

Made in America: The affects Cognitive Load, Consumer Ethnocentrism, and Country of Origin have on Consumer Purchasing Decisions

By

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ABSTRACT

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Previous research suggests that cognitive load affects decision-making tasks. As well, a consumer varies his or her purchasing decisions based off of his or her personal level of Consumer Ethnocentrism (CE) and the Country of Origin (COO) of the product or brand. Eighty individuals participated in the study. Some participants were put under cognitive load by having remembering an 8 digit number span. All subjects were randomly exposed to one of two product sets, where COO was manipulated. Each product set consisted of 5 advertisements followed by a series of 4 questions. These questions regarded their willingness to purchase the product in the advertisement, their familiarity with the product, and a quality rating of the product. All participants then answered the CETSCALE questionnaire in order to measure their CE. It was hypothesized that participants with high CE regardless of cognitive load will tend to favor purchasing American products over products with a foreign COO. In addition, participants with low CE under cognitive load will be indifferent when making purchasing decisions on domestic versus foreign products.

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Made in America: The effect Cognitive Load, Consumer Ethnocentrism and Country of Origin has on Purchasing Decisions

With the changing economic and global market place, countries, especially the United States owned manufacturers, have been producing products abroad to decreased manufacturing costs. Yet the consumer realization of the potential negative implications, such as domestic job loss, has caused a national push to buy “Made in America” brands, such that 8 out of 10 Americans say they would rather purchase a “Made in America” product (Consumer Reports, 2015). This push is marked through President Obama’s words having said “that’s what we’ve got to be shooting for, is to create opportunities for hardworking Americans to get in there and start making stuff again and sending it all over the world—products stamped with three proud words: Made in America” (Obama, 2012).

President Obama’s words further instill a sense of patriotism in American consumers, along with many other factors that may affect consumer purchasing decisions. One important factor, studied frequently, that may contribute to purchasing decisions is country of origin (COO). COO is where a product is originally made or produced. Consumers use country of origin to help assess the quality of products. Han (1989) hypothesized that consumers use the Halo Construct when choosing products. The Halo Construct is when consumers make inferences regarding the quality of a product, and that COO affects consumer’s ratings of products. COO leads to perceived beliefs about a product, which then creates a consumer’s brand attitude. In order to test the Halo

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Construct 116 participants were sampled from a Midwestern US city. Consumers were asked about the perceived quality, personal ownership, and brand attitude of cars and TV sets from three different countries - USA, Japan, and Korea. The American products were high in familiarity to the participants, the Japanese products were of medium familiarity to the participants, and the Korean products were of low familiarity to the participants. Participants were interviewed over the phone. Overall, Han (1989) found that when a product was low in familiarity to a person, that the consumer used the country image to infer a product's quality and attributes. This in turn affected the consumer's attitude towards the brand. However, when a product was high in familiarity to a consumer, the COO and country image of the product favorably affected their attitudes towards the brand. In summary, these results reveal that COO and brand familiarity correlate with participant's attitudes, perceived quality, and beliefs about a product or brand.

Another key study, which examined the effect of COO on purchasing decisions, was by Maruyama and Wu (2014). The purpose of their study was to assess the importance of COO on consumer's choice between domestic and foreign products. Furthermore they sought to analyze the relevance of the retailer's COO on consumer's product choice. In this experiment, participants were surveyed about their grocery store decisions. Consumers were asked questions regarding the importance of a retailer's COO and about the consumers perceived importance of supporting domestic retailers with their purchasing decisions. Overall they found a domestic COO was an important factor for consumers when debating between buying a domestic or foreign product. While they

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found that these perceptions did not necessarily translate to consumers in store purchasing behavior, consumers perceived importance of buying domestic products did have a negative correlation on that consumer's choice to buy foreign products. If we know that COO is important to consumers, it is important to understand how significant a role it plays in their decisions.

Another relevant study, undertaken by Harris, Garner-Earl, Sprick, and Carroll (1994), analyzed the effect of COO on purchasing decisions. In this investigation, 246 participants were sampled. All of the participants were shown 18 advertisements that were unfamiliar. The advertisements were written by the researchers in order to remove participant reactivity or bias in case the subjects had seen the advertisement before. Three sets of advertisements were utilized with each set containing 6 U.S. ads, 6 French ads, and 6 German ads. Participants either listened or read the advertisements and then answered 3 questions on a 7-item Likert scale regarding their likeliness to purchase the product. Results revealed that participants tended to prefer the U.S. products to the foreign products. However, the type of product advertised and the participant's gender also predicted participant's decisions. For example, female participants preferred German personal care products to German technical products while no difference existed for males. Overall, Harris et al (1994) concluded that country of origin matters but COO tends to interact with other variables such as sex and modality. This study clearly demonstrated that COO is an important factor in purchasing decisions.

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Further studies demonstrate that COO correlates with a consumer's perceived quality of a brand or product. One such study that assessed this was by Erickson, Johansson, and Chao (1984). This study surveyed 96 MBA students from the University of Washington. These students were tested on their product familiarity, attitudes, and beliefs about certain automobiles. The researchers chose to use cars with different COO's, given source is an important factor to many people when purchasing an automobile. The vehicle options included 4 cars from the U.S., 4 cars from Japan, and 2 cars from Germany. In the questionnaire, participants were asked to respond to questions regarding their beliefs and attributes pertaining to the 10 automobiles. Respondents were asked to rate the cars on a 5-point scale, and to rank their familiarity with the cars. They were given information regarding each car's price, COO, gas mileage, reliability, durability, and workmanship. The researchers found a consumer's quality ranking positively correlated with reliability, durability, workmanship, and price. In addition, there was a positive correlation of belief on attitude towards the product. There was also a strong halo effect. They further found that familiarity directly correlates with consumer attitude, and that price correlates with a consumer's perceived quality. Finally, they noted that their results indicate that COO correlates with product beliefs but not with product attitude. In summary, these results indicate that COO correlates with a consumer's perceived product quality.

It is also important to note that while consumers may try to avoid using COO in making product purchase decisions, they may not be able to do so once COO information has been presented to them. One such principle used to explain this behavior is spreading

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activation. Spreading activation is the idea that once an object or an idea is in the working memory or consciousness, other associated or related objects are also activated from your long-term memory and brought to your consciousness through different neural networks (Collins and Loftus, 1975). As such, this information that is brought to your consciousness is categorized and can be used to make judgments (Collins and Loftus, 1975). This action is significant because if one is aware of COO then other ideas regarding that country may be brought to one's consciousness. Furthermore, he or she may then be primed to associate certain thoughts with a product.

One study that looked at the activation of COO and stereotypes was undertaken by Herz (2013). In his study, he hypothesized that the mere presence of information regarding COO will affect the cognitive and brand assessment of a consumer. If the consumer's stereotypes are functional (emotional) then there should be a stronger impact on cognitive brand evaluations. This study utilized a 3 (functional stereotypes, emotional stereotypes, and no country information) x 2 (functional advertising, emotional advertising). Two hundred and seventy Austrian consumers were randomly assigned to 6 conditions. The researchers created their own brand/product to ensure none of the participants came in with a pre-existing bias. A fruit juice was utilized as the product. Each participant was first exposed to different product attributes and told to create a first impression of the brand. In the second stage, they were instructed to rate the quality of the brand. In the third stage, participants were given the COO exposure cue, which was from one of the 6 above conditions. In the fourth stage, the participants answered questions regarding their brand evaluations, brand behavior, and a few control variables.

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They used temporal separation between brand attitude and COO exposure in order to obtain product image measurement with and without COO information. Since the researchers presented the cues after the stage 2 pre-rating, they could compare pre and post brand ratings to assess the automatic cognitive effect of a COO cue. The pre and post quality rating tests, taking from previous studies, asked questions regarding the participants attitude towards the brand, love towards the brand, and purchasing intentions. Not only did they find that advertising format affects brand assessments, but that both a functional and emotional stereotype resulting from a COO cue correlates with perceived brand quality and brand assessments. Before the cue, the German (M=4.14) and Italian (M=4.34) products had little difference in rating. When no COO is presented, there is no change in pre and post ratings. However after the cue was presented, the mean scores, specifically for the German product changed (M=5.38). In turn, these results imply that COO has a cognitive effect on a perceived brand, product quality ratings, and assessment ratings. These results indicate that country stereotypes can be automatically brought to consciousness, potentially through spreading activation, affecting brand image, brand assessments, and perceived brand quality.

One study that tried to further understand the effect of cognitive processes and COO on products was Hong and Wyer JR (1989). Their goal was to evaluate four hypotheses. In order to test, these hypotheses, the researchers sampled 128 college students. Each participant was given information regarding two products. Participants were then assigned to one of two objectives. If the participant's objective was comprehension they were told to read the information presented and evaluate it based off

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of its clarity. Those participants assigned to impression formation had to form impressions of the products based off of the information with which they were provided. The researchers also altered the order the information provided. Some participants were given the COO information first followed by other information regarding the product. Others were given the COO information last in the product description. After reading the information the participants were asked to evaluate the product, recall information from the product description, and rate how favorable each attribute presented was. In total there were 8 conditions with 16 participants in each group. Each group was then further divide into groups of four. Each group received different COO information about both products they were asked to evaluate. The two products were a computer and a VCR, and the four countries used were West Germany, Mexico, South Korea, and Japan. Results indicated that COO affects product evaluations especially when COO is presented first. Overall, their results best support the cognitive elaboration hypothesis. This study indicates that relevant and presented information such as COO can arouse other ideas, concepts and attributes about products which may affect product evaluations.

If COO directly affects perceived product quality, and these beliefs can arise from pre-existing stereotypes, it is important to understand what other types of stereotypes affect consumers. Therefore, one variable to consider is consumer ethnocentrism.

Consumer Ethnocentrism is the idea that one person believes that the group he or she belongs to is superior or more important than other groups. In particular, people high in consumer ethnocentrism tend to favor domestic products over foreign products.

Consumers, therefore, tend to judge other products by what they themselves are culturally

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accustomed to (Shimp and Sharma 1987). Shimp and Sharma (1987) constructed a scale, called the CETSCALE to measure consumer ethnocentrism (CE). The scale asks questions like “ A real American should always buy American-made products?” and “It is always best to purchase American products?”. Participants answer these questions on a 7-item Likert scale. Through the use of four different studies they tested the reliability of each question using different sample populations. Of the four studies conducted, the smallest sample size was 145 participants. Shimp and Sharma (1987) found the scale to be reliable with Chronbach’s alphas from the four experiments ranging from 0.94 to 0.96. They found that those who had a high CE tended to be more dogmatic, patriotic, and conservative. In addition, they tended to have more negative feelings towards products from foreign countries. This finding is important to understand because consumers with different levels of CE may pick products for varying reasons.

Another study that validated and checked the cross-country comparisons of the CETSCALE is Netemeyer, Durvasula, and Lichtenstein (1991). Their studied analyzed the CETSCALE in four major economies and world markets including the U.S., Japan, France, and West Germany. They hypothesized that the CETSCALE has a uni-dimensional factor structure, it is invariant across the four countries, and that it has high internal consistency. As well, they hypothesized that there would be a positive correlation between the CETSCALE and attitude towards one’s home country. In order to test this hypothesis, participants were given products from the four countries and asked to rank the order based off of personal preference. It was expected that the CETSCALE would be positively correlated with picking products from one’s home country. They were also

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given a questionnaire in their country's native language regarding their attitudes towards their home country. Participants also had to answer the 17-item CETSCALE. In order to remove age bias they used students of the same age across all four countries. There were a total of 290 participants. A statistical test revealed that the CETSCALE is reliable across the countries with alpha's ranging from 0.91 to 0.95. This specific study did not look at product ratings. Results revealed that the CETSCALE only correlated with general home country attitude for the U.S. and Japan. In turn, one can figure that the CETSCALE is a useful and reliable measure of consumer ethnocentrism especially for participants from the United States.

Other studies have used the CETSCALE as part of their methodology. One example is Tsai, Yoo, Lee (2013). They were interested in assessing the relationship between CE on consumer's preference of a domestic or foreign COO. Furthermore they sought to analyze if product preferences were based off of product category, i.e. beverages, auto, food, etc., or COO dependent. In order to test hypothesis, an online survey was utilized. Overall their results revealed that the affect CE had depended on the product category and COO. Furthermore their three-country study found that Americans had the highest CE when compared to citizens of South Korea and China. The researchers noted that CE tended to be highest in countries with advanced economies. This inclination is significant because it demonstrates that CE is a variable based on the specific participant, the participant's home country, and the participant's beliefs. Furthermore it demonstrates that marketing tactics may need to vary depending on the

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general CE of the public when consumers have the option of purchasing a similar product with both domestic and foreign retailers.

Given that today's consumers have an increasing ability to purchase foreign and domestic products at the tap of a button, it is important to understand what other processes and outside factors affect buying behavior. Additional influences that may contribute or affect decision-making and buying behavior include cognitive load. Now-a-days consumers are always multitasking. Some current day examples of multitasking include picking out a product at the grocery store while texting, or shopping online and watching TV. In turn, our purchasing decisions may be unconsciously altered. Cognitive load, also known as cognitive busyness, is the amount of mental effort a person uses and needs when completing a task (Paas, Tuovinen, Tabbers, Van Gerven, 2010). Furthermore, the more processes a person is trying to focus on at once the higher the load (Paas et al., 2010). People have a limited capacity when sorting information or focusing on multiple tasks (Paas et al., 2010). If a person is focusing on many tasks at once and using many mental resources, cognitive load can impact one's decision-making strategies and processes (Gilbert and Osborne, 1989).

Cognitive load has been manipulated in experiments via multiple ways. One of the most common ways to employ cognitive load is through the use of memorization of a series of numbers. One such study that utilized a number span to handle cognitive load was Gilbert and Osborne (1989). The goal of their study was to determine if a person under cognitive load could reverse their impressions and decisions, if given the

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opportunity to do so. They randomly assigned participants to watch the same video either with sound or without sound. Participants were told the video was a conversation about the target woman's sexual fantasies. All of the participants were told to remember an 8-digit number span in order to put them under cognitive load. Then all of the participants rated the target women's anxiety level. Next, half repeated the 8-digit number span, removing them from cognitive load, while the other half still had to remember the number span, remaining under cognitive load. The participants were then instructed to write an essay about the target woman's anxiety level. Gilbert and Osborne (1989) found that those under cognitive busyness throughout the entire experiment did not change their original impression of the target's anxiety level, while those who were relieved of cognitive load revised their original ranking of the target's anxiety level when writing the essay. These results reveal two things. First, when a person is under cognitive load, he or she does not use the complete context to formulate their decisions. The results revealed this conclusion by showing that people reverse their decisions. Secondly, if people are given a chance to only think about one topic, i.e., they are not under cognitive load, they can revise their original impressions and make a more accurate decision. It is important to understand how and why people change their decisions when under cognitive load. Gilbert and Osborne's manipulation, through the use of a number span, successfully manipulated cognitive load and revealed that the level of cognitive load can affect and change decisions.

A study that more closely analyzed the effect of information overload or cognitive load on consumer purchasing decisions was Chen, Shang, and Kao. (2008). Chen et al.

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(2008) hypothesized that online consumers face a response rate drop-off. Specifically, when consumers face an excess amount of information, the consumer's decisions are altered. In order to test this hypothesis Chen et al. (2008) sampled participants and showed them a varying amount of cellphone options they could purchase. The number of phones shown varied from 100 phones in the high information group to 40 phones in the low information group. Participants were given the ability to sort the information through filtering mechanisms provided by the retailers. Participants had to make a decision in 15 minutes. The study manipulated the participant's level of cognitive load by giving the participants more or less information at once. Researchers measured participants perceived level of load as well as their decision-making ability under different levels of load. Overall, Chen et al. (2008) found that participants who were given more information had a higher perceived level of information overload, such that participants thought they were given too many options and too much information to make the best decisions. They found that shoppers, especially those who were less experienced, could not handle the excess information they were provided. Those participants thought they could not make the best or most informed decisions. Meaning that participants who were not used to shopping with excess information felt that their purchasing decisions were altered from what that participant would have normally purchased had shopping variables been different. These results are significant because it shows that information overload can alter one's decisions when shopping for consumer products.

They way in which cognitive load affects decision-making can also be analyzed through the neuroscience and cognitive psychology paradigms. As humans we have a

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limited capacity memory and working memory (Baddeley and Hitch, 1974). This constraint means that we can only process and attenuate to a certain number of items at once (Baddeley and Hitch, 1974). On top of this, people have a pool of resources that can be used to attend to tasks. In addition, this pool can vary day by day based off of arousal level and genetic disposition, as seen in the Yerkes-Dodson Law (Matlin, 2013). Our working memory is where individuals can store relevant needed information, while simultaneously working on different tasks (Matlin, 2013). Scholars claim that people have a pool of resources that can be split between three storage bins in their working memory. These bins are specifically known as the phonological loop, the episodic buffer and the visuospatial sketchpad (Baddeley, 1986). These areas compete for a limited number of resources when a person is trying to do serial or dual task processing. In addition, certain types of task will be completed in the different pools or storage bins.

One study that looked at the pool of resources available in working memory, the capacity of working memory, and the effect of cognitive load is Vergauwe, Dewaele, Langerock, and Barrouillet (2012). In their first experiment they tested 39 female undergraduate students. The participants were randomly assigned to high, medium, or low cognitive load. Participants then had to complete a task, compose a letter span task, and a spatial fit judgment task. The letter span task measured storage while the special fit task measured processing. For the letter span task, the participant heard varying numbers of letters and had to remember each letter. The processing task was a two choice reaction time tests where participants had to decide if a line would fit into a gap within a box. The layout of the encoding task was 1500 ms for one letter, a 500 ms delay, then the letter

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was presented auditorily. Participants completed 36 series, which was further broken down into groups of nine with an ascending number of letters. The participants in the end had to recall all of the letters presented to them. Their recall performance was measured. Results revealed that those under cognitive load performed worse on the recall task. By increasing the level of cognitive load for the visuospatial processing task, their verbal recall performance was hurt. These results support the claim that there is a general domain pool of resources for different task, including visual, spatial, and verbal tasks. Furthermore these results support the assertion that working memory has a limited capacity and a limited pool of resources. As the difficulty of a task increases, performance and the number of available resources decrease, such that there is an inverse relationship.

This drives the question if we have a limited pool of resources, what happens when a person is multi-tasking or engaging in parallel processing? For example, what happens when one is engaging in a decision making task while trying to remember a digit span, or doing a reaction time task? One study that analyzed this was Posner and Boies (1974). Their analysis looked at dual task processing. The idea was to assess that humans have a limited capacity to do tasks and that those tasks can interfere with each other. In order to test this idea they gave participants two tasks simultaneously. The first task, or primary task, was to decide if two letters presented over a period of time matched. The potential match could have occurred in two ways. The first way was at the name level where one letter was upper case and the second letter was lower case. The second way was a physical match where both letters were uppercase. The secondary task

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was to push a button when they heard noise, which was 50 decibels of white noise. The overall layout of this experiment included a fixation point, the presentation of the first letter, a 3 period delay, the presentation of the second letter, and then another fixation point. There was a total of 8 different time points in the experiment. If the noise was presented during the first fixation, it was measured as a control reaction time for the primary task. This is because the primary task was then complete without the secondary task interfering. As time went on the primary task required more cognitive resources and became harder. This increased level of difficulty was due to the participant having to remember more while performing mental operation in working memory. Multiple trials were repeated with participants. Results revealed that the first letter was encoded in under 1 second. Yet when the second letter was presented and the tone occurred, reactions times were significantly slower. This decrease in processing speed ranged from 100 ms to a 400 ms increase in reaction time. This suggests that there is trouble processing the second letter to engage in the matching decision, even though it could be completed. This is important to note because while tasks can be done simultaneously the time and cognitive resources required increases.

Scholars argue that you cannot engage in two decision-making tasks at once because there is a bottleneck in decision making. This bottleneck is called the psychological refractory period (Pashler, 1994). On average, a person has a short-term memory capacity of 7 plus or minus two items or chunks (Matlin, 2013). This capacity suggests that while almost all resources may be used up, a person can remember a digit span while engaging in a decision making task. This finding is important to note because

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it suggests that when a person is multitasking they cannot simultaneously engage in two decision-making tasks since there is a refractory period.

As suggested above, consumer decisions can be influenced by the idea of spreading activation, limited capacity working memory, and the psychological refractory period. All of these proprieties and ideas have a basis in the brain. In turn, it is important to understand what processes and locations in the brain are implicated in consumer buying behavior and purchasing decisions. One study looked at this was by Jones, Childers, and Jiang (2012). The purpose of their study was to look at how consumers choose products based on gender under different levels of stress and anxiety. To measure this decision-making impact, they had 20 high math anxiety participants and 19 low math anxiety participants engage in purchasing decision for promoted products (those that had a 15% discount) and un-promoted products (those with no discount). The stress levels were measured using an Electroencephalogram (EEG). Participants were shown a total of 50 products, which they were exposed to twice. Some of these products were over priced and some were under priced. The prices of products ranged from 99 cents to \$198.39. The participants took the Abbreviated Math Anxiety Scale test a week before the actual experiment in order to determine into which group they would fall. The following week the experiment was broken into two blocks, one for the promoted products and one for the un-promoted products. Individuals were given a product, and for the promoted products they were asked to estimate the new price after the 15% discount. Participants were instructed to decide to purchase the product only if they felt a better deal could not be found. In terms of timing on experiment, participants were presented the product for

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1000 ms, followed by an image of the product for 2000 ms, and then they were presented with the price information for 4000 ms. Finally they were presented with the option to buy the product for 4000 ms followed by the price for 4000 ms. Lastly, they had to engage in a decision. Throughout this process, the EEG was recording.

Results indicated the females had a lower reference price confidence compared to males. Reference price confidence refers to the individuals' confidence and ability to quickly calculate the price of the product after the discount. The results also indicated that the participants bought more products under the no promotion condition than the promotion condition. As such, females were less likely to buy than males. Furthermore those with a low math anxiety tended to buy more than those with a high math anxiety. P200 amplitudes were lower in the no promotion condition for buys for low math anxiety females and high math anxiety females. There was no P200 latency effect for price. There were also differences for low math anxiety males under promotions and high math anxiety females under no promotions and promotions. Such that low math anxiety males demonstrated a more positive FN400 result for buys than non-buys, which was similar for the high math anxiety females. Results also indicated FN400 latency effects. The low math anxiety males had lower LPC amplitudes for non-buys versus buys, where low math anxiety females revealed the opposite effects. Finally, high math anxiety females had much smaller P300 amplitudes. In turn one can see that there is different brain activation for buying and not buying products, as well as gender differences. Furthermore there were differences in purchasing decisions and processing based off of levels of math anxiety. Anxiety may be seen as a form of load. This conclusion is due to anxiety directly

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affecting the reaction time of specific brain regions. One can assume that those who have anxiety viewed the task as more difficult. The task may have used up more cognitive resources compared to those participants with no or low levels of anxiety.

Research suggests that certain neural networks in the brain are associated with purchasing decisions. One study that looked at the neural networks behind product preference and prices is Knutson, Rick, Wimmer, Prelec, and Loewenstein (2007). They hypothesized that preference would activate neural networks. In addition, they believed that excessive price presentation would activate circuits implicated in loss, and that these regions would predict purchasing decisions better than self reported variables. In their study, 26 right-handed participants were shown a product for 4 s, followed by the product's price for 4 s, and then asked a buy or not to buy question for 4 s. Participants were shown a total of 80 products while under fMRI. They found that on average subjects choose to purchase 30% of the products and that there were no gender differences. They also found that Nuclear Accumbens (NAcc) were activated during the preference phase, which was composed of the product and price pictures shown to the participants. Results also revealed that the Mesial Prefrontal Cortex was activated for the participant's price differential (what the product costs versus what the participant is willing to pay). Furthermore when a participant chooses to purchase a product, the fMRI results revealed a deactivation in the bilateral insula. This deactivation was compounded by activation in other regions. Overall, purchases versus non-purchase decisions were marked by bilateral activation of the NAcc. These results reveal that specific regions of the brain are

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implicated in purchasing decisions and furthermore that by looking at brain activation one can predict a consumer's purchasing decisions.

As has been reviewed, there are a numbers of factors that impact consumer buying decisions, yet consumer fulfillment and gratification can also impact current and future procurement actions. Jacoby, Speller, Kohn (1974) argued that it is important for the consumer psyche and consumer satisfaction to feel like he or she made the correct decision. Certainly companies benefit when they understand how consumers make decisions. Companies can better tailor their marketing efforts to increase the demand for their company's products. Many factors affect consumer-purchasing decisions. Overall research suggests decision-making can be affected by multiple factors, including cognitive load, consumer ethnocentrism, and country of origin. Previous research suggests that COO cues can cause spreading activation in consumer's and in turn affect their brand assessments and perceived brand quality (Herz, 2013). Research regarding CE suggests that people who are more dogmatic and conservative will prefer to purchase products from their own home countries and tend to reject products from foreign countries (Shrimp and Sharma, 1987). Finally, Vergauwe et al (2010) suggests that people not only have a limited capacity working memory but that cognitive load can alter a consumer's purchasing decisions (Chen et al., 2008). Specifically, Chen et al. discusses how people under cognitive load reverse their original decisions when they are removed from cognitive load. However, there is currently a lack of research in how cognitive load and COO affects consumer decision-making in people with varying levels of CE.

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Building on previous research the goal of this study is to assess how CE, COO, and cognitive load together affect a participant's consumer purchasing decisions. This study hypothesizes that participants with high CE under cognitive load will tend to favor purchasing American products over products with a foreign COO. If participants with high CE are put under cognitive load then one can expect that their working memory will be closer to capacity, but not at capacity. In turn, participants will rely more on the process of spreading activation and the rising of stereotypes to make their purchasing decisions over using other cues. Participants with high CE and no cognitive load will favor the American made products, and participants with low CE and no cognitive load will not favor either product. Lastly, participants with low CE under cognitive load will be indifferent when purchasing domestic versus foreign products. They will be indifferent because to them COO is not an important factor in purchasing a product. These hypotheses will be tested through randomly assigning participants to view one of two product sets with 5 ads in each set. In product set one, the target ad will be from the United States. In product set two, the target ad (the same product from set 1) will be from India. Each participant will then be randomly assigned to be under cognitive load or to not be under cognitive load. After viewing each ad, the participant will be asked a series of 4 questions. The queries will ask the participants about their likelihood to buy the product and about their perceived quality of the product. It is predicted that those with a high CE under load and not under load will rank the American product with a higher quality than those with a low CE. As well it is predicted that those under load will be more likely to purchase products in general than those participants not under cognitive

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load. Finally, each participant's CE will be measured. Overall this study will assess how a consumer's purchasing decisions are affected based off of their CE, COO, and cognitive load.

Method

Participants

Eighty individuals participated in this study. Fifty-seven participants were female while 23 were male. Ages ranged from 18 to 22 years with a mean age of 19.73 years. All participants were current students at Union College. The participants were either compensated with course credit or 4 dollars per half hour for their participation.

Procedure

Before the start of the experiment, each participant filled out an informed consent agreement. Next, the participant was instructed to sit down. Each participant was read a cover story. The cover story read to them stated that this study was about consumer product packaging designs and how appealing they found different packaging designs. A random number generator was run, without the participant's knowledge. If the participant was assigned a number 1 then he or she was placed under cognitive load. If the participant was assigned number 2 then he or she was not placed under cognitive load. Those under cognitive load were then given an 8 digit number span to remember. The number span was kept the same for each participant and was (03249736). Each participant was given 20 seconds to rehearse the digit span. The participants were instructed twice that they would need to recall this number at the conclusion of the experiment.

A random generator was run again, to randomly assign participants to a product set. If the participant was given number 1, he or she was assigned to Product Set 1. If he

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or she was given number 2, he or she was assigned to Product Set 2. All product ads, in both sets, were of consumer food or drink products. The ads were a mixture of video and paper advertisements or commercials. Product Set 1 contained 5 ads, 3 of the ads were from the United States of America and the other 2 were from different countries of origins (one from Austria and one from China). Product Set 2 contained five ads, 3 of the ads were foreign COO produced items while 2 ads were produced with a domestic COO. The foreign ads were from China, India, and Austria. The target ad was the same exact besides the product's COO in set 1 and set 2. The target ad had the same wording and picture in order to remove any confounds. The description of each product included information about price, COO, and where it could be purchased. All of the ads were presented in the exact same order in both Product Set 1 and Product Set 2. Advertisement 1, 2, 3, and 4 were exactly the same in Product Set 1 and 2. Product 2 in Product Set 1 and Product Set 2 were the designated target ads. Participants assigned to Product Set 1 believed that target product ad was produced in America while those assigned to Product Set 2 believed the target product ad was from India. As well, the target ad was unfamiliar to the majority of participants in order to remove bias. The ad was a print picture of a shirtless man of a medium skin tone holding up a bottle of Thumbs Up soda.

Participants were then shown each of the 5 ads from their respective set. After viewing each ad, the participants were asked a series of four questions based on a 7-item Likert scale. (Appendix A). The questions were about their likeliness to buy the product, how appealing the packaging design was, their familiarity with the product, and about their perceived quality of the product. An example questions includes "On a scale from 1

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to 7, with 1 being I strongly disagree and 7 being I strongly agree, how likely is it that you would purchase this product?" Answers to the questions ranged from 1 strongly disagree to 7 strongly agree.

After the participants finished viewing all five ads, they were given the CETSCALE to answer (Appendix B). The CETSCALE measured the participant's consumer ethnocentrism. The scale contained 17 questions with responses on a 7-item Likert scale. Questions and statements asked about importing products, supporting domestic or foreign produced goods, and about taxation of foreign products. Sample questions and statements include "Buy American-made products. Keep America working", and "Foreign products should be taxed heavily to reduce their entry into the US." The participants were then asked a series of general demographic questions including their gender and age (Appendix A). After, the participants who were placed under cognitive load were asked to recall the 8-digit number span. Participants were then thanked for their participation, debriefed, and compensated.

Results

This study assessed the role of consumer ethnocentrism, cognitive load, and country of origin on consumer purchasing decisions, specifically on the target product. The target product was Thumbs Up soda, which participants were led to believe was produced in either India or the USA. Before analysis, after all of the data was collected participants were categorized either as having high or low CE. This was accomplished by taking the median CE score, which was 46. Participants who had a CE score on the

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CETSCALE, above 46, were categorized and coded as being high in consumer ethnocentrism and those below 46 were categorized and coded as having low consumer ethnocentrism. As well due to previous mixed results in the literature a t-test was run to analyze the differences in gender for CE. Results were not significant $t(78)=0.81$, such that there were no difference in the levels of consumer ethnocentrism between males ($M=47.00$) ($SD=18.47$) and females ($M=48.00$) ($SD=16.96$). Due to the lack of gender differences, they were not included in subsequent analyses.

In order to assess the extent to which the three questions asked to the participants, which include quality, likeliness to purchase, and appealing scores might be measuring the same construct, a Chronbach's alpha was run. The answer scale of the questions ranged on a 7-item Likert scale from 1 being least favorable to 7 being most favorable. Results revealed that Chronbach's alpha ($\alpha=0.8$) was sufficiently high and the data for the three questions were summed so statistical analysis could be run.

To address the main hypothesis, the resulting composite scores were submitted to a 2(level of ethnocentrism) x 2(COO) x 2(cognitive load) ANOVA. Results revealed a marginally trending main effect for CE score $F(1,72)=1.67$ $p=0.20$, such that those high in CE had a higher mean score rating score for the product ($M=10.26$) compared to those with a low CE score ($M=9.34$). Results also revealed a trending main effect for COO $F(1,72)=2.63$ $p=0.10$, such that those who thought the product was from India rated it higher ($M=10.38$) than those who thought the product was from the US ($M=9.30$). Results also revealed a marginally trending main effect for cognitive load $F(1,72)=1.35$

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$p=0.25$, such that those under no load rated the product better ($M=10.18$) compared to those under load ($M=9.5$).

Results also revealed a marginal trend for $2(CE) \times 2(COO)$ interaction, $F(1,72)=1.47$ $p=0.23$, such that those who were low in CE preferred the Indian product ($M=10.25$) over the American product ($M=8.47$) while those who were high in CE preferred the American product ($M=10.21$) as much as the Indian product ($M=10.50$). Results also revealed a trending interaction $2(CE) \times 2(\text{cognitive load})$ $F(1,72)=2.14$ $p=0.15$, such that those with a low CE preferred the product more under no load ($M=10.10$) than under load ($M=8.55$) while those with a high CE score preferred the product equally under load ($M=10.45$) and no load ($M=10.26$). Overall results from an ANOVA revealed a non-significant but trending $2(COO) \times 2(\text{cognitive load}) \times 2(CE)$ interaction, $F(1,72)=1.161$ $p=0.285$, such that those with a low CE score under load thought the Indian product ($M=9.08$) was more appealing than the American product ($M=7.75$), while those with a low CE score under no load thought the Indian product was more appealing ($M=12.00$) than the American product ($M=8.92$). Those with a high CE under no load thought the American product was more appealing ($M=10.57$) than the Indian product ($M=10.08$), while those with a high CE under load thought the Indian product was more appealing ($M=11.13$) than the American product ($M=10.00$). (For a table of the results see Appendix C Table 1.)

Discussion

Consumers are always multitasking. In turn it is important to understand how their decisions may be altered. This understanding would certainly allow and benefit advertising firms and marketing agencies to better market and sell products to consumers. Consumers purchase and engage in different buying behavior for varying reasons. While their decisions can be activated through different neuronal process, understanding the role of cognitive load, COO, and CE in consumer's purchasing decisions is crucial. The current research explored the role of the consumer bias of consumer ethnocentrism, cognitive load, and country of origin in consumer's purchasing decisions, consumer's beliefs, and consumer's product ratings.

The current research hypothesized that participants with high CE under cognitive load will tend to favor purchasing American products over products with a foreign COO. This was not completely suggested by the research. The results for the product's ratings suggest a trend that participants under cognitive load with a high CE score were more likely to purchase products in general than those under cognitive load with a low CE. Participants with high CE and no cognitive load will favor the American made products over the Indian product, which supports the hypothesis. This however is reversed when high CE participants are under cognitive load, which does not support the current hypothesis. Furthermore this study hypothesized that those with a low CE, both under cognitive load and not under cognitive load, would be indifferent between the two products. However, the results revealed these participants always preferred the Indian product. Interestingly, for those with a low CE under no load the rating scores were

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higher than when participants were not under load. The results indicate when CE tends to affect decision making in regards to both the COO condition and the cognitive load manipulation.

Implications

We are always multitasking and engaging in multiple tasks at once. Therefore one major implication to analyze is the effect of cognitive load. The hypothesis that high CE consumers under cognitive load would prefer the American product compared to the Indian product was not supported. Results revealed that these participants under cognitive load actually preferred the Indian product. However results also showed that high CE consumers under no load who thought the product was American found the product and packaging design more appealing than those who thought the product was Indian. It is possible that the level of cognitive load may have interfered with the spreading activation of more negative ideas associated with the Indian product. This could have allowed participants with high CE under cognitive load to rate the Indian product more appealing. Another more likely explanation for this result could be associated with the level of cognitive load to which participants were subjected. The level of load may have been too high such that participants were not able to make a decision that they would normally make. This idea of reversing or changing a decision and not making a decision an individual would normally make is supported by Gilbert and Osborne's (1989) research. As discussed in the introduction, they found that participants under cognitive load, throughout the entire experiment, did not reverse their original decisions about the target's anxiety level. However those who were relieved of cognitive load reversed or

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changed their decisions. Since people reverse their decisions, it suggests that those under cognitive load may not make the same decisions as they would under no load. This may be due to the effect cognitive load has on brain and working memory capacity or due to different underlying neuronal processes.

Furthermore if consumer preference and consumer decisions are linked to consumer ethnocentrism, then once again those high in consumer ethnocentrism should prefer American products. If high CE consumers under no load prefer the American brand then they should also prefer the American product under cognitive load. However this was not supported so it is important to understand what are affecting or changing participant's preference and rating. It is hypothesized that this unexpected result was due to the cognitive load manipulation as previous research suggests strong brain activation for preferred and luxury products.

Previous research has suggested that different brain regions are activated for buying more basic products versus luxury, status, and favorite brands (Schaefer and Rotte, 2006). They hypothesized that status symbols and concrete positive product images activate and affect reward circuitry. Brands that are associated with wealth and status will activate the brain in different ways, compared to rational brands. The researchers tested these hypotheses by sampling 14 right-handed individuals. While the participants were under fMRI they were shown 14 pictures of different car logos. Some of the logos were of cars that had a higher status, luxury or wealth symbol, while some were logos of cars with a lower status symbol. The logos were presented for a span of 15

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seconds followed by a 4 second break between logos. After the fMRI, participants completed a questionnaire. Participants answered questions and ranked the cars based on attractiveness, their familiarity. They also ranked them based off of the most rational or logical economic choice. All of the participants ranked the 14 cars as being familiar. Results revealed significant activation in the right ventral striatum, inferior frontal gyrus, and in the left dorsolateral prefrontal cortex to viewing favorite brands. For luxury logos the ventral striatum was activated but there was a negative linear relationship in the BOLD change for rational car choices. Viewing luxury brands was associated with reduced activation in the right hippocampus and cerebellum while there was reduced activation in the ventral midbrain, bilateral putamen, and N. caudatus when viewing rational car brand logos. Overall, the researchers concluded that the attractive luxury brands curbs and activates the reward circuit in the same way as other reward stimuli. They also concluded that social aspects and symbols might influence brain activation, specifically the ventral striatum, and in turn affect reward circuitry. There may be a different reward circuitry for luxury or favorite brands versus rational or non-favorite brands. Therefore, looking at luxury familiar brands associated with wealth activated the brain differently than when looking at rational car brand logos.

If different brain regions and reward circuitries are activated for more familiar, more appealing, or more luxury brands, which the American product could have been considered when compared to the Indian brand, then one would have expected the American brand to be ranked more appealing than the Indian product. Therefore an explanation for why this didn't happen, with high CE participants under cognitive load, is

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that cognitive load in some manner may have interfered with the reward circuitries or decision-making processes.

Furthermore consumer preference correlates with specific brain activation. One study that assessed this was McClure, Li, Tomlin, Cypert, Montague, and Montague (2004). In this study, the researchers looked at consumer preferences, brand image, and taste testing of popular consumer beverages under fMRI. The two beverages picked were Pepsi and Coke because they are familiar to participants, they have similar chemical compositions, and consumers generally have a specific preference between the two. They sampled a total of 67 participants and broke them down into four groups. Two groups sampled outside of the fMRI scanner and also answered questions regarding which beverage they preferred. They were also subjected to 3 rounds of a forced choice test to determine brand preference. The remaining two groups made three preference decisions, but one cup had the drink's label and the other was unlabeled. This use or lack of labeling was done to ascertain the participant's behavioral preference. Then all of the participants were given taste test while in the scanner. The researchers found an equal number preferred each (either Coke or Pepsi). Group one and two tasted the drinks without knowing what was in each. Results revealed a difference in the ventromedial prefrontal cortex for Coke and Pepsi, independent of the participant's stated preference. Group three was presented three cups with one cup labeled Coke. They looked at the difference in brain activity between knowing it was Coke and not knowing if it was Coke or Pepsi. They found significant activation in the hippocampus, parahippocampus, midbrain, and dorsolateral prefrontal cortex. Group four completed the same task as group 3 but the

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labeled cup was Pepsi. They found that there were no similar areas of activation between group 3 and 4, concluding that brand knowledge between the two consumer beverages has different brain responses. In turn, there are two different systems for preference. They found that brand knowledge affects preference decision in the forced choice test enlisting the hippocampus, midbrain, and DLPFC. Furthermore when an image of Coke, but not Pepsi, is shown before tasting the product identified increased activation in the DLPFC, hippocampus, and midbrain. It is important to note that the DLPFC has been associated with aspects of cognitive control (decision making) and working memory. As stated above in the introduction, we have a limited capacity working memory. Therefore if cognitive load is using up a limited number of resources than brain activation and decision-making, including preference decisions, may be affected. This finding can be one explanation for why those under cognitive load with a high CE preferred the Indian product to the American product when those under no load with a high CE preferred and found the American product more appealing.

Limitations

There are several limitations to the present study. First, the sample size was limited and small with $n=80$. As well participants were rated as having relative high or relative low levels of consumer ethnocentrism. If CE was broken down into relative low, medium, and high levels of CE there may have been more of a significant difference between participants of low and high CE. However in the current study this was not done. This further partitioning (adding a middle level of CE) would have greatly reduced the sample size in each group. That would have hurt the results because the design was

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already a 2x2x2 so the number of participants in each condition would have been insufficient.

As well it is important to address unforeseen issues with the target ad. The target ad picked, Thumbs Up, was a soda. Currently there are trends that suggest people are more conscious of what they are consuming, and that consumers want healthier products and are willing to pay more for these healthier products (Frey and French, 2014). Specifically, millennials are looking for healthier products, and products that contain more calcium, vitamins, and fiber (Frey and French, 2014). In turn the participants, who are college students matching the millennial generation, may have ranked the quality of the product lower. Therefore, their likeliness to buy the product was lower regardless of CE and COO because the product was perceived as unhealthy.

While it would have been difficult to discern, participants may have been under varying levels of cognitive load. Participants could have been thinking about other tasks during the experiment. Participants under cognitive load may have used different memory strategies such as rehearsal or chunking. Those who chunked the 8 digit span into two smaller chunks and just rehearsed the two smaller chunks would have been under less load compared to those participants who just rehearsed and remembered each number as an individual chunk.

Directions for Future Research

There are multiple directions for future research that stem from this research. First, it would be interesting to re-run a study similar to this one with a different target ad, such as with automobiles or clothing brands. In addition, participants should be queried about what methods they are utilizing to remember the number span (rehearsing and chunking the cognitive load digit span). It might be useful to have participants engage in the Overt Rehearsal Procedure. The way the number was rehearsed or chunked could have a direct affect on measuring the level of load the participant is under. In turn varying reported levels of load could have been categorized and combined with COO and CE to analyze the affects on purchasing decisions.

Further understanding of the Neuroscience and Nueroeconomics behind consumer purchasing decisions would enrich this area of study. It would be interesting to look at how brain activation and decisions change when consumers believe the target product is from different countries of origins. Of additional interest is to determine how well the brain activation changes for people with high consumer ethnocentrism versus low consumer ethnocentrism. It is important to understand the role of the brain in buying and purchasing behavior in order to curb marketing efforts. However the potential implications of this type of research could have some ethical concerns. As suggested by Stanton, Sinnott-Armstrong, and Huettel (2016) there are certain ethical concerns that may directly affect consumers. This type of research can compromise consumer privacy and control. If this type of research elicits tactics to affect brain activation and reward circuitry when viewing certain brands or products, consumer purchasing behavior may be

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directly affected in ways it would not have previously been. While this type of marketing research is important for Fortune 500 companies, it is important to consider our changing markets and the associated potential ethical concerns that might arise.

Conclusion

Overall this study added to previous research by analyzing the affect cognitive load combined with consumer ethnocentrism and country of origin has on consumer purchasing decisions and buying behavior. It is important that this type of research starts to take a Neuroeconomics approach in order to understand what type of brain processes and networks affect buying behavior. In order to best understand how to market and affect purchasing behavior, companies need to understand what makes the consumer's brain tick and what differences in brain activity exists between different types of consumers. There are many factors that contribute to purchasing decisions, besides brain activation, COO, CE and cognitive load. We are all consumers in our own right and it is important to understand what affects our purchasing decisions and buying behavior.

Appendix A:

Advertisement Packet:

Directions: In this packet you will view a total of 5 advertisements. Please answer all of the questions regarding each advertisement in the Answer Packet.

Product 1: Tsingtao Beer

https://www.youtube.com/watch?v=pz_575hdLcc

Tsingtao Beer is produced in China. One can of beer costs 20 Yuan. You can buy single can or cans in a pack of 12 or 30. Tsingtao beer can be found at any local liquor store, restaurant, or convenience store. After watching this ad please answer the following four questions regarding this product and advertisement.

1. On a scale from 1 to 7, with 1 being I strongly disagree and 7 being I strongly agree, how likely is it that you would purchase this product?

1.....2.....3.....4.....5.....6.....7

2. On a scale from 1 to 7, with 1 being horrible and 7 being amazing, rate how good you think this product would taste?

1.....2.....3.....4.....5.....6.....7

3. On a scale of 1 to 7, with one being unsatisfactory and 7 being satisfactory, how appealing is the packaging design?

1.....2.....3.....4.....5.....6.....7

4. Are you familiar with this product?

Yes.....No

Product 2: Thumbs Up



Thumbs Up is a soda produced in India. It costs 10 Indian Rupee per can. It can be found at any local convenience store in bottle or can form. Please answer the following four questions about this product and advertisement. **Note: In the second product set participants believed this product was from the United States of America. Otherwise product set 1 and 2 were exactly the same.*

1. On a scale from 1 to 7, with 1 being I strongly disagree and 7 being I strongly agree, how likely is it that you would purchase this product?

1.....2.....3.....4.....5.....6.....7

2. On a scale from 1 to 7, with 1 being horrible and 7 being amazing, rate how good you think this product would taste?

1.....2.....3.....4.....5.....6.....7

3. On a scale of 1 to 7, with one being unsatisfactory and 7 being satisfactory, how appealing is the packaging design?

1.....2.....3.....4.....5.....6.....7

4. Are you familiar with this product?

Yes.....No

Product 3: Evolution Fresh



Evolution Fresh is a fresh health food drink produced in America. It costs \$4.75 per bottle, and you can buy it packages of four. These drinks can be found in the grocery store and health food stores. Please answer the following questions about this product and advertisement.

1. On a scale from 1 to 7, with 1 being I strongly disagree and 7 being I strongly agree, how likely is it that you would purchase this product?

1.....2.....3.....4.....5.....6.....7

2. On a scale from 1 to 7, with 1 being horrible and 7 being amazing, rate how good you think this product would taste?

1.....2.....3.....4.....5.....6.....7

3. On a scale of 1 to 7, with one being unsatisfactory and 7 being satisfactory, how appealing is the packaging design?

1.....2.....3.....4.....5.....6.....7

4. Are you familiar with this product?

Yes.....No

Product 4: Mikado Chocolate



Mikado Chocolate is produced in Austria. This chocolate cost 8 Euro per package. It can be bought at the grocery store or any local convenience store. Please answer the following questions regarding this product and advertisement?

1. On a scale from 1 to 7, with 1 being I strongly disagree and 7 being I strongly agree, how likely is it that you would purchase this product?

1.....2.....3.....4.....5.....6.....7

2. On a scale from 1 to 7, with 1 being horrible and 7 being amazing, rate how good you think this product would taste?

1.....2.....3.....4.....5.....6.....7

3. On a scale of 1 to 7, with one being unsatisfactory and 7 being satisfactory, how appealing is the packaging design?

1.....2.....3.....4.....5.....6.....7

4. Are you familiar with this product?

Yes.....No

Product 5: Joe Chips

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JOE CHIPS®

We start with select potatoes and a very, very hot kettle. Then, we hand cook one batch of OFF ROAD JOE'S CHIPS (tm) at a time (just the right amount of time) using all natural ingredients. This ensures the crunchiest of chips and the gnarliest of looks. And if by chance these chips make you a little thirsty . . . wash them down with some JOE TEA ®!
Enjoy.



Joe Chips are made in the United States of America. One bag of chips cost \$2.50. Bags can be bought individually or in packs of twelve. Joe Chips are found in local sandwich shops and stores. You cannot find these chips at large grocery stores or chains. Please answer the following questions about this product and advertisement.

1. On a scale from 1 to 7, with 1 being I strongly disagree and 7 being I strongly agree, how likely is it that you would purchase this product?

1.....2.....3.....4.....5.....6.....7

2. On a scale from 1 to 7, with 1 being horrible and 7 being amazing, rate how good you think this product would taste?

1.....2.....3.....4.....5.....6.....7

3. On a scale of 1 to 7, with one being unsatisfactory and 7 being satisfactory, how appealing is the packaging design?

1.....2.....3.....4.....5.....6.....7

4. Are you familiar with this product?

Yes.....No

Appendix B:

JOURNAL OF MARKETING RESEARCH, AUGUST 1987

Table 1
17-ITEM CETSCALE^a

<i>Item</i>	<i>Reliability^b</i>
1. American people should always buy American-made products instead of imports.	.65
2. Only those products that are unavailable in the U.S. should be imported.	.63
3. Buy American-made products. Keep America working.	.51
4. American products, first, last, and foremost.	.65
5. Purchasing foreign-made products is un-American.	.64
6. It is not right to purchase foreign products, because it puts Americans out of jobs.	.72
7. A real American should always buy American-made products.	.70
8. We should purchase products manufactured in America instead of letting other countries get rich off us.	.67
9. It is always best to purchase American products.	.59
10. There should be very little trading or purchasing of goods from other countries unless out of necessity.	.53
11. Americans should not buy foreign products, because this hurts American business and causes unemployment.	.67
12. Curbs should be put on all imports.	.52
13. It may cost me in the long-run but I prefer to support American products.	.55
14. Foreigners should not be allowed to put their products on our markets.	.52
15. Foreign products should be taxed heavily to reduce their entry into the U.S.	.58
16. We should buy from foreign countries only those products that we cannot obtain within our own country.	.60
17. American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work.	.65

^aResponse format is 7-point Likert-type scale (strongly agree = 7, strongly disagree = 1). Range of scores is from 17 to 119.

^bCalculated from confirmatory factor analysis of data from four-areas study.

Appendix C:

Table 1

Mean Scores for CE, Cognitive Load, and COO.

Consumer Ethnocentrism (CE)	Cognitive Load	
	No Load	Load
High CE	10.26 (n=19)	10.45 (n=20)
Indian Product	10.08 (n=12)	11.13 (n=8)
American Product	10.57 (n=7)	10.00 (n=12)
Low CE	10.10 (n=21)	8.55 (n=20)
Indian Product	12.00 (n=8)	9.08 (n=12)
American Product	8.92 (n=13)	7.75 (n=8)

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