; Koch and Nicholson 2016) and, in the context of the Iraq War, were reminders of terrorist threat (Gershkoff and Kushner 2005). For a given store-week, a local casualty is the death in that week of an American soldier whose hometown is located in the same county as the store. We hypothesize that local casualties increase growth in American brands' market share in local supermarkets.

Consumer behavior is an insightful setting to examine broader value change for several reasons. First, brand preferences, much like political preferences, reflect both material and non-material considerations. As an external threat, local causalities potentially change values but do not affect other aspect of consumption such as supply or product characteristics. Our research design allows us to observe whether changed values drive a tangible behavior: how consumers spend their own money. Second, we can observe change in revealed attachment to national identity over time in an ostensibly unrelated domain. Unlike most political behaviors, supermarket purchases are a frequent, consistent, well-documented, and nearly universal behavior in the United States (Kahn and Schmittlein 1989; Sorensen et al. 2017). Consumption can offer insights into external threat responses of groups excluded or alienated from political participation and polling. Evidence of heightened national identity in this domain increases our confidence that external threat produces broader changes in personal values.<sup>2</sup> Third, supermarket brand choices rely heavily on psychological processes outside of consumers' conscious awareness (Petty and Cacioppo 1986). Thus, we are able to capture the effects of strengthened national identity across multiple levels of cognition. Fourth, decision-making in supermarkets captures realistic conditions in which people perceive and act on information about international politics. Consumption choices happen in the context of everyday exposure to information and competing cognitive demands.

We analyze weekly supermarket sales for a nationally representative sample of more than 8,000 brands in over 1,100 US supermarkets. Our original measure of brands' perceived American nationality approximates how consumers infer a brand's country of origin (Samiee et al. 2005). Our identifying assumption is that casualties are quasi-randomly distributed across counties, conditional on county-level military enlistment in prior years. For each store-week in 2003-2006, we estimate the change in market share of American brands relative to the same store-week in 2001, the first year for which data are available. This year-over-2001 design provides a pre-Iraq War baseline to evaluate change and holds constant the numerous fixed and slow-moving correlates of brands' market share in a given store, including customer demographics, ex ante demand for American brands, product characteristics, and seasonality. As noted, local casualties influenced consumption only as an external threat. We control for store-week change brand availability and price, retailers' only possible real-time response to demand shocks.

We find that in store-weeks exposed to casualties, the year-over-2001 weekly market share of American brands increased on average. The finding is robust to a variety of measurement and model specifications, and controls for store, week, and county characteristics. Cumulative casualty exposure produced even larger market share growth on average. Recognizing that stronger attachment to national identity is not equivalent to value change, we probe mechanisms. Analyzing customer demographic data, we find heterogeneity consistent with the external threat mechanism. Market share grew in stores located in Republican-leaning

 $<sup>^{2}</sup>$ Iraq War casualties did not produce systematic elite cues related to consumption.

counties, in line with conservatives' stronger propensity to reinforce national identity in response to threat. Stores with a higher proportion of educated customers saw a relative decline in market share, consistent with their weaker propensity to reinforce national identity in response to threat. We find no racial heterogeneity in casualty response, which suggests our findings are not due to other group identities that some consumers associate with American identity. We rule out alternative mechanisms including elite priming, other characteristics of American brands, and animosity towards brands associated with foreign countries.

This study contributes to multiple strands of IR scholarship. First, our work builds upon scholarship on personal values and foreign policy attitudes (Hurwitz and Peffley 1987; Herrmann et al. 1999; Rathbun et al. 2016) and research that links external threat to value change by demonstrating that threat-driven value change manifests in an ostensibly unrelated domain – supermarket purchases (Norris and Inglehart 2019; Ballard-Rosa et al. 2021b,a). Our findings also help reinforce the link between value change and vote choice by establishing that value change drives material decisions – how people spend their money. Our use of supermarket data addresses methodological concerns raised by some IR scholars, including external validity of experimental findings (Hafner-Burton et al. 2017) and potential endogeneity of values and foreign policy preferences (Fordham and Kleinberg 2012). More generally, our findings reveal a distinct mechanism through which international relations shapes individuals (Kertzer and Tingley 2018).

Second, we expand research on international politics and consumption by showing how external threats change consumption in the absence of elite cues. Existing scholarship emphasizes consumer boycotts, episodes of explicitly politicized consumption focused on specific brands or firms (Davis and Meunier 2011; Pandya and Venkatesan 2016). Our focus on supermarket brand choice – a type of decision heavily influenced by cognitive processes outside of conscious awareness – helps capture effects of external threats on multiple levels of cognition. As we discuss below, supermarket purchases are less likely to reflect social pressure, which holds constant another proposed driver of consumer boycott participation. Finally, we contribute to research on the political consequences of causalities. Our design builds on extensive research that leverages county-level variation in casualty exposure to estimate casualties' consequences for public support of war (Berinsky 2009; Gelpi et al. 2009; Baum and Groeling 2010; Kriner and Shen 2010), political participation (Koch and Nicholson 2016), and electoral outcomes (Karol and Miguel 2007; Kriner and Shen 2014). By evaluating causalities' effects on a non-political outcome, we address debates regarding public awareness of casualties. Our findings suggest consistent public awareness and response to casualties despite change over time in elite cues, information, and casualty counts.

High-frequency consumption data are uncommon to our discipline so we highlight important features of our empirical strategy. We capture real-time effects, showing that consumption changes in the same week as the casualty and, for robustness, lagged by one week. Inferences about longer lags are not valid because unobserved, non-price responses to demand shocks are more likely. For example, retailers may target casualty-exposed areas with advertisements that cue national identity, a response that requires time to implement. Our results establish the lower and upper bounds of persistence. The baseline analysis assumes that casualties' effects dissipate completely the following week. Analysis of logged cumulative casualties assumes that effects persist for all subsequent weeks.

Effect sizes, the scale of which are unfamiliar in our discipline, are substantively large in the context of year-over-2001 market share growth. To provide an intuitive baseline, we interpret growth relative to a one-standard-deviation price drop, the most consistent correlate of market share growth (Yang et al. 2003). Data confidentiality requirements prohibit us from reporting changes for specific brands or stores. We report average effects at various levels of perceived American brand nationality.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup>Financial consequences of market share changes are difficult to estimate in our setting. We regard our interpretations with respect to price changes as a more insightful quantity of interest related to micro-level political behavior.

## 2 International Politics and Consumer Behavior: Theoretical Framework

We develop a theoretical framework that articulates how external threats affect US consumers' choice of American brands. Our framework brings into dialogue IR theories of mass responses to international politics and consumer psychology theories of brand choice. Though seemingly disparate fields, both build on psychological theories of social identity.<sup>4</sup> Basic tenets of these theories are that people define themselves, in part, by the social groups to which they belong (Tajfel and Turner 1979; Tajfel 1981), derive self-esteem and security from belonging to those groups (Hogg 2006), and reinforce group identity to themselves and others by adhering to group norms and behaviors (Akerlof and Kranton 2000). These theories emphasize membership as an individual's subjective sense of belonging to a group. Our framework centers around how social identity shapes responses to perceived threats, a topic of interest to IR and consumer psychology scholars. When faced with threats to safety or self-esteem, people reinforce their most closely held identities to reaffirm their value and purpose (Branscombe et al. 1999; Davies et al. 2008).

We articulate this framework by first examining how the mass public perceives external threats and how national identity shapes responses. Next, we introduce the concept of brands and their role in consumer behavior. This discussion establishes how brands symbolize national identity and how consumers express their identity through brand choice. Finally, we derive testable hypotheses about the effects of war casualties on sales of American brands.

## International Politics and Perceived External Threat

International politics generates multiple types of external threat. Threats are external inasmuch as they, on some level, threaten the nation as a group. Violence, including war and

<sup>&</sup>lt;sup>4</sup>Scholarship on consumer decision-making emphasizes many of the same dynamics as individual-level IR theories, including the interplay between material and non-material sources of preferences, information processing, and emotion.

terrorism, threatens physical safety (Huddy et al. 2002, 2005). Economic dislocation, such as import competition, threatens material well-being (Ballard-Rosa et al. 2021a). The public does not draw sharp distinctions between threats to themselves and the nation as a whole (Stevens and Vaughan-Williams 2016). Events that undermine the value and distinctiveness of national identity also threaten self-esteem (Branscombe et al. 1999). For example, Powers and Renshon (2021) argue that voters evaluate whether leaders' foreign policy performance enhances their country's international status.

Consistent with theories of social identity, external threats strengthen attachment to national identity (Branscombe et al. 1999; Brewer and Roccas 2001). At baseline, Americans with strong national identity attachments are more likely to adhere to prototypical norms and behaviors and derive self-esteem from doing so (Huddy and Khatib 2007). Following the 9/11 terrorist attacks, Americans exhibited stronger national attachments (Li and Brewer 2004; Moskalenko et al. 2006). Reminders of the attack strengthened attachments more than an equivalent domestic threat, mass shootings (Davies et al. 2008). Threats increase use of national symbols like flags (Bar-Tal and Staub 1997; Skitka 2005).

Though stronger attachments do not always imply a specific orientation towards outgroups, external threats typically produce out-group animosity (Huddy and Khatib 2007). As Huddy et al. (2005, p. 594) note, "[o]ne of the most pervasive and powerful effects of threat is to increase intolerance, prejudice, ethnocentrism, and xenophobia, regardless of whether threat is defined as a widely acknowledged external force or a subjective, perceived state." Political scientists have shown that external threat drives public support for deploying troops abroad (Jentleson 1992; Jentleson and Britton 1998), curtailing civil liberties (Davis and Silver 2004), and the public's assessments of leaders (Merolla and Zechmeister 2009).

## Consumption and National Identity

In this section, we introduce key features of consumer behavior that, we argue, make the purchase of American brands an insightful metric of value change. A brand is "a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors" (Kotler 1991, p. 442). Brands create value for firms by making consumers more likely to purchase the branded product relative to an otherwise identical unbranded product (Oh et al. 2020).<sup>5</sup> Firms realize this value by cultivating and maintaining positive and enduring associations through strategic use of marketing including advertisements, slogans, packaging, and brand names. The ultimate objective of marketing is to earn consumers' loyalty to the brand (Keller 1993). Marketing is one of many drivers of consumer brand choice. Within a given product category, brand preferences reflect material and non-material considerations including price, quality, early life exposure, identity, and peer influence (Bronnenberg and Dubé 2017).

We focus on brands that cue national identity. Cues include brand names that incorporate country name or national symbols, visual cues in product packaging and advertising, and slogans that forge positive association with national identity. Indirect cues include sponsorship of sports and other national identity-related activities. Consumers may perceive brands as American that lack prima facie cues simply because they are familiar and well-known. Brands need not be produced domestically; consumers infer national origin from branding cues and ignore country of origins labels (Samiee et al. 2005).

Our framework emphasizes two ways in which American branding influences consumers' choice of supermarket brands. First, brands are heuristics that simplify decision-making (Petty and Cacioppo 1986). Supermarket products are classic examples of "low involvement" goods, inexpensive goods for which poor choices have little consequence, so information-gathering motives are weak (Laurent and Kapferer 1985). Consumers are risk-averse and rely on brand associations to infer characteristics they cannot readily observe (Heilman et al. 2000). Some consumers have an underlying propensity to consumer ethnocentrism, a consis-

<sup>&</sup>lt;sup>5</sup>For shorthand, we describe brands as distinct variants of a single type of product. In practice, a single brand may have multiple variants (package size, flavoring) within the product category. Some brands also operate across multiple product categories.

tent preference for domestic brands (Bilkey and Nes 1982; Shimp and Sharma 1987). These consumers are predisposed to use American branding as a heuristic for quality. Ethnocentric product evaluations are more common for low involvement goods like food (Acharya and Elliott 2003). Consumers rely on these evaluations more when their national identity is more salient (Gürhan-Canli and Maheswaran 2000).

Second, consumers choose brands to express and reinforce important social identities (Belk 1988; Reed et al. 2012). For low involvement goods, which are typically privately consumed, brand choice privately reinforces identity rather than signaling to others (White and Dahl 2006). For ethnocentric consumers, purchasing domestic brands is a prescriptive norm associated with national identity (Shimp and Sharma 1987; Sharma et al. 1995). Consumers exhibit stronger ethnocentrism when they perceive threats to themselves or their nation (Siamagka and Balabanis 2015).

Our framework focuses on how external threats *change* American consumers' preference for American brands. This section puts into sharper perspective the high bar for external threats to change brand choice. Baseline brand preferences already reflect consumers' identity and loyalties. If ethnocentric Americans already purchase American brands, they cannot switch to American brands. We capture shifts at the margins – consumers for whom national identity previously did not drive brand choices who, feeling stronger national identification, *switch* to American brands.

## War Casualties and Preference for American Brands: Hypotheses

In this section, we derive observable implications of our framework by analyzing the effect of US Iraq War casualties. We consider the death of American soldiers deployed in the Iraq War an external threat. Casualties are a powerful symbolic threat to the nation that closely ties death to national identity. Vivid images, including flag-draped coffins or images of grieving family members, emotionalize and personalize casualties in a context of national identity (Gartner 2011). People may also view casualties as a direct threat to ideals conventionally associated with national identity, values for which soldiers gave their lives. Second, Iraq War casualties represent a more clearly physical terrorism-related threat. Americans consistently linked the Iraq War to the violent threat of terrorism (Gershkoff and Kushner 2005). Iraq War casualties could serve as stark reminders of the persistent threat of potential victimization by terrorist attacks. More broadly, casualties are reminders of violent external conflict in which one's nation is involved.

We argue that, in response to casualties, American reinforce national identity by switching to American brands. Koch and Nicholson (2016) make an analogous argument to ours and find that casualty exposure increases voter turnout, a manifestation of strengthened national identity. In experiments, death-related cues unrelated to national identity increase subjects' preference for domestic beverage and candy brands (Nelson et al. 1997; Friese and Hofmann 2008). These effects are likely pronounced when threats are closely tied to national identity. Liu and Smeesters (2010) find that exposure to 9/11-related media coverage increased preference for domestic beer brands and lasted for at least 24 hours post-exposure. Like much political science research on casualties, we leverage the quasi-random distribution of local casualties, where local refers to the home county of soldiers. The ongoing war was a shared source of external threat nationally, which allows us to isolate distinct mechanisms associated with local casualties.

**Hypothesis 1:** In the week that a US county experienced a local Iraq War casualty, the market share of American brands grew in supermarkets located in that county.

We probe the external threat mechanism by analyzing variation in casualty response across three demographic characteristics related to perception of and reaction to external threats. First, ideology corresponds to distinctive personality traits, cognitive processes, motives, and values, all of which shape how people perceive international politics, their baseline brand preferences, and preference stickiness (Jost 2017). Conservative Americans are predisposed to perceive threats (Jost et al. 2017) and respond to threats by choosing American brands (Cutright et al. 2011; Shepherd et al. 2015). Thus, we expect stronger casualty response among conservatives. Biasing against this expectation is that conservatives are, at baseline, more likely to purchase American brands (Carney et al. 2008) and have stickier brand preferences (Khan et al. 2013).

**Hypothesis 2.1:** Stores with a higher proportion of conservative customers exhibit larger growth in the sales of American brands in response to local casualties.

Second, educational attainment has implications for responses to external threat and consumption more generally. Educated individuals are less likely to reaffirm national identity in threatening circumstances (Schildkraut 2014), rely less on brand cues (Evanschitzky and Wunderlich 2006), and are less likely to be ethnocentric consumers (Sharma et al. 1995). Biasing against this expectation is that education may also correlate with casualty awareness through news consumption (Althaus et al. 2012) and likelihood of social connections to casualties or soldiers more generally (Kriner and Shen 2010).

**Hypothesis 2.2:** Stores with a higher proportion of educated customers exhibit little to no growth in the sales of American brands in response to local casualties.

Third, casualty response may vary by race.<sup>6</sup> Non-white Americans have weaker baseline attachments to national identity (Mutz et al. 2021), and are less likely to reaffirm national identity in response to threat (Schildkraut 2014) or to reaffirm identity more generally through brand choice (Aaker and Schmitt 2001; Escalas and Bettman 2005). Given the possibility that some Americans may equate national identity with specific racial attributes (Schildkraut 2014), the absence of racial heterogeneity would provide some reassurance that American brands capture attachment to national identity rather than other dimensions of social identity correlated with national identity.

 $<sup>^{6}{\</sup>rm Iraq}$  War casualties were overwhelmingly white (data available on request), so varying responses based on soldiers' race are unlikely.





Data Source: Associated Press.

**Hypothesis 2.3:** Stores with a higher proportion of non-white customers exhibit little to no growth in the sales of American brands in response to local casualties.

### 3 Local Exposure to Iraq War Casualties, 2003-2006

The Iraq War generated 3,240 US military casualties during 2003-2006. Figure 1 plots weekly Iraq casualty counts. The weekly average is relatively stable, with the largest spikes corresponding to predictable moments like the initial invasion and 2004 insurgency.

From the perspective of a US county, a "local" casualty refers to the death of a deployed soldier originally from that county. Figure 2 maps cumulative county-level American causalities in Iraq during 2003-2006. The geographic distribution of casualties is roughly proportional to population. We focus on the Iraq War because it generated 90 percent of US war casualties during the sample.<sup>7</sup>

Our identifying assumption is that, conditional on military enlistment, county exposure to casualties is quasi-random. Timing of local casualties is clearly exogenous to soldiers' home counties. However, military enlistment is non-random because the US had an allvolunteer military during the Iraq War. We control for enlistment in all analyses. Americans demonstrated high awareness of local Iraq War casualties. Proximity increases likelihood of exposure to information about the casualty through media and social networks (Gartner and Segura 2021). Local casualties produce the largest shifts in war support among nonconsumers of media, suggesting social networks, rather than media, transmit this information (Althaus et al. 2012). The implausibly high fraction of survey respondents who report knowing an Iraq War casualty suggests that the mass public perceives strong personal connection to casualties (Gartner 2009).

### 4 Data and Measurement

Our empirical analysis requires measurement of three central concepts: weekly supermarket purchases, perceived American nationality of supermarket brands, and local exposure to Iraq War casualties.

### Weekly Supermarket Purchases

We measure American brand market share using weekly supermarket scanner data supplied by Information Resources Inc. (IRI), a leading source of scanner data (Bronnenberg et al. 2008).<sup>8</sup> These data cover a representative sample of 1,145 supermarkets across 50 IRIdesignated geographic markets.<sup>9</sup> The 135 supermarket chains in our sample collectively

<sup>&</sup>lt;sup>7</sup>Our results are robust to using US casualties from both Iraq and Afghanistan.

<sup>&</sup>lt;sup>8</sup>These are academic-use data whose use is subject to a confidentiality agreement.

<sup>&</sup>lt;sup>9</sup>IRI set its market definitions in 1987 to achieve a representative sample of US consumers, making it unlikely that our findings are an artefact of sample selection. A map of IRI's geographic coverage is available upon request.



Figure 2: Distribution of American Soldiers Killed in Iraq by County, 2003-2006

account for around 80 percent of US supermarket sales during the sample period.<sup>10</sup> The 968 counties in our data account for 90 percent of Iraq War casualties 2003-2006.

We construct our store-level measures of American brand sales using weekly unit sales for 8,644 brands across 27 categories of supermarket products.<sup>11</sup> Major supermarket chains stock mature brands and maintain a stable brand portfolio within each store. For each store, we retain only brands that were sold in all weeks of the given year and 2001 so our results are not biased by entry or attrition. We aggregate data across multiple stock keeping unit (SKU) codes of a single brand-product category, but not across distinct, but related, brands.<sup>12</sup>

## **Brand Nationality**

We measured perceived brand nationality with surveys administered on Amazon's Mechanical Turk (MTurk).<sup>13</sup> 1,203 participants received a randomly selected brand name and its product category. We asked "What nationality does this brand most make you think of?" and offered ten possible responses (American, Chinese, English, French, German, Italian, Japanese, Spanish, "none," and "other.")<sup>14</sup> We paid participants per evaluation and restricted each participant to 20 evaluations. Each brand had seven independent evaluations.

We use these data to construct an index of each brand's perceived American nationality. For each independent evaluation, we create an indicator variable,  $American_{rb}$ , that equals

 $<sup>^{10}\</sup>mathrm{In}$  2003, supermarkets accounted for roughly 70 percent of all US grocery purchases (Market Share Reporter, 2003).

<sup>&</sup>lt;sup>11</sup>IRI assigns brands to the following categories: beer, blades, carbonated beverages, cigarettes, coffee, cold cereal, deodorant, diapers, facial tissue, frozen dinners, frozen pizza, household cleaners, hot dogs, laundry detergent, butter, mayonnaise, milk, mustard/ketchup, paper towel, peanut butter, razors, salty snacks, shampoo, soup, spaghetti sauce, sugar substitutes, and yogurt.

<sup>&</sup>lt;sup>12</sup>For instance, six-packs and two-liter bottles of Coca-Cola are distinct SKUs within the same brand. Coca-Cola and Diet Coke are separate brands.

<sup>&</sup>lt;sup>13</sup>MTurk results are often more reliable results than convenience- and lab-based samples (Berinsky et al. 2012; Huff and Tingley 2015). While MTurk samples may not mirror American demographics (Levay et al. 2016), the gap is likely uncorrelated with brand nationality perceptions.

<sup>&</sup>lt;sup>14</sup>Brand names included all special characters including accents and umlauts. We also performed a trial experiment to test whether additional brand information influenced perceived nationality. For a random sample of brands with US-trademarked logos, 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 solely on brand name and product category. Responses were not statistically distinguishable between the two groups.

$AmericanScore_b$ Value	Brand Example (Product Category)
7	Rocky Mountain Popcorn (salty snacks)
1	Kentucky Gold (ketchup/mustard)
6	Land O' Lakes (margarine/butter)
0	Phillies (hot dogs)
K	Olde Cape Cod (spaghetti sauce)
0	Swanson American Recipes (frozen dinners)
A	New England (ketchup/mustard)
4	Dad's Root Beer (carb. beverages)
2	Maple Leaf (hot dogs)
3	Van De Kamps (frozen dinners)
0	Life in Provence Aioli (mayonnaise)
Δ	Dietz & Watson (ketchup/mustard)
1	Royal Scot (margarine/butter)
1	World Trend (toothbrushes)
0	König Ludwig Weiss (beer)
0	Cucina Antica (spaghetti sauce)

Table 1: Brand Examples Across AmericanScore<sub>b</sub> Values

 $AmericanScore_b =$  Number of survey respondents that deem brand b to be American

one if respondent r coded brand b as American and zero otherwise. For each brand, we then sum  $American_{rb}$  for all seven independent evaluations into a single index. Our measure of perceived American nationality is the count of respondents who perceived brand b as American.  $AmericanScore_b$  ranges in value from 0 (no respondents coded brand b as American) to 7 (all respondents coded brand b as American).

Table 1 presents examples of brands at each value of  $AmericanScore_b$ . Brands with  $AmericanScore_b=7$  exhibit strong American nationality cues, including references to US geography and historical figures. Low-scoring brands often have distinctive non-American elements, including non-English words and foreign geographic references. In a separate survey of 400 US-based respondents, we verify that  $AmericanScore_b$  positively and strongly correlates with a widely-used psychometric scale of brands' perceived American origin.<sup>15</sup> One potential concern is that gradated increases in  $AmericanScore_b$  (i.e. moving from 3 to

 $<sup>^{15}\</sup>mathrm{See}$  Appendix Section A.1 for further details.

4) may not reflect consistent and meaningful rises in perceived American nationality. Our findings are robust to excluding middle categories  $(1 < AmericanScore_b < 6)$  and focusing on the most clearly American and non-American brands.

## Exposure to US Iraq War Casualties

Casualty data are from US Department of Defense press releases compiled by the Associated Press. For each casualty, our data include name, hometown, rank, unit, and date and cause of death.<sup>16</sup> We match each casualty to their home county. The county level is the most conservative measure of exposure we can accurately construct and is standard in existing research on casualties.

LocalCasualty<sub>jt</sub> is equal to one if at least one casualty occurred in the same county as store j in week t, and zero otherwise. Of the store-weeks that experienced casualties, 92 percent experienced a single casualty.<sup>17</sup> We verify that our results are robust to continuous measures of local weekly casualty exposure. By the end of the sample period, more than 95 percent of sample stores experienced at least one casualty. We also construct *NationalCasualties*<sub>t</sub>, the national total of Iraq War casualties in week t, which captures time-varying characteristics of the war that could influence consumption, including events in Iraq, national elite rhetoric, and media coverage.

### Additional Control Variables

Our identifying assumption of quasi-random casualty exposure is conditional on military enlistment. We control for total enlistment over the previous five years in store j's ZIP code. These data are based on enlistees' home addresses and cover all military branches.<sup>18</sup>

 $<sup>^{16}</sup>$ We verify that hometown is distinct from the soldier's service unit. For example, among the 294 casualties of soldiers based at Fort Hood, Texas, there are 259 unique US hometowns.

<sup>&</sup>lt;sup>17</sup>An additional 7 percent of store-weeks in which a casualty occurred represented two casualties. The maximum number of casualties in a store-week was four, which represents less than 0.5 percent of store-weeks with at least one casualty.

<sup>&</sup>lt;sup>18</sup>Data are from Kriner and Shen (2010).

Controlling for enlistment also accounts for unobserved local characteristics correlated with both military enlistment and propensity to react to local casualties by changing consumption.

We also control for weekly change in local economic conditions as proxied by average home prices in store j's ZIP code and week t.<sup>19</sup> Though local casualty exposure is unlikely to correlate with weekly change in local economic conditions, economic conditions could plausibly influence casualty response by changing emotional states and the information environment. We verify that American brands are not systematically cheaper such that tighter budget constraints prompt a switch to incidentally American lower-cost brands.

Partisanship may influence the propensity to respond to threats by changing consumption. As a robustness check, we control for George W. Bush's 2000 county vote share. Data come from Dave Leip's Electoral Atlas. Finally, we control for logged county population in 2000 to account for the potential that population size influences casualty information or response. Data are from the 2000 US Census.

### 5 Empirical Analysis

We model the average change in market share between 2001 (pre-Iraq War) and years 2003-2006 at each level of  $AmericanScore_i$  for each product category-store-week. Our outcome is indexed by:

- i: 8  $AmericanScore_i$  levels (0-7),
- j: 1,145 supermarkets,
- k: 27 product categories, and
- t: 52 weeks.

A brand's weekly store market share is the number of brand product units sold as a percentage of all units in the product category sold in that store-week. For example, if brand b in product category k (e.g., yogurt) had a 50% market share in a given store j

<sup>&</sup>lt;sup>19</sup>These data are from zillow.com

for week t, the brand accounted for half of all units of yogurt sold in that store-week. Measuring market share, as opposed to total number of units sold, scales store sales of a brand relative to overall demand for that product category in that store-week. Changes in market share capture shifts in demand for brands distinct from changes in demand for an entire product category. For each category-store-week, we calculate the average change in market share across brands at each of the eight levels of *AmericanScore<sub>i</sub>*. This aggregation reflects our interest in change across *AmericanScore<sub>i</sub>* levels rather than individual brands and reduces the sample to a computationally feasible size. As compared to sampling a subset of stores, this approach minimizes computational burden, maintains generalizability, and utilizes variation in casualties across all stores.

For each year during 2003-2006, for every  $AmericanScore_i$ -category-store-week in our sample, we calculate the change in market share between week t in that year and the same week in 2001 (*ShareYear-2001<sub>ijkt</sub>*). Measuring change in demand within each store holds constant relatively time-invariant baseline characteristics of a store's customer base that influence sales, including ex ante customer preferences. Likewise, our specification controls for product category characteristics such as propensity to have nationality-based branding. The year-over-2001 change accounts for seasonal fluctuations, such as higher demand for American brands around patriotic holidays. We choose 2001, the first year for which scanner data are available, as a baseline because it precedes all Iraq War casualties. If 9/11 increased sales of American brands, this would bias against our expected finding for subsequent years.<sup>20</sup> We verify that our results hold if we restrict our sample to January-August.

We estimate an ordinary least squares model of weekly changes in market share growth  $(\Delta Share Year-2001_{ijkt})$ :

 $\Delta Share Year - 2001_{ijkt} = \beta_1 Local Casual ty_{jt} + \beta_2 American Score_i + \beta_3 Local Casual ty_{jt} * American Score_i + \beta_4 Enlistment_j + \beta_5 Enlistment_j * American Score_i + \beta_6 Home Price_{jt} + \beta_6 Home Price$ 

 $<sup>^{20}</sup>$ Though 2002 is also before the Iraq War, it is more likely to exhibit the effects of the Afghanistan War and lingering effects of 9/11.

 $\beta_{7}HomePrice_{jt} * AmericanScore_{i} + \beta_{8}Population_{j2000} + \beta_{9}\Delta PriceYear-2001_{ijkt} + \beta_{10}\Delta VariantsYear-2001_{ijkt} + \epsilon_{ijkt}$ 

where

Year	$\in$	[2003, 2004, 2005, 2006],
$\Delta Share Year - 2001_{ijkt}$	=	average difference in market share from $2001$ to Year for
		brands with $AmericanScore_i$ in store $j$ belonging to product
		category $k$ in week $t$ ,
$LocalCasualty_{jt}$	=	indicator for US war casualty in Iraq from same county
		as store $j$ in week $t$ ,
$AmericanScore_i$	=	index from 0-7 indicating level of perceived American nationality,
$Enlistment_j$	=	total military enlistment in same ZIP code as store $\boldsymbol{j}$
		in last five years,
$HomePrice_{jt}$	=	average home price in same ZIP code as store $j$ and week $t$ ,
$Population_{j2000}$	=	population in same county as store $j$ in year 2000,
$\Delta Price Year - 2001_{ijkt}$		= average difference in price from 2001 to <i>Year</i> for
		$AmericanScore_i$ in store $j$ belonging to product
		category $k$ in week $t$ ,
$\Delta$ Variants Year-2001 <sub>i</sub>	jkt	= average difference in number of variants from 2001 to Year
		for $AmericanScore_i$ in store $j$ belonging to product
		category $k$ in week $t$ , and
$\epsilon_{ijkt}$		= normally distributed random error term.

The coefficient of interest is  $\beta_3$ , the interaction between local casualty exposure and AmericanScore<sub>i</sub>. We interact Enlistment<sub>j</sub> and HomePrice<sub>j</sub>t with AmericanScore<sub>i</sub> to allow for the salience of ex ante military enlistment and local economic conditions to vary by level of perceived American nationality. We control for two time-varying brand-store characteristics that affect market share (Ataman et al. 2010).  $\Delta Price Year-2001_{ijkt}$  controls for average price changes and the effect of promotional, limited-time discounts.<sup>21</sup> Price promotions are retailers' fastest response to negative demand shocks.<sup>22</sup> Non-price responses, such as advertising, require longer lead times to implement. Retailers' contracts with manufacturers forbid changes to shelf space allocation and location.<sup>23</sup> We also control for average weekly changes in the number of brand SKUs that a store stocks in a product category,  $\Delta Variants Year-2001_{ijkt}$ . All else equal, consumers are more likely to purchase a brand if a store stocks more varieties.

## **Baseline Results**

Table 2 presents results for 2003, the first year of the Iraq War. Model (1) focuses on local weekly casualties.<sup>24</sup> The coefficient on  $LocalCasualty_{jt} * AmericanScore_i$  is positive and statistically significant in both models, indicating that, on average, in weeks that stores experience a local casualty, the market share growth of American brands increases. Model (2) controls for total American casualties in Iraq in week t. Our baseline finding is unchanged.

Figure 3 plots in black the coefficient on  $LocalCasualty_{jt} * AmericanScore_i$  for Model (2), estimated annually during 2003-2006. The figure illustrates that Americans consistently responded to local casualties by switching to American brands during 2003-2006. The magnitude of this effect is substantively large. In casualty-exposed store-weeks, the average  $AmericanScore_i = 7$  brand saw market share growth equivalent to generated by a onestandard deviation price drop.

Our findings hold across multiple robustness tests.<sup>25</sup> We lag casualty exposure by one week to allow for delay in consumer response (Appendix Table A.2). Our dependent variable – which measures within-store over-time change in market share – obviates the need for store

<sup>&</sup>lt;sup>21</sup>We verify that average weekly price changes are uncorrelated with  $AmericanScore_i$ .

<sup>&</sup>lt;sup>22</sup>Manufacturers typically fund promotions, so price fluctuations are not correlated with local characteristics.

<sup>&</sup>lt;sup>23</sup>Manufacturers 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.

<sup>&</sup>lt;sup>24</sup>See Appendix Table A.1 for results and control variables for all years.

 $<sup>^{25}\</sup>mathrm{Results}$  not in the appendix are available upon request.

	$\Delta Share 2003$	$-2001_{ijkt}$ (%)
	(1)	(2)
$LocalCasualty_{jt} * AmericanScore_i$	$0.016^{***}$ (0.00613)	$\begin{array}{c} 0.01437^{**} \\ (0.00623) \end{array}$
$National Casualties_t * American Score_i$		0.00014 (0.00009)
$LocalCasualty_{jt}$	$\begin{array}{c} 0.03231 \\ (0.02815) \end{array}$	0.02518 (0.02860)
$National Casual ties_t$		$0.00052 \\ (0.00041)$
$AmericanScore_i$	$-0.01196^{***}$ (0.00245)	$\begin{array}{c} -0.01350^{***} \\ (0.00265) \end{array}$
Observations Controls	$\substack{6,715,772\\\checkmark}$	6,715,772 ✓

Table 2: Weekly Casualties and American Brand Share - 2003

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All models estimated with OLS. See Appendix Table A.1 for controls.

or week fixed effects.<sup>26</sup> However, county-specific factors may still influence the estimates when multiple stores are located within a single county. We estimate models including county fixed effects and find nearly identical results (Appendix Table A.3). We control for George W. Bush's 2000 vote share in store j's county. We cluster standard errors by store and find very similar results (Appendix Table A.4). Finally, we aggregate casualties to the media market level (designated market area, or DMA) to account for potential spillovers between counties within the same media market (Appendix Tables A.5 and A.6). These results are substantively identical.

<sup>&</sup>lt;sup>26</sup>The inclusion of store and week fixed effects results in identical coefficient estimates.



Figure 3: Casualties Increase American Brand Market Share Growth, 2003-2006

Effect of weekly and cumulative casualty exposure on market share of American brands over time, with 95 percent confidence intervals. Coefficients for weekly casualties from Appendix Table A.1. Coefficients for cumulative casualties from Appendix Table A.7.

## **Cumulative Casualties**

Our baseline analysis assumes that Americans respond to each week's casualties *de novo*. We next evaluate the effect of cumulative casualties. Information-based theories of casualties and public opinion emphasize variation in public recall of past events. We replace weekly casualties with  $ln(CumulCasualties_{jt})$ , the natural log of cumulative local casualties in the same county as store *j* from the beginning of the Iraq War to week *t*. We also control for  $ln(CumulNatCasualties_t)$  in line with our baseline specifications. These measures assume some recall of past casualties and provide an upper bound for the size of consumer response.

Table 3 presents our results for cumulative casualties for 2006, the last year in our sam-

	$\Delta Share 2006$	6-2001 <sub>ijkt</sub> (%)
	(1)	(2)
$ln(CumulCasualties_{jt}) * AmericanScore_i$	$\begin{array}{c} 0.011^{***} \\ (0.001) \end{array}$	$0.010^{***}$ (0.001)
$ln(CumulNatCasualties_{jt}) * AmericanScore_i$		$0.090^{***}$ (0.015)
$ln(CumulCasualties_{jt})$	$-0.044^{***}$ (0.007)	$-0.060^{***}$ (0.007)
$ln(CumulNatCasualties_t)$		$\begin{array}{c} 0.724^{***} \\ (0.066) \end{array}$
$AmericanScore_i$	$-0.099^{***}$ (0.003)	$-0.809^{***}$ (0.115)
Observations Controls	5,533,301 ✓	5,533,301 ✓

Lasie of Camalative Casaalities and Limerican Drand Share 200	Table 3:	Cumulative	Casualties	and	American	Brand	Share -	2000
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Note: p<0.1; p<0.05; p<0.05; p<0.01. All models estimated with OLS. See Appendix Table A.7 for controls.

ple.<sup>27</sup> In line with our baseline results, repeated exposure to casualties increases the market share growth of American brands. The effect remains when we control for cumulative national casualties. In stores with a one-standard-deviation higher exposure to logged cumulative casualties, average growth in the market share of  $AmericanScore_i = 7$  brands is about two-thirds the market share growth of a one-standard-deviation price drop.

Figure 3 displays in gray the coefficient on the interaction between  $ln(CumulCasualties_{jt})$ and  $AmericanScore_i$  and its 95 percent confidence interval for every year during 2003-2006, extracted from our Model (2) specification. While the estimated coefficient decreases in size over time, this also coincides with a monotonically increasing number of local cumulative casualties over time.

<sup>&</sup>lt;sup>27</sup>See Appendix Table A.7 for results and control variables for all years.

We perform the same robustness tests as in the baseline analysis: controlling for Bush 2000 vote share, including county fixed effects (Appendix Table A.8), and clustering standard errors by store (Appendix Table A.9).<sup>28</sup> We also omit counties two standard deviations from mean logged cumulative casualties. Results do not substantively change when we weight local cumulative casualties by 2000 county population (Appendix Table A.10.).

Finally, we ensure that both our baseline and cumulative casualty results are robust to limiting our sample to brands that most respondents judged to be American or non-American. We dichotomize  $AmericanScore_i$  to create  $American_i$ , which is equal to 1 if  $AmericanScore_i > 5$  and 0 if  $AmericanScore_i < 2$ . We then run our same baseline and cumulative casualty models on this subsample. Our main results hold (Appendix Tables A.11 and A.12). This exercise illustrates that our findings are not driven primarily by small or gradated increases in the middle of  $AmericanScore_i$ , but rather by switching from clearly non-American to clearly American brands.

### 6 Mechanisms

We hypothesize that sales of American brands increase because consumers reaffirm their national identity in response to external threat. We test this mechanism by analyzing heterogeneity in casualty response across stores' customer demographics. Existing research highlights specific demographic traits that correspond to strengthened national identity in response to external threats, including ideology, education, and racial identity. These patterns yield the testable implication that the size of casualty response should vary across stores with different proportions of these populations.

We evaluate these implications using customer demographic data on these traits and others that may be associated with increased national identification. For each store, IRI supplies select population characteristics in 2000 for a two-mile radius, the standard catchment area

 $<sup>^{28}\</sup>mathrm{All}$  results not in the appendix are available upon request.

of a supermarket.<sup>29</sup> We proxy for education with the percent of customers in 2000 employed in skilled jobs  $(SkilledOcc_{j2000})^{30}$  and racial heterogeneity with the percent of customers who are black  $(Black_{j2000})$ . We include two additional variables that plausibly control for ex ante strength of national identity: share of customers employed by the military (including civilians)  $(ArmedForces_{j2000})$  and share born in the US  $(NativeBorn_{j2000})$ . We supplement these data with county-level 2000 Bush vote share  $(Bush_{j2000})$  to proxy for ideology.

We first establish baseline demographic correlates of American brand market share. These correlations help us interpret change in response to local casualties. We estimate the average market share of products at each level of  $AmericanScore_i$  in 2001, the baseline year for our main results. As this is a cross-sectional analysis, we include product category, store, and week fixed effects. We omit the weeks after September 11, 2001 in case the 9/11 terror attacks changed consumption patterns, and exclude counties with populations below and above two standard deviations of the mean. We estimate a model using OLS that includes the interaction of  $AmericanScore_i$  and each customer characteristic.

Appendix Table A.13 summarizes our results. All else equal, American brands have higher market shares in stores with larger proportions of Republican-leaning customers. For  $AmericanScore_i = 7$  brands, a five-percentage point increase in 2000 Bush vote share corresponds to a roughly 0.013-percentage-point higher average market share. This high correlation points to a ceiling effect that biases against our argument. Because Republicans are ex ante more likely to purchase American brands, we are less likely to observe market share growth in response to casualties. Stores with high proportions of educated and armed forces workers also exhibit higher American brand market share. Stores with more USborn customers show no correlation with American brand market share. Stores with higher proportions of black customers exhibit lower baseline American brand market share.

We analyze demographic variation by adding to our 2006 cumulative casualty model three-way interactions between cumulative casualty exposure,  $AmericanScore_i$ , and each

<sup>&</sup>lt;sup>29</sup>Data derived from the 2000 US Census.

<sup>&</sup>lt;sup>30</sup>These are "white collar" workers as defined in the 2000 US Occupation and Employment Census.

	$\Delta Share 2006 - 2001_{ijkt}$
	(1)
$ln(CumulCasualties_{jt}) * AmericanScore_i * Bush_{j2000}$	$0.00166^{***}$
	(0.00015)
$ln(CumulCasualties_{it}) * AmericanScore_i * SkilledOcc_{i2000}$	$-0.00075^{***}$
	(0.00019)
$ln(CumulCasualties_{it}) * AmericanScore_i * ArmedForces_{i2000}$	0.00082
	(0.00089)
$ln(CumulCasualties_{it}) * AmericanScore_i * NativeBorn_{i2000}$	-0.00009
	(0.00018)
$ln(CumulCasualties_{it}) * AmericanScore_i * Black_{i2000}$	-0.00010
	(0.00013)
Observations	5,030,086
Controls	$\checkmark$

#### Table 4: Cumulative Casualties and Demographic Variation - 2006

Note: p<0.1; p<0.05; p<0.05; p<0.01. Model estimated with OLS. All constituent interaction terms included in model and suppressed in table. Stores in counties with populations two standard deviations above or below the mean excluded.

demographic variable. Table 4 presents the results. Partisanship is the strongest correlate of American brand share growth. For stores with mean logged cumulative casualty exposure, a five-percentage-point increase in 2000 Bush vote share is associated, on average, with a 0.1-percentage-point increase in  $AmericanScore_i = 7$  brand market share growth. Even though stores in more Republican areas had higher baseline purchases of American brands, local casualties prompted further switch to American brands. Stores with high proportions of educated customers exhibit decline in market share growth. For stores with mean cumulative casualty exposure, a five-percentage-point increase in educated customers corresponds to a roughly 0.04-percentage-point decrease in market share growth for  $AmericanScore_i = 7$ on average. This decline is consistent with educated customers responding to threat by reinforcing other dimensions of their identity. We find no change in stores with higher proportions of black, US-born, armed forces-employed customers. Our findings are consistent with black Americans' lower propensity to express identity through brands.<sup>31</sup>

## Alternate Mechanism: Partisan Cues

We further unpack the role of partisanship by evaluating the effect of partisan elite cues on local casualty response. Though explicit cues to purchase American brands were absent, related cues may prime national identity. We measure cues using Iraq War-related campaign advertising in the 2006 midterm elections.<sup>32</sup> 2006 House and Senate advertising data are from the Wesleyan Advertising Project (WAP), which reports each instance of a given candidateadvertisement for the top 100 US media markets (DMAs). All ads are 30 seconds. The WAP reports air dates, media market, candidate, political party, and detailed ad content. Our sample is January-November 2006, corresponding to when midterm election ads aired.<sup>33</sup> Television ads, especially in the context of the 2006 election, are highly salient political messages to which a large majority of the population is exposed (Gerber et al. 2011). Ads related to the Iraq War are most likely to contain partisan cues about the character and direction of military conflict. For each DMA-week, we measure the percentage of televised campaign ads that the WAP coded as related to the Iraq War.<sup>34</sup>

An important limitation of this analysis is that the top 100 media markets skew Democratic, so our sample is not representative with respect to partisanship. Of our sample stores, 320 are in Democratic-leaning counties, where Bush lost by 10 percentage points or more in 2000; 227 stores are in tossup counties, where Bush won by less than 10 percentage points; and only 194 stores are in Republican-leaning counties, where Bush won by more than ten

<sup>&</sup>lt;sup>31</sup>This finding is also inconsistent with the proposition that the effect is solely driven by consumers who relate national identity to white racial attributes, as stores with more racial diversity exhibited similar increases in American brand market share.

<sup>&</sup>lt;sup>32</sup>Partisan cues may have been weaker in 2006 due to the collapse of partisan consensus about the war (Berinsky 2009). This biases against finding an effect of cues.

<sup>&</sup>lt;sup>33</sup>The campaign season generally may have primed American national identity, but is unlikely to correlate with county-week casualty exposure.

<sup>&</sup>lt;sup>34</sup>We use a DMA-ZIP code crosswalk to construct our store-week measure of ad exposure.

	Change in market share			
	(1)	(2)	(3)	(4)
$ln(CumulCasualties_{jt}) * IraqAds_{jt} * AmericanScore_i$	$0.0002^{*}$ (0.0001)			
$ln(CumulCasualties_{jt}) * DemIraqAds_{jt} * AmericanScore_i$		$0.0003^{**}$ (0.0001)		$\begin{array}{c} 0.0003^{***} \\ (0.0001) \end{array}$
$\begin{array}{l} ln(CumulCasualties_{jt})*RepIraqAds_{jt}*\\ AmericanScore_i \end{array}$			-0.001 (0.0004)	-0.001 (0.0004)
$ln(CumulCasualties_{jt}) * AmericanScore_i$	$\begin{array}{c} 0.013^{***} \\ (0.001) \end{array}$	$\begin{array}{c} 0.013^{***} \\ (0.001) \end{array}$	$\begin{array}{c} 0.014^{***} \\ (0.001) \end{array}$	$\begin{array}{c} 0.013^{***} \\ (0.001) \end{array}$
Observations Controls	5,326,090 ✓	5,326,090 ✓	5,326,090 ✓	5,326,090 ✓

#### Table 5: Casualty Exposure and Political Advertising - 2006

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All constituent interactions included in model and suppressed in table.

percentage points. Therefore, we are more circumspect in our inferences about consumer response in swing and Republican-leaning areas.<sup>35</sup> The correlation between local cumulative casualty exposure and the number of Iraq War-related ads broadcast is less than .05 in absolute value.

We estimate the joint effect of casualties and partian Iraq War-related cues. We add to our cumulative casualty model a three-way interaction between local cumulative casualty exposure, perceived brand nationality, and our time-varying measure of exposure to Iraqrelated political advertising. We also disaggregate our measure of exposure to advertising by political party. As in the cumulative casualty analysis, we include 2000 county-level Bush vote share and its interaction with  $AmericanScore_i$  to control for local partianship.

Table 5 presents the advertising model results. Taken together, the results indicate that partian cues modestly magnify casualties' effects on brand choice but do not independently

<sup>&</sup>lt;sup>35</sup>Average total political advertising also correlates with local partisanship.

activate national identity. Regardless, across every regression, the coefficient on the interaction between cumulative casualties and  $AmericanScore_i$  continues to be positive and statistically significant on its own. The magnifying effects of advertising are strongest in Democratic-leaning areas, though data limitations preclude stronger inferences about heterogeneity in the effect of partian cues. Overall, these results suggest that elite cues play a meaningful, but not necessarily paramount, role in shaping the salience of casualty exposure.

### Alternate Mechanism: Other Characteristics of American Brands

American brands could systematically have other characteristics that drive market share growth after casualties. Given the psychological mechanisms that we propose, one possibility is that stress associated with external threat prompts increased consumption of products with hedonistic appeal (e.g. sugar, salt, fat, alcohol, tobacco) as a coping mechanism (Wakefield and Inman 2003).<sup>36</sup>

We test two observable implications, positing that coping should be concentrated in food rather than non-food household items; or in hedonistic product categories. We use IRI's product category classifications to create two indicators:  $Food_k$ , equal to one if product category k is a food category and zero otherwise, and  $Hedonic_k$ , equal to one if product category k is either alcohol, salty snacks, or tobacco, and zero otherwise. We estimate our baseline model with a triple interaction between casualty exposure,  $AmericanScore_i$ , and these indicator variables to explore whether our observed effects are concentrated in these coping-related product categories. We find that causalities' effects are not limited to product categories associated with coping (Appendix Tables A.14-A.17).

<sup>&</sup>lt;sup>36</sup>Another plausible coping mechanism is that consumers seek comfort in familiar brands, especially those that they consumed as children. As we noted earlier, baseline brand preferences already reflect early life exposure (Bronnenberg and Dubé 2017).

## Other Alternative Mechanisms

We briefly address additional alternative mechanisms. Another possible mechanism is that consumers' shift to American brands was incidental to a shift away from non-American brands associated with countries hostile to the Iraq War. Though these are conceptually distinct motives, they are observationally equivalent. We probe this mechanism by separately evaluating sales of perceived French and German brands, countries that opposed the war, and sales of brands associated with US war allies, the United Kingdom, Italy, and Spain. The animosity mechanism would correspond to a market share decline for only the first group. In Appendix Section A.2 we discuss this possibility in more detail and present results; we instead find equally declining market share of both sets of brands.

Casualties may increase exposure to patriotic images that simply prime national identity rather than triggering external threat. News coverage may be consistently bundled with such images, but other key information sources, including word of mouth, may not be (Gartner and Segura 2021). Supermarkets routinely use patriotic decor and imagery, but these are unlikely to be systematically in place when a casualty occurs. The possibility that stores introduce these cues after casualties reinforces why our research design does not support inferences about persistence of market share growth. Peer pressure is also unlikely to drive our findings. As noted earlier, supermarket purchases are less susceptible to peer pressure because they are typically consumed in private. Another possibility is that firms change their marketing to capitalize on the stronger resonance of national identity. As we noted, this response takes time to implement and would threaten brand equity derived from stable and consistent brand characteristics.

External threats create emotions that may independently influence brand choice. Anxiety heightens risk aversion, reducing support for retaliation for terrorist attacks, whereas anger has the opposite effect (Huddy et al. 2005). Given that risk aversion is a foundation of brand loyalty, heightened anxiety following casualties should *reduce* propensity to switch

brands. Anger is consistent with greater risk acceptance in switching brands, but anger without strengthened national identification cannot explain switching to American brands specifically.

## 7 Conclusion

We demonstrate that external threat increases the salience of national identity for ordinary people in an ostensibly non-political domain – supermarket consumption. Heightened national identity in response to external threat is consistent with increasing embrace of related values like ethnocentrism and authoritarianism. We note several directions for future research. First, brands incorporate a range of other politically relevant identities besides national identity, including geographic location, race and ethnicity, gender, and religion. Our research design can be used to explore how international politics activates other salient identities and values. For example, empathy towards a foreign country following conflict or natural disaster could prompt consumers to purchase brands associated with the country.

Second, while we show how external threats activate national identity in real time, future research can examine to what extent activation persists. Extant work links years-long processes – economic dislocation and repeated terrorist attacks – to infrequent political behaviors like voting. By contrast, high-frequency consumption data allow us to track persistence of strengthened national identity in response to specific threats. Evaluating whether activated identity persists in an unrelated domain would more fully indicate the scope of its political consequences – an important issue in work on support for far-right parties. The challenge, as we note, is that firms may strategically change their marketing to capitalize on consumers' heightened national identity. Future work can develop research designs that overcome this challenge, such as settings in which firms are unable to deploy marketing to harness the effects of external threats.

Finally, our study is limited to the US, raising the question of whether external threats would produce revealed value change in other contexts. Whether consumers in other countries respond to external threat by purchasing brands consistent with their national identity depends on at least two factors. First, individuals in other cultural contexts may have a weaker propensity to embrace ethnocentric and authoritarian values in response to threat. Second, consumers in different cultural contexts may vary with respect to viewing brand choice as a meaningful expression of identity. Evaluating how generalizable our findings are would require addressing these two factors, as well as use of analogous consumption data for other countries.

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## A Appendix: War on Aisle 5

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	$\Delta Share Year-2001_{ijkt} \ (\%)$			
	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$LocalCasualty_{jt} * AmericanScore_i$	$0.014^{**}$	0.012**	$0.011^{**}$	0.030***
-	(0.006)	(0.005)	(0.006)	(0.006)
$NationalCasualties_t * AmericanScore_i$	0.0001	$-0.0002^{**}$	0.001***	-0.0001
, , , , , , , , , , , , , , , , , , ,	(0.0001)	(0.0001)	(0.0001)	(0.0002)
$LocalCasualty_{it}$	0.025	$-0.095^{***}$	$-0.050^{*}$	$-0.152^{***}$
<i></i>	(0.029)	(0.023)	(0.026)	(0.026)
$National Casualties_{t}$	0.001	-0.001	$-0.001^{**}$	0.005***
	(0.0004)	(0.0004)	(0.001)	(0.001)
AmericanScore:	-0.013***	$-0.052^{***}$	$-0.122^{***}$	-0.091***
	(0.003)	(0.003)	(0.003)	(0.004)
HomePrice <sub>it</sub>	0.004***	0.002***	-0.002***	-0.003***
	(0.0003)	(0.0003)	(0.0003)	(0.0002)
$HomePrice_{it} * AmericanScore_i$	$-0.001^{***}$	$-0.0005^{***}$	0.0002***	0.0005***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
$Enlistment_i$	$-0.105^{***}$	$-0.261^{***}$	$-0.331^{***}$	$-0.348^{***}$
,	(0.027)	(0.029)	(0.032)	(0.033)
$Enlistment_i * AmericanScore_i$	$-0.013^{**}$	0.027***	0.059***	0.060***
,	(0.006)	(0.006)	(0.007)	(0.007)
$Population_{i2000}$	0.00002***	0.00003***	0.00002***	0.00002***
	(0.00000)	(0.00000)	(0.00000)	(0.00000)
$\Delta Price Year - 2001_{ijkt}$	$-0.053^{***}$	$-0.052^{***}$	$-0.040^{***}$	$-0.019^{***}$
	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta$ Variants Year-2001 <sub>iikt</sub>	0.900***	0.857***	$0.872^{***}$	0.968***
	(0.001)	(0.001)	(0.001)	(0.001)
Intercept	$-0.042^{***}$	0.127***	0.433***	$0.358^{***}$
-	(0.012)	(0.014)	(0.016)	(0.019)
Observations	6,715,772	6,344,222	5,756,986	5,533,301

## Appendix Table A.1: Weekly Casualties and American Brand Share, 2003-2006

	$\Delta Share Year-2001_{ijkt}$ (%)			
	2003 2004 2005 2006			
	(1)	(2)	(3)	(4)
$LocalCasualty_{jt-1} * AmericanScore_i$	0.022***	$0.009^{*}$	$0.015^{***}$	0.030***
	(0.006)	(0.005)	(0.006)	(0.006)
National Casualties, 1 * American Score	0.0001	-0.001***	0.001***	0.001***
$1 \text{ anomate as a antes } t = 1 \text{ a mention bet} t_i$	(0.0001)	(0.001)	(0.0001)	(0.001)
$LocalCasualty_{it-1}$	0.036	$-0.105^{***}$	$-0.079^{***}$	$-0.148^{***}$
	(0.029)	(0.023)	(0.026)	(0.027)
$National Casual ties_{t-1}$	$-0.001^{**}$	0.002***	$-0.004^{***}$	0.001
	(0.0004)	(0.0004)	(0.001)	(0.001)
$AmericanScore_i$	$-0.012^{***}$	$-0.044^{***}$	$-0.126^{***}$	$-0.103^{***}$
	(0.003)	(0.003)	(0.003)	(0.004)
$HomePrice_{it}$	0.004***	0.002***	$-0.002^{***}$	-0.003***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
$HomePrice_{it} * AmericanScore_i$	$-0.001^{***}$	$-0.0005^{***}$	0.0002***	0.0005***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
$Enlistment_i$	$-0.099^{***}$	$-0.259^{***}$	$-0.332^{***}$	$-0.340^{***}$
	(0.028)	(0.029)	(0.032)	(0.033)
$Enlistment_i * AmericanScore_i$	$-0.014^{**}$	0.027***	0.059***	0.059***
	(0.006)	(0.006)	(0.007)	(0.007)
$Population_{j2000}$	0.00002***	0.00003***	0.00002***	0.00002***
-	(0.000001)	(0.000001)	(0.000001)	(0.000002)
$\Delta Price Year - 2001_{ijkt}$	$-0.053^{***}$	$-0.052^{***}$	$-0.040^{***}$	$-0.019^{***}$
	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.899***	0.856***	0.875***	0.969***
	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	$-0.031^{**}$	0.086***	0.486***	0.421***
	(0.012)	(0.014)	(0.016)	(0.019)
Observations	6,569,912	6,206,893	5,630,408	5,413,818
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

## Appendix Table A.2: Lagged Weekly Casualties and American Brand Share, 2003-2006

		$\Delta Share Year$ -	$2001_{iikt}$ (%)	
	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$\overline{LocalCasualty_{jt} * AmericanScore_i}$	0.015**	0.013**	0.012**	0.030***
	(0.006)	(0.005)	(0.006)	(0.006)
$National Casualties_t * American Score_i$	0.0001	$-0.0002^{**}$	0.001***	-0.00008
	(0.0001)	(0.0001)	(0.0001)	(0.0002)
$LocalCasualty_{jt}$	0.024	$-0.094^{***}$	-0.025	$-0.117^{***}$
-	(0.029)	(0.023)	(0.026)	(0.026)
$National Casualties_t$	0.001	-0.0004	$-0.001^{**}$	0.005***
	(0.0004)	(0.0004)	(0.0005)	(0.001)
$AmericanScore_i$	$-0.017^{***}$	$-0.057^{***}$	$-0.125^{***}$	$-0.091^{***}$
	(0.003)	(0.003)	(0.003)	(0.004)
$HomePrice_{it}$	0.006***	0.001***	$-0.001^{***}$	$-0.003^{***}$
2	(0.0004)	(0.0003)	(0.0003)	(0.0003)
$HomePrice_{jt} * AmericanScore_i$	$-0.001^{***}$	$-0.0004^{***}$	0.0003***	0.0005***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
$Enlistment_i$	$-0.061^{*}$	$-0.344^{***}$	$-0.399^{***}$	$-0.519^{***}$
	(0.034)	(0.036)	(0.040)	(0.041)
$Enlistment_i * AmericanScore_i$	$-0.010^{*}$	0.029***	0.058***	0.056***
	(0.006)	(0.006)	(0.007)	(0.007)
$\Delta Price Year - 2001_{ijkt}$	$-0.052^{***}$	$-0.050^{***}$	-0.038***	$-0.019^{***}$
-	(0.001)	(0.001)	(0.001)	(0.008)
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.903***	0.860***	0.875***	0.971***
<b>.</b>	(0.001)	(0.001)	(0.001)	(0.001)
Observations	6,715,772	6,344,222	5,756,986	5,533,301
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

Appendix Table A.3: Weekly Casualties and American Brand Share, 2003-2006 - County Fixed Effects

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All models estimated with OLS and include county fixed effects.

Appendix	Table	A.4:	Weekly	Casualties	and	American	Brand
Share, 200	3-2006	- Sto	re-Cluste	red Standar	rd Er	rors	

	$\Delta Share Year-2001_{ijkt}$ (%)			
	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$LocalCasualty_{jt} * AmericanScore_i$	$0.014^{**}$ (0.007)	$0.012^{**}$ (0.006)	$0.011 \\ (0.008)$	$0.030^{***}$ (0.009)
Observations	6,715,772	6,344,222	5,756,986	$5,\!533,\!301$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

	$\Delta Share Year-2001_{iikt}$ (%)					
	2003	2004	2005	2006		
	(1)	(2)	(3)	(4)		
$\overline{DMACasualty_{jt} * AmericanScore_i}$	0.020***	$0.017^{***}$	$0.017^{***}$	0.015***		
	(0.004)	(0.003)	(0.004)	(0.004)		
$National Casualties_t * American Score_i$	0.00004	-0.0003***	0.001***	-0.0001		
	(0.0001)	(0.0001)	(0.0001)	(0.0002)		
$DMACasualty_{jt}$	0.002	$-0.093^{***}$	$-0.056^{***}$	$-0.059^{***}$		
	(0.017)	(0.014)	(0.017)	(0.016)		
$National Casual ties_t$	0.001	-0.0002	-0.001	0.005***		
	(0.0004)	(0.0004)	(0.001)	(0.001)		
$AmericanScore_i$	$-0.013^{***}$	$-0.051^{***}$	$-0.121^{***}$	$-0.091^{***}$		
	(0.003)	(0.003)	(0.003)	(0.004)		
$HomePrice_{jt}$	0.004***	0.002***	$-0.001^{***}$	$-0.003^{***}$		
	(0.0003)	(0.0003)	(0.0003)	(0.0003)		
$HomePrice_{jt} * AmericanScore_i$	$-0.001^{***}$	$-0.001^{***}$	0.0002***	0.0004***		
·	(0.0001)	(0.0001)	(0.0001)	(0.0001)		
$Enlistment_j$	$-0.101^{***}$	$-0.259^{***}$	$-0.329^{***}$	$-0.354^{***}$		
	(0.027)	(0.029)	(0.032)	(0.033)		
$Enlistment_j * AmericanScore_i$	$-0.013^{**}$	0.026***	0.058***	0.061***		
	(0.006)	(0.006)	(0.007)	(0.007)		
$Population_{j2000}$	0.00002***	0.00003***	0.00001***	0.00002***		
	(0.00000)	(0.00000)	(0.00000)	(0.00000)		
$\Delta Price Year - 2001_{ijkt}$	$-0.053^{***}$	$-0.052^{***}$	$-0.040^{***}$	$-0.019^{***}$		
	(0.001)	(0.001)	(0.001)	(0.001)		
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.900***	0.857***	0.872***	0.968***		
	(0.001)	(0.001)	(0.001)	(0.001)		
Intercept	$-0.044^{***}$	0.123***	0.430***	0.360***		
	(0.012)	(0.014)	(0.016)	(0.019)		
Observations	6,715,772	6,344,222	5,756.986	5,533.301		
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		

# Appendix Table A.5: Weekly Casualties and American Brand Share, 2003-2006 - DMA-Level Indicator

	$\Delta Share Year-2001_{ijkt}$ (%)					
	2003	2004	2005	2006		
	(1)	(2)	(3)	(4)		
$DMACasualties_{jt} * AmericanScore_i$	$0.017^{***}$	$0.014^{***}$	$0.017^{***}$	0.017***		
-	(0.003)	(0.002)	(0.003)	(0.003)		
$National Casualties_t * American Score_i$	0.00002	$-0.0003^{***}$	0.0005***	-0.0002		
	(0.0001)	(0.0001)	(0.0001)	(0.0002)		
$DMACasualties_{jt}$	0.017	$-0.072^{***}$	$-0.059^{***}$	$-0.070^{***}$		
	(0.013)	(0.009)	(0.013)	(0.012)		
$National Casualties_t$	0.0004	0.0002	-0.001	0.006***		
	(0.0004)	(0.0004)	(0.001)	(0.001)		
$AmericanScore_i$	$-0.012^{***}$	$-0.049^{***}$	$-0.120^{***}$	$-0.089^{***}$		
	(0.003)	(0.003)	(0.003)	(0.004)		
$HomePrice_{jt}$	0.004***	0.002***	$-0.001^{***}$	$-0.003^{***}$		
	(0.0003)	(0.0003)	(0.0003)	(0.0003)		
$HomePrice_{jt} * AmericanScore_i$	$-0.001^{***}$	$-0.001^{***}$	0.0002***	0.0004***		
fromer recejt + finier teans core;	(0.0001)	(0.0001)	(0.0001)	(0.0001)		
$Enlistment_j$	$-0.099^{***}$	$-0.255^{***}$	$-0.326^{***}$	$-0.349^{***}$		
	(0.027)	(0.029)	(0.032)	(0.033)		
$Enlistment_j * AmericanScore_i$	$-0.014^{**}$	0.025***	0.057***	0.060***		
	(0.006)	(0.006)	(0.007)	(0.007)		
$Population_{j2000}$	0.00002***	0.00003***	0.00002***	0.00002***		
	(0.00000)	(0.00000)	(0.00000)	(0.00000)		
$\Delta Price Year$ -2001 $_{ijkt}$	$-0.053^{***}$	$-0.052^{***}$	$-0.040^{***}$	$-0.019^{***}$		
	(0.001)	(0.001)	(0.001)	(0.001)		
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.900***	0.857***	0.872***	0.968***		
	(0.001)	(0.001)	(0.001)	(0.001)		
Intercept	$-0.043^{***}$	0.113***	0.425***	0.351***		
	(0.012)	(0.014)	(0.016)	(0.019)		
Observations	6,715,772	6,344,222	5,756,986	5,533,301		
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		

## Appendix Table A.6: Weekly Casualties and American Brand Share, 2003-2006 - No. of DMA Casualties

		$\Delta Share Year$	$-2001_{ijkt}$ (%	)
	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$ln(CumulCasualties_{jt}) * AmericanScore_i$	$0.021^{***}$	$0.018^{***}$	$0.012^{***}$	0.010***
	(0.002)	(0.001)	(0.001)	(0.001)
$ln(Cumul Nat Casual ties_{jt}) * American Score_i$	$-0.004^{***}$ (0.0005)	$-0.088^{***}$ (0.004)	$0.052^{***}$ (0.009)	$0.090^{***}$ (0.015)
$ln(CumulCasualties_{jt})$	0.006	$-0.097^{***}$	$-0.081^{***}$	$-0.060^{***}$
	(0.010)	(0.007)	(0.007)	(0.007)
$ln(CumulNatCasualties_{jt})$	$0.004^{*}$	$0.338^{***}$	$0.286^{***}$	$0.724^{***}$
	(0.002)	(0.019)	(0.043)	(0.066)
$AmericanScore_{i}$	0.007**	$0.544^{***}$	$-0.506^{***}$	$-0.809^{***}$
	(0.003)	(0.028)	(0.071)	(0.115)
$HomePrice_{jt}$	0.004***	0.003***	$-0.001^{**}$	$-0.002^{***}$
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
$HomePrice_{it} * AmericanScore_i$	$-0.001^{***}$	$-0.001^{***}$	0.00002	0.0003***
-	(0.0001)	(0.0001)	(0.0001)	(0.0001)
$Enlistment_i$	$-0.062^{**}$	$-0.139^{***}$	$-0.211^{***}$	$-0.255^{***}$
	(0.028)	(0.030)	(0.034)	(0.035)
$Enlistment_i * AmericanScore_i$	$-0.026^{***}$	0.0004	0.036***	0.042***
	(0.006)	(0.007)	(0.007)	(0.008)
$Population_{i2000}$	0.00001***	0.00004***	0.00003***	0.00002***
	(0.00000)	(0.00000)	(0.00000)	(0.00000)
$\Delta Price Year - 2001_{ijkt}$ (2001-Year)	$-0.053^{***}$	$-0.052^{***}$	$-0.040^{***}$	$-0.019^{***}$
	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.901***	0.857***	0.872***	0.968***
	(0.001)	(0.001)	(0.001)	(0.001)
Intercept	$-0.062^{***}$	$-2.187^{***}$	$-1.712^{***}$	$-5.248^{***}$
·	(0.015)	(0.128)	(0.323)	(0.524)
Observations	6,715,772	6,344,222	5,756,986	5,533,301

## Appendix Table A.7: Cumulative Casualties and American Brand Share, 2003-2006

		$\Delta Share Year$	$-2001_{ijkt}$ (%)	
	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$\frac{1}{ln(CumulCasualties_{it}) * AmericanScore_i}$	0.021***	0.018***	0.012***	0.011***
	(0.002)	(0.001)	(0.001)	(0.001)
$ln(CumulNatCasualties_{jt}) * AmericanScore_i$	$-0.004^{***}$	$-0.088^{***}$	0.054***	0.089***
	(0.0005)	(0.004)	(0.009)	(0.014)
$ln(CumulCasualties_{jt})$	0.073***	$-0.173^{***}$	$-0.058^{***}$	0.014
	(0.011)	(0.014)	(0.021)	(0.027)
$ln(CumulNatCasualties_{jt})$	-0.002	0.407***	0.334***	0.704***
	(0.002)	(0.020)	(0.045)	(0.070)
$AmericanScore_i$	0.004	$0.541^{***}$	$-0.522^{***}$	$-0.806^{***}$
	(0.003)	(0.028)	(0.070)	(0.115)
$HomePrice_{it}$	0.006***	0.002***	$-0.001^{***}$	$-0.002^{***}$
·	(0.0004)	(0.0003)	(0.0003)	(0.0003)
$HomePrice_{jt} * AmericanScore_i$	$-0.001^{***}$	$-0.001^{***}$	0.0001	0.0003***
<b>.</b>	(0.00007)	(0.00006)	(0.00006)	(0.00006)
$Enlistment_{j}$	-0.007	$-0.234^{***}$	$-0.310^{***}$	$-0.440^{***}$
	(0.034)	(0.037)	(0.042)	(0.043)
$Enlistment_{i} * AmericanScore_{i}$	$-0.024^{***}$	0.002	0.034***	0.037***
	(0.006)	(0.007)	(0.007)	(0.007)
$\Delta Price Year-2001_{ijkt}$	$-0.052^{***}$	$-0.050^{***}$	$-0.038^{***}$	$-0.019^{***}$
-	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.903***	0.860***	0.875***	0.971***
-	(0.001)	(0.001)	(0.001)	(0.001)
Observations	6.715.772	6.344.222	5,756,986	5.533.301

## Appendix Table A.8: Cumulative Casualties and American Brand Share, 2003-2006 - County Fixed Effects

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All models estimated with OLS and include county fixed effects.

Controls

 $\checkmark$ 

 $\checkmark$ 

 $\checkmark$ 

 $\checkmark$ 

Appendix Table A.9: Cumulative Casualties and American Brand Share
2003-2006 – Store-Clustered Standard Errors

	$\Delta Share Year-2001_{ijkt}$ (%)			
	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$ln(CumulCasualties_{jt}) * AmericanScore_i$	$0.021^{***}$ (0.005)	$0.018^{***}$ (0.004)	$0.012^{**}$ (0.005)	$0.010^{*}$ (0.006)
Observations	6,715,772	6,344,222	5,756,986	$5,\!533,\!301$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

# Appendix Table A.10: Cumulative Casualties Weighted by Population and American Brand Share, 2003-2006

	Z	$\Delta Share Year$ -	$2001_{ijkt}$ (%	)
-	2003	2004	2005	2006
	(1)	(2)	(3)	(4)
$CumulCasualties_{jt}/Pop_{j2000} * AmericanScore_i$	1.682***	$0.577^{**}$	0.838***	0.483***
	(0.607)	(0.277)	(0.225)	(0.178)
$ln(CumulNatCasualties_{jt}) * AmericanScore_{i}$	-0.003***	$-0.079^{***}$	0.055***	0.095***
	(0.0005)	(0.004)	(0.009)	(0.015)
$CumulCasualties_{jt}/Population_{j2000}$	0.723	$-2.747^{**}$	$-9.463^{***}$	$-7.052^{***}$
	(2.824)	(1.273)	(1.033)	(0.816)
$ln(CumulNatCasualties_{jt})$	0.004**	0.286***	0.275***	0.726***
	(0.002)	(0.019)	(0.043)	(0.066)
$AmericanScore_i$	-0.001	0.486***	$-0.532^{***}$	$-0.846^{***}$
	(0.003)	(0.028)	(0.071)	(0.115)
$HomePrice_{jt}$	0.005***	0.002***	$-0.001^{***}$	$-0.002^{***}$
	(0.0003)	(0.0003)	(0.0002)	(0.0002)
$HomePrice_{jt} * AmericanScore_i$	$-0.001^{***}$	$-0.0004^{***}$	0.0002***	0.001***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
$Enlistment_j$	-0.020	$-0.176^{***}$	$-0.291^{***}$	-0.309***
	(0.027)	(0.028)	(0.031)	(0.032)
$Enlistment_j * AmericanScore_i$	$-0.011^{*}$	0.029***	0.060***	0.064***
	(0.006)	(0.006)	(0.007)	(0.007)
$\Delta Price Year$ -2001 $_{ijkt}$	-0.054***	-0.053***	-0.040***	-0.019***
	(0.001)	(0.001)	(0.001)	(0.001)
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	0.901***	0.857***	0.872***	0.968***
	(0.001)	(0.001)	(0.001)	(0.001)
Intercept	-0.071***	-1.847***	$-1.615^{***}$	-5.256***
	(0.015)	(0.127)	(0.323)	(0.524)
Observations	6,715,772	6,344,222	5,756,986	5,533,301
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

	$\Delta Share Year-2001_{iikt}$ (%)					
	2003	2004	2005	2006		
	(1)	(2)	(3)	(4)		
$LocalCasualty_{jt} * American_i$	$0.140^{***}$ (0.038)	$\begin{array}{c} 0.115^{***} \\ (0.030) \end{array}$	$0.150^{***}$ (0.033)	$0.258^{***}$ (0.033)		
$National Casualties_t * American_i$	0.0003	-0.0002	0.001	0.0004		
	(0.0005)	(0.001)	(0.001)	(0.001)		
$LocalCasualty_{jt}$	-0.021	$-0.101^{***}$	$-0.075^{***}$	$-0.165^{***}$		
	(0.031)	(0.024)	(0.027)	(0.027)		
$National Casualties_t$	$0.003^{***}$	$-0.001^{*}$	$0.002^{***}$	$0.003^{***}$		
	(0.0004)	(0.0005)	(0.001)	(0.001)		
$American_i$	$\begin{array}{c} 0.078^{***} \\ (0.015) \end{array}$	$-0.130^{***}$ (0.017)	$-0.216^{***}$ (0.019)	$-0.152^{***}$ (0.023)		
$HomePrice_{jt}$	$0.005^{***}$	$0.002^{***}$	$0.001^{***}$	-0.0004		
	(0.0003)	(0.0003)	(0.0003)	(0.0003)		
$HomePrice_{jt} * American_i$	$-0.002^{***}$	$-0.001^{***}$	$-0.001^{***}$	$-0.0002^{***}$		
	(0.0001)	(0.0001)	(0.0001)	(0.0001)		
$Enlistment_j$	$\begin{array}{c} 0.204^{***} \\ (0.031) \end{array}$	$\begin{array}{c} 0.234^{***} \\ (0.032) \end{array}$	$\begin{array}{c} 0.632^{***} \\ (0.035) \end{array}$	$\begin{array}{c} 0.452^{***} \\ (0.035) \end{array}$		
$Enlistment_j * American_i$	$-0.072^{***}$	$-0.068^{***}$	$-0.111^{***}$	$-0.091^{***}$		
	(0.006)	(0.006)	(0.006)	(0.006)		
$Population_{j2000}$	$\begin{array}{c} 0.00003^{***} \\ (0.000002) \end{array}$	$\begin{array}{c} 0.00005^{***} \\ (0.000002) \end{array}$	$\begin{array}{c} 0.00003^{***} \\ (0.000002) \end{array}$	$\begin{array}{c} 0.00002^{***} \\ (0.000002) \end{array}$		
$\Delta Price Year$ -2001 $_{ijkt}$	$-0.028^{***}$	$-0.028^{***}$	$-0.011^{***}$	$-0.003^{***}$		
	(0.001)	(0.001)	(0.001)	(0.001)		
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	$\begin{array}{c} 0.926^{***} \\ (0.002) \end{array}$	$\begin{array}{c} 0.814^{***} \\ (0.001) \end{array}$	$\begin{array}{c} 0.793^{***} \\ (0.001) \end{array}$	$0.975^{***}$ (0.002)		
Intercept	$-0.245^{***}$	$-0.164^{***}$	$-0.254^{***}$	$-0.196^{***}$		
	(0.013)	(0.014)	(0.016)	(0.019)		
Observations	3,243,529	3,056,611	2,778,396 ✓	2,675,991		
Controls	✓	✓		✓		

## Appendix Table A.11: Weekly Casualties and American Brand Share, 2003-2006 - Dichotomized AmericanScore\_i

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. Sample limited to  $AmericanScore_i < 2$  and  $AmericanScore_i > 5$ .  $AmericanScore_i < 2$  recoded to 0 and  $AmericanScore_i > 5$  recoded to 1 to create  $American_i$ .

	Change in market share for American brands				
	2003	2004	2005	2006	
	(1)	(2)	(3)	(4)	
$ln(CumulCasualties_{jt}) * American_i$	$\begin{array}{c} 0.165^{***} \\ (0.012) \end{array}$	$\begin{array}{c} 0.161^{***} \\ (0.008) \end{array}$	$\begin{array}{c} 0.196^{***} \\ (0.008) \end{array}$	$\begin{array}{c} 0.185^{***} \\ (0.008) \end{array}$	
$ln(CumulNatCasualties_{jt}) * American_i$	$-0.042^{***}$ (0.003)	$-0.524^{***}$ (0.024)	$\begin{array}{c} 0.239^{***} \\ (0.055) \end{array}$	$\begin{array}{c} 0.398^{***} \\ (0.084) \end{array}$	
$ln(CumulCasualties_{jt})$	$-0.029^{***}$ (0.011)	$-0.106^{***}$ (0.008)	$-0.132^{***}$ (0.008)	$-0.127^{***}$ (0.008)	
$ln(CumulNatCasualties_{jt})$	$\begin{array}{c} 0.019^{***} \\ (0.002) \end{array}$	$\begin{array}{c} 0.226^{***} \\ (0.020) \end{array}$	$\begin{array}{c} 0.412^{***} \\ (0.045) \end{array}$	$\begin{array}{c} 0.732^{***} \\ (0.068) \end{array}$	
$American_i$	$\begin{array}{c} 0.265^{***} \\ (0.019) \end{array}$	$3.428^{***}$ (0.166)	$-2.095^{***}$ (0.414)	$-3.439^{***}$ (0.662)	
$HomePrice_{jt}$	$0.005^{***}$ (0.0003)	$0.004^{***}$ (0.0003)	$0.003^{***}$ (0.0003)	$0.001^{***}$ (0.0003)	
$HomePrice_{jt} * American_i$	$-0.002^{***}$ (0.0001)	$-0.001^{***}$ (0.0001)	$-0.001^{***}$ (0.0001)	$-0.001^{***}$ (0.0001)	
$Enlistment_j$	$0.260^{***}$ (0.031)	$\begin{array}{c} 0.385^{***} \\ (0.033) \end{array}$	$0.867^{***}$ (0.036)	$0.676^{***}$ (0.037)	
$Enlistment_j * American_i$	$-0.087^{***}$ (0.006)	$-0.102^{***}$ (0.006)	$-0.164^{***}$ (0.007)	$-0.140^{***}$ (0.007)	
$Population_{j2000}$	$\begin{array}{c} 0.00002^{***} \\ (0.000002) \end{array}$	$\begin{array}{c} 0.00005^{***} \\ (0.000002) \end{array}$	$0.00004^{***}$ (0.000003)	$0.00003^{***}$ (0.000003)	
$\Delta Price Year$ -2001 $_{ijkt}$	$-0.028^{***}$ (0.001)	$-0.028^{***}$ (0.001)	$-0.011^{***}$ (0.001)	$-0.003^{***}$ (0.001)	
$\Delta$ Variants Year-2001 <sub>ijkt</sub>	$\begin{array}{c} 0.927^{***} \\ (0.002) \end{array}$	$\begin{array}{c} 0.815^{***} \\ (0.001) \end{array}$	$0.793^{***}$ (0.001)	$0.975^{***}$ (0.002)	
Intercept	$-0.305^{***}$ (0.016)	$-1.707^{***}$ (0.136)	$-3.270^{***}$ (0.336)	$-5.841^{***}$ (0.534)	
Observations Controls	3,243,529 ✓	3,056,611 ✓	2,778,396 ✓	2,675,991 ✓	

Appendix Table A.12: Cumulative Casualties and American Brand Share, 2003-2006 - Dichotomized  $\rm American Score_i$ 

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. Sample limited to  $AmericanScore_i < 2$  and  $AmericanScore_i > 5$ .  $AmericanScore_i < 2$  recoded to 0 and  $AmericanScore_i > 5$  recoded to 1 to create  $American_i$ .

	Share $2001_{ijkt}$ (%)
	(1)
$AmericanScore_i * Bush_{j2000}$	$0.00036^{***}$ (0.00013)
$AmericanScore_i * SkilledOcc_{j2000}$	$0.00405^{***}$ (0.00019)
$AmericanScore_i * ArmedForces_{j2000}$	$0.00603^{***}$ (0.00065)
$AmericanScore_i * NativeBorn_{j2000}$	$0.00008 \\ (0.00017)$
$AmericanScore_i * Black_{j2000}$	$-0.00028^{**}$ (0.00011)
$AmericanScore_i$	$-0.08147^{***}$ (0.01535)
Observations	3,467,761
Controls	$\checkmark$
Category FEs	$\checkmark$
Store FEs	$\checkmark$
Week FEs	$\checkmark$

Appendix Table A.13: Baseline Demographic Propensity for American Brands - 2001

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. Model estimated with OLS. Controls include  $Price2001_{ijkt}$  and  $Variants2001_{ijkt}$ . Sample limited to weeks in 2001 prior to September 11. Stores in counties with populations two standard deviations above or below the mean excluded.

	$\Delta Share Year - 2001_{ijkt}$				
	2003	2006			
	(1)	(2)	(3)	(4)	
$LocalCasualty_{jt} * American_i * Food_k$	$0.044^{***}$	0.009	-0.003	0.039***	
	(0.014)	(0.011)	(0.013)	(0.013)	
$LocalCasualty_{jt} * American_i$	$-0.022^{*}$	0.003	0.009	-0.005	
	(0.011)	(0.009)	(0.011)	(0.011)	
Observations	6,715,772	6,344,222	5,756,986	5,533,301	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	

## Appendix Table A.14: Effect Heterogeneity in Food vs. Non-Food Products - Weekly Casualties

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All models estimated using OLS.

## Appendix Table A.15: Effect Heterogeneity in Food vs. Non-Food Products - Cumulative Casualties

	$\Delta Share Year-2001_{ijkt}$				
	2003 2004 2005 2				
	(1)	(2)	(3)	(4)	
$ln(CumulCasualties_{jt}) * American_i * Food_k$	$0.002 \\ (0.004)$	$0.006^{**}$ (0.003)	$0.003 \\ (0.003)$	$\begin{array}{c} 0.008^{***} \\ (0.003) \end{array}$	
$ln(CumulCasualties_{jt}) * American_i$	$0.015^{***}$ (0.004)	$0.012^{***}$ (0.002)	$0.007^{***}$ (0.002)	$0.002 \\ (0.002)$	
Observations Controls	$6,715,772$ $\checkmark$	6,344,222 ✓	5,756,986 ✓	5,533,301 ✓	

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All models estimated using OLS.

## Appendix Table A.16: Effect Heterogeneity in Hedonic vs. Non-Hedonic Products - Weekly Casualties

	$\Delta Share Year - 2001_{iikt}$				
	2003 2004 2005 20				
	(1)	(2)	(3)	(4)	
$LocalCasualty_{jt} * American_i * Hedonic_k$	-0.010	-0.011	-0.023	$-0.047^{***}$	
	(0.020)	(0.016)	(0.019)	(0.016)	
$LocalCasualty_{jt} * American_i$	$0.015^{**}$	$0.013^{**}$	$0.013^{**}$	$0.036^{***}$	
	(0.007)	(0.005)	(0.006)	(0.006)	
Observations	$\substack{6,715,772\\\checkmark}$	6,344,222	5,756,986	5,533,301	
Controls		✓	✓	✓	

## Appendix Table A.17: Effect Heterogeneity in Hedonic vs. Non-Hedonic Products - Cumulative Casualties

	$\Delta Share Year$ -2001 $_{iikt}$				
	2003	2004	2005	2006	
	(1)	(2)	(3)	(4)	
$ln(CumulCasualties_{jt}) * American_i * Hedonic_k$	$-0.017^{***}$ (0.006)	$-0.012^{***}$ (0.004)	$-0.016^{***}$ (0.004)	$-0.025^{***}$ (0.003)	
$ln(CumulCasualties_{jt}) * American_i$	$0.022^{***}$ (0.002)	$0.019^{***}$ (0.001)	$0.013^{***}$ (0.001)	$\begin{array}{c} 0.014^{***} \\ (0.001) \end{array}$	
Observations	6,715,772	6,344,222	5,756,986	$5,\!533,\!301$	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	

## A.1 External Validation of AmericanScore<sub>b</sub>

As an external validation exercise, we verify that American brands indeed symbolize American national identity. The brands that score high (low) on  $AmericanScore_b$  should be strong (weak) symbols of America. We measure brands' America symbolism using a three-item scale from Steenkamp et al (2003): "To me, this brand is a symbol of America; I associate this brand with things that are American; To me, this brand represents American values." The rating options ranged from 1 to 7, with 1 meaning "I completely disagree with this statement," and 7 meaning "I completely agree with this statement." As such, we expect a correlation between our *AmericanScore<sub>b</sub>* and the American Symbolism scales.

Given the massive number of brands (8,644) already evaluated with the AmericanScore<sub>b</sub> scale, we decided to sample a selection of them (40 brands) to test the correlation between the AmericanScore<sub>b</sub> and the American Symbolism scales. We randomly selected five different product categories (beer, laundry detergent, toothpaste, spaghetti sauce, and frozen dinner). For each one of these categories, we needed to include brands belonging to different levels of AmericanScore<sub>b</sub>. As such, we randomly selected two brands with an American Score of zero, three, five, and seven. Summarizing, the selection of these 40 brands was the result of two randomly selected brands for each of four levels of AmericanScore<sub>b</sub> in five different brand categories.

We assessed that evaluating 40 brands in a single session could generate survey fatigue. As such, we assigned participants to evaluate only 20 brands (instead of 40) in a random order. Each respondent evaluated a brand that scored zero, three, five, and seven on each of the five different brand categories. This generated a mix-model design, in which we had 20 brands, within-subjects (four *AmericanScore*<sub>b</sub> levels five brand categories), and two randomly generated brand lists, between-subjects. To exemplify, Respondent 1 evaluated 20 brands (one brand for four different *AmericanScore*<sub>b</sub> levels five brand categories—what we called "List A"). Respondent 2 evaluated the other 20 brands (one brand for four different *AmericanScore*<sub>b</sub> levels five brand categories—what we called "List B"). Respondent 3 evaluated List A, Respondent 4 evaluated List B, and so on. Table 2 shows the 40 brands used and identifies to which of the two lists it belonged. 400 US-based participants from an online pool participated in this study in exchange for money.

Appendix Table A.18: Mean Values of American Symbolism, Test Brands

	American		American	American	
Category	List	Brand Name	Casua	$\operatorname{Symbolism}$	Symbolism
	Score	Score	Scale (mean)	Scale (95% CI)	
beer	List A	Guinness	0	2.82	2.57,  3.06

beer	List B	Tequiza	0	2.25	2.07, 2.43
beer	List A	Sierra Blanca	3	2.70	2.50, 2.91
beer	List B	Molson	3	2.99	2.78,  3.20
beer	List A	Red Wolf	5	3.81	3.59, 4.03
beer	List B	Brooklyn Brewery	5	5.09	4.87, 5.31
beer	List A	Budweiser	7	5.81	5.63,  5.99
beer	List B	Great Lakes Brewing	7	5.18	4.98, 5.38
laundry detergent	List A	Blanca Nieves	0	2.41	2.21, 2.60
laundry detergent	List B	Paloma	0	2.81	2.62, 2.99
laundry detergent	List A	Ariel	3	3.18	2.97, 3.39
laundry detergent	List B	Citra Suds	3	3.11	2.91, 3.31
laundry detergent	List A	Ajax	5	4.69	4.46, 4.91
laundry detergent	List B	Method	5	4.08	3.86, 4.30
laundry detergent	List A	Arm & Hammer	7	5.56	5.39, 5.73
laundry detergent	List B	Tide	7	5.52	5.33, 5.70
toothpaste	List A	Elgydium	0	2.49	2.29, 2.69
toothpaste	List B	Dabur	0	2.17	2.00, 2.34
toothpaste	List A	Butler	3	3.40	3.18,  3.62
toothpaste	List B	Shane	3	3.28	3.06,  3.50
toothpaste	List A	Mentadent	5	3.65	3.43,  3.87
toothpaste	List B	Choice	5	3.73	3.51,  3.95
toothpaste	List A	Colgate	7	5.38	5.20, 5.56
toothpaste	List B	Crest	7	5.44	5.26, 5.62
spaghetti sauce	List A	Cucina Antica	0	2.41	2.21, 2.62
spaghetti sauce	List B	Anna Mario's	0	2.94	2.75, 3.14

spaghetti	List A	Prego	3	3 41	3 19 3 63
sauce	1150 11	11050	0	0.11	5.15, 5.05
spaghetti sauce	List B	Roland	3	3.32	3.12,  3.52
spaghetti sauce	List A	Sonoma Gourmet	5	4.34	4.12,  4.57
spaghetti sauce	List B	Ragu	5	4.51	4.29, 4.74
spaghetti sauce	List A	California Seasonings	7	4.77	4.55, 4.99
spaghetti sauce	List B	Uncle Dave's	7	4.43	4.21, 4.65
frozen dinner	List A	Ajinomoto	0	2.27	2.07, 2.46
frozen dinner	List B	Gallina Blanca	0	2.31	2.13, 2.49
frozen dinner	List A	Michelina's Signature	3	3.65	3.43, 3.87
frozen dinner	List B	Bobby Salazars	3	3.01	2.82, 3.19
frozen dinner	List A	Healthy Choice	5	4.85	4.64, 5.06
frozen dinner	List B	Seeds of Change	5	3.62	3.41, 3.84
frozen dinner	List A	Boston Market	7	5.45	5.26, 5.64
frozen dinner	List B	Uncle Ben's	7	5.20	5.00, 5.41

We analyzed the Cronbach's alpha of the three items we used to measure American symbolism. Given that the alpha was high (.96), we decided to average these three items in an index ("American Symbolism scale"). We then performed a mix-model ANOVA with the two Lists (A and B) as the between-subjects independent variable, and the 20 brands evaluated by each person as the within-subjects dependent variable. The means of each brand are reported in Appendix Table A.18.

This mix-model ANOVA revealed a non-significant effect of the list (F(1, 398) = 1.30, p = .254,  $\eta p^2 = .003$ ) and significant main effect of the brands (different brand names were

evaluated differently on the American Symbolism scale; F(19, 7,562) = 348.15, p < .001,  $\eta p^2 = .467$ ). The interaction between the two factors was significant (F(19, 7,562) = 19.63, p < .001,  $\eta p^2 = .047$ ). A significant interaction was unexpected but simply indicated that, within the same brand level, sometime the means were higher in List A and some other times were higher in List B.

American Score	American Symbolism	American Symbolism
	Scale (mean)	Scale $(95\% \text{ CIfor mean})$
0	2.49	2.43, 2.55
3	3.20	3.14,  3.27
5	4.24	4.17,  4.31
7	5.27	5.21, 5.34

Appendix Table A.19: Mean American Symbolism By AmericanScore<sub>b</sub> Level

Given that there was no general main effect of the of the Lists, we pooled the data and grouped the 20 brands of List A and 20 brands of List B together. We then ran a correlation between  $AmericanScore_b$  (0, 3, 5, 7) and American Symbolism scale. The two scales were strongly and positively correlated, r(7,998) = .56, p < .001 (note that 7,998 degrees of freedom, n = 8,000, equals to 20 brands \* 400 people). Appendix Table A.19 shows how each subsequent level of  $AmericanScore_b$  corresponded to a higher rating on the American Symbolism scale.

#### References

Steenkamp, Jan-Benedict E. M., Batra, Rajeev, Alden, Dana L. (2003) How Perceived Brand Globalness Creates Brand Value. Journal of International Business Studies, 34: 53-65.

## A.2 Alternative Mechanism: Animosity Towards Foreign Brands

A potential alternative mechanism we consider is that consumers' shift to American brands was incidental to a shift away from non-American brands associated with countries hostile to the Iraq War. Though these are conceptually distinct motives, they are observationally equivalent. Though hostility is unlikely to correlate with county-week casualty exposure, we nonetheless evaluate this mechanism in the context of divisions between US allies in the leadup to the Iraq War. France and Germany opposed the invasion while the United Kingdom, Italy, and Spain joined the "Coalition of the Willing" by sending troops to Iraq. In the US, animosity towards the opponents produced boycott calls that reduced the market share of brands Americans perceived as French (Pandya and Venkatesan 2016).

We compare weekly change in market share of brands associated with these two sets of countries. If this alternative mechanism is at play, the first group should exhibit no change or Appendix Figure A.1: Casualties Reduce Market Share of Both French/German and Coalition of the Willing Brands



CumulCasualties<sub>it</sub> \* CoalitionScore<sub>i</sub> — CumulCasualties<sub>it</sub> \* France + GermanyScore<sub>i</sub>

Effect of cumulative casualty exposure on market share of "Coalition of the Willing" and French and German brands over time, with 95 percent confidence intervals. Coefficients for "Coalition of the Willing" brands from Appendix Table A.20. Coefficients for French and German brands from Appendix Table A.21.

growth whereas the second group would experience a consistent decline in market share throughout the sample. We construct perceived nationality scores from the same original survey data from which we generated  $AmericanScore_i$ .  $CoalitionScore_i$  is equal to how many respondents coded brand b to be from the United Kingdom, Spain, or Italy.  $France + GermanyScore_i$  is an analogous measure for France and Germany: both measures range from 0-7. We estimate two versions of our cumulative casualty model, replacing  $AmericanScore_i$  with  $CoalitionScore_i$ and  $France + GermanyScore_i$ , respectively.

Figure A.1 plots the coefficient of the interaction between logged cumulative local casualties and *CoalitionScore<sub>i</sub>* (black) and *France* + *GermanyScore<sub>i</sub>* (gray) for each sample year. Appendix Tables A.20 and A.21 report full results. Market shares for both sets of brands declined similarly in response to cumulative casualty exposure, a decline that, for almost all country group-years, is statistically different from zero. For both country groups, the magnitude of market share drop attenuates over time. These findings indicate that American brand market

<sup>&</sup>lt;sup>1</sup>Our results are unchanged if only examine French brands.

share growth was not incidental to shifting preferences for foreign brands.

	$\Delta Share Year - 2001_{iikt}$				
	2003	2004	2005	2006	
	(1)	(2)	(3)	(4)	
$ln(CumulCasualties_{jt}) * CoalitionScore_i$	$-0.025^{***}$ (0.003)	$-0.016^{***}$ (0.002)	$-0.005^{**}$ (0.002)	$-0.008^{***}$ (0.002)	
$ln(Cumul NatCasualties_{jt}) * CoalitionScore_i$	$0.003^{***}$ (0.001)	$0.040^{***}$ (0.007)	$-0.045^{***}$ (0.015)	$-0.041^{*}$ (0.025)	
$ln(CumulCasualties_{jt})$	$\begin{array}{c} 0.084^{***} \\ (0.010) \end{array}$	$-0.111^{***}$ (0.008)	$-0.141^{***}$ (0.008)	$-0.022^{***}$ (0.008)	
$ln(CumulNatCasualties_{jt})$	$-0.012^{***}$ (0.002)	$\begin{array}{c} 0.305^{***} \\ (0.019) \end{array}$	$\frac{1.411^{***}}{(0.045)}$	$\begin{array}{c} 1.139^{***} \\ (0.072) \end{array}$	
$CoalitionScore_i$	$0.007 \\ (0.005)$	$-0.223^{***}$ (0.045)	$\begin{array}{c} 0.410^{***} \\ (0.114) \end{array}$	$0.418^{**}$ (0.195)	
$HomePrice_{jt}$	$-0.003^{***}$ (0.0003)	$-0.003^{***}$ (0.0003)	-0.0003 (0.0003)	$-0.001^{***}$ (0.0003)	
$HomePrice_{jt} * CoalitionScore_i$	$-0.0002^{*}$ (0.0001)	$-0.0003^{***}$ (0.0001)	$-0.001^{***}$ (0.0001)	$-0.001^{***}$ (0.0001)	
$Enlistment_j$	$-0.345^{***}$ (0.028)	$-0.071^{**}$ (0.032)	-0.005 (0.036)	$\begin{array}{c} 0.114^{***} \\ (0.038) \end{array}$	
$Enlistment_{j} * CoalitionScore_{i}$	$0.008 \\ (0.009)$	$-0.023^{**}$ (0.011)	$-0.037^{***}$ (0.012)	$-0.061^{***}$ (0.013)	
$Population_{j2000}$	$0.0001^{***}$ (0.000002)	$\begin{array}{c} 0.0001^{***} \\ (0.000002) \end{array}$	$0.0001^{***}$ (0.000003)	$0.0001^{***}$ (0.000003)	
$\Delta Price Year$ -2001 $_{ijkt}$	$-0.086^{***}$ (0.002)	$-0.061^{***}$ (0.001)	$-0.056^{***}$ (0.001)	$-0.027^{***}$ (0.001)	
$\Delta$ Variants Year-2001_{ijkt}	$0.767^{***}$ (0.001)	$0.744^{***}$ (0.001)	$\begin{array}{c} 0.729^{***} \\ (0.001) \end{array}$	$0.681^{***}$ (0.001)	
Intercept	$-0.100^{***}$ (0.015)	$-2.290^{***}$ (0.133)	$-10.558^{***}$ (0.336)	$-9.102^{***}$ (0.572)	
Observations Controls	6,573,689 ✓	5,968,261 ✓	5,472,115 ✓	5,056,532 ✓	

## Appendix Table A.20: Cumulative Casualties and Coalition of the Willing Brand Share, 2003-2006

	$\Delta Share Year-2001_{ijkt}$				
-	2003	2004	2005	2006	
	(1)	(2)	(3)	(4)	
$ln(CumulCasualties_{jt}) * France + GermScore_i$	-0.024***	-0.008***	-0.007***	-0.005*	
	(0.003)	(0.002)	(0.002)	(0.003)	
$ln(Cumul NatCasualties_{jt}) * France + GermScore_i$	0.005***	0.039***	0.115***	0.040	
	(0.001)	(0.007)	(0.016)	(0.026)	
$ln(CumulCasualties_{jt})$	0.056***	$-0.118^{***}$	$-0.119^{***}$	$-0.039^{***}$	
	(0.011)	(0.009)	(0.009)	(0.009)	
$ln(CumulNatCasualties_{it})$	$-0.021^{***}$	0.340***	0.990***	1.145***	
	(0.002)	(0.021)	(0.048)	(0.077)	
$France + GermScore_i$	$-0.095^{***}$	$-0.340^{***}$	-0.938***	$-0.385^{*}$	
· ·	(0.006)	(0.048)	(0.123)	(0.206)	
$HomePrice_{it}$	-0.002***	-0.002***	0.00002	-0.0004	
<u>.</u>	(0.0003)	(0.0003)	(0.0003)	(0.0003)	
$HomePrice_{it} * France + GermanyScore_i$	0.0005***	0.0004***	0.0003**	$0.0002^{*}$	
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	
$Enlistment_i$	$-0.246^{***}$	$-0.139^{***}$	-0.047	-0.002	
	(0.031)	(0.034)	(0.038)	(0.040)	
$Enlistment_i * France + GermanyScore_i$	$-0.042^{***}$	$-0.037^{***}$	$-0.029^{**}$	$-0.028^{**}$	
	(0.010)	(0.012)	(0.013)	(0.014)	
Population <sub>12000</sub>	0.0001***	0.0001***	0.0001***	0.0001***	
	(0.000002)	(0.000003)	(0.000003)	(0.000003)	
$\Delta Price Year - 2001_{ijkt}$	-0.116***	$-0.095^{***}$	-0.093***	$-0.069^{***}$	
eji ee	(0.002)	(0.002)	(0.002)	(0.002)	
$\Delta$ Variants Year-2001 <sub>iikt</sub>	0.781***	0.762***	0.757***	0.732***	
-,,	(0.001)	(0.001)	(0.001)	(0.001)	
Intercept	0.071***	$-2.280^{***}$	$-7.151^{***}$	-8.826***	
<b>4</b> *	(0.016)	(0.143)	(0.362)	(0.605)	
Observations	4,770,144	4,339,951	3,966,649	3,662,239	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	

## Appendix Table A.21: Cumulative Casualties and France/Germany Brand Share, 2003-2006