

Understanding the Effects of Tactile Marketing on Preferences:
A case study of Alligator Hide

by

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Preface

This project is an extension of the main project which investigated consumer preferences for alligator leather versus cow leather. Its focus is on novel markets, namely the small crafting market, as a potential source of demand for alligator hide leather. The Discrete Choice Experiment was designed to elicit preferences for different types of leathers in kits to create small items including keychains, earrings, and luggage tags. One important limitation of the study is it did not provide respondents with the opportunity to physically interact with the items.

The main purpose of this specific UROP-funded project is to extend the existing research design to test how tactile/sensory experience affects preferences. Models are run by Juyoung Yoo, with the manuscript below prepared by Daniel Harris, who also participated in most of the events where data collection occurred. The original grant proposed collecting 200 responses. Despite going to 11 events, presently we have only been able to collect 120 usable responses for analysis. We are scheduled to go to the Louisiana Outdoor Expo at Lamar Dixon in Gonzales, Louisiana. This event occurs from March 15th – 17th, 2024 and will be attended by several thousand people, so we feel confident that by its end, we will have collected 200 responses.

Regardless, the results presented below based on 120 tell a compelling story. Preferences for cowhide and alligator hide leather products change with tactile experience. This suggests that demand for unfamiliar materials in novel markets may be improved by allowing a tactile experience. It is expected that the results of this analysis will be similar once the final round of responses are collected in March.

Introduction

A major factor of consumer preferences relates to their experience with the product. In the case of fabrics and textiles, tactile or sensory experience is a major contributor to an individual's impression. This potentially restricts our understanding of consumer behavior as opposed to traditional tactile marketing where consumers can feel the items they are considering (Duarte and Silva, 2020).

Sensory characteristics have long been understood as an important part in the determining preferences (Hung and Verbeke 2018), with a particular emphasis on the tactile experience (Harlow 1958; Lederman and Klatzky 1987). Several studies have examined the effects of different sensory experiences on preferences for different goods, with examples listed in Table 1.

Applied economics studies of consumer preferences have largely focused on the importance of sensory experiences in preferences for foods, mainly taste (Combris et al. 2009; Alfnes et al. 2006; Malone and Lusk 2017; Lusk et al. 2001; Torquati et al. 2018) and the food's associated container (Piqueras-Fiszman and Spence 2011; Krishna and Morrin 2008; Lefebvre and Orlowski 2019). These last three studies examined how the sturdiness of a cup, material properties of cutlery, and service vessel affected taste expectations and preferences for different drinks and foods, respectively. It may even improve charitable giving and volunteerism for individuals who have a high need-for-touch (Peck and Wiggins 2006).

Positive tactile experiences generally tend to increase consumer preferences for different consumer goods (Peck 2011; Krishna 2012; Peck and Childers 2003). WTP is a useful way to measure preferences in economics, but most of the studies which offer estimates of how WTP changes following sensory experiences are largely focused on food and drink products. While a few studies seek to understand how preferences for non-food products change after sensory experiences, they do not use WTP as a metric.

Sensory experience is especially important in forming preferences of textile materials (Pense-Lheritier et al. 2006). McCabe and Nawlis (2003) find that products with material attributes (e.g. clothing, textiles) benefit from in-person, tactile experiences. More specifically, they conclude that objects with pleasant material properties, such as animal skins, are more likely to be selected by consumers when they have a tactile experience with the items. To our knowledge, no studies exist to explore the effects of tactile marketing on alligator leather, a market that has potential implications for the economy and ecosystem of Louisiana. Thus, we address a gap in the literature to assess how tactile experience affects WTP.

The context of this research is through a DCE to understand consumer preferences for alligator hide as part of a crafting kit. Alligator hide is a material largely unfamiliar to most consumers (Belleau, Marquette, and Summers 2004; Schaber 2023). Due to growing demand for farm-raised alligator hides as well as substitute skins from overseas production, the price for wild American Alligator hides has fallen over the past few years (Louisiana Department of Wildlife and Fisheries 2021) . Consequently, fewer wild alligators are caught, harming coastal economy that relies on wild caught alligator as a source of income and causing wild alligator populations to grow to unsustainable levels, harming ecosystem health.

To address this issue, there is interest in finding novel markets to bolster demand for Louisiana's wild-caught and farm-raised alligator industry. One potential source of demand is crafters, those who participate in making small items by hand such as sewing, knitting, and leatherwork. The number and diversity of crafters has grown in recent years (Dobush 2017). This work extends an existing project that examined crafter WTP for kits to make popular crafting items from alligator hide.

WTP can be conveyed to the Louisiana Alligator Advisory Council so that they may effectively focus their marketing efforts. High WTP for alligator hide among crafters indicates further efforts to develop products and advertising efforts towards this market will be profitable., while low suggests

otherwise. This study measures how tactile experience affects consumer perception and preferences towards different types of leather. We compare WTP among respondents who physically interact with the items to a control group which does not touch the items to understand the effects of tactile marketing on demand for alligator hide items.

Methods

To understand how tactile experiences may affect preferences, we employ a split-sample experiment as part of DCE of 200 crafters. We first describe the survey and DCE, then the embedded tactile experiment.

Survey and DCE

The purpose of the survey is to understand crafters' preferences to potentially use alligator hide relative to traditional cow hide as a crafting material. To qualify, respondents must participate in at least one crafting activity (painting/drawing, leatherworking, woodworking, knitting and crocheting, etc.) and be somewhat interested in purchasing a crafting kit.

The survey begins by asking general questions about the crafter. We ask which stores the respondent has purchased crafting supplies from in the past six months with options ranging from Hobby Lobby to local/independent stores to online stores such as Etsy. We also ask the average time spent on each selected crafting activity per week and how long the respondent has participated in each activity they selected. The survey then goes onto ask the respondent's experiences with leatherworking in the past. We ask if the respondent owns the necessary tools to work with leather. We also ask if they have had the opportunity to touch alligator hide prior to the survey.

Before eliciting WTP, the respondents are shown a two-minute video that gives instructions for the DCE.¹The video outlines the contents of each choice set (the alternatives, the optout option, etc.), explains each attribute and level, that they will answer several choice sets, and general instructions on how to answer (i.e. avoid comparing across choice sets). Following the video, the respondent answers several attention-check questions to check their understanding. Reminders of key details appear for those who answer either question incorrectly. Finally, respondents are asked if there are any attributes that they are not willing to purchase, regardless of the price. Thus, the choice experiment excludes any attributes that the respondent would always vote against.

A DCE is a stated preference technique that asks respondents to choose among a set of alternatives with different characteristics, known as attributes. An example choice set from the DCE appears in Figure 1. Table 2 includes a list of attributes and corresponding levels to be voted on in the DCE. Materials include either cowhide leather or alligator hide leather. Among the alligator hides, leather was sourced from two locations: specifically, Louisiana and then more generally the US. Further, the alligator hides can either be farm-raised or wild-caught and feature small or large scales. Alligator hide is also prone to imperfections when being harvested, especially if it is wild caught. Thus, these kits may have a small or a large scar, or no scar at all. The three items considered were a luggage tag, a keychain, and a set of earrings. Each kit is also rated based on the expected skill level to assemble the kit with levels of beginner and intermediate. Finally, each kit is given a corresponding price level of \$8, \$16, \$24, or \$32. Prices were determined through several focus groups and approximate prices for similar products.

¹ Two-minute video explaining the DCE may be viewed here

Experiment

To test the effect of tactile experience, we implement a split-sample experiment in which respondents are assigned to either the control or treatment group, hereafter referred to as Tactile. While both groups have a chance to see the items shown in the DCE, only the Tactile group sees the items in-person and physically touches them. Although randomized treatment assignment is ideal, this is infeasible given the nature of the tactile intervention. Randomization would mean control and tactile respondents potentially simultaneously taking the survey such that the tactile intervention is witnessed by control respondents, weakening the potential treatment effect. Instead, assignment to control or tactile is per event (listed in Table A1) with approximately half of the time per event assigned to each treatment.

This intervention occurred after the DCE instructions and just prior to the DCE choice sets to allow respondents to gain more familiarity with the finished products and attributes. The control group saw a thirty second video that displays the items for consideration². The video familiarizes respondents with the items and their attributes such as size and texture but does not allow them to see the items in-person or touch them. The tactile group is shown a display containing the same items and in a similar visual layout as in the video, shown in Figure 2. Respondents are encouraged but not required to feel the items. Although there was no upper limit to the amount of time they had to interact, respondents were shown the kits for at least thirty seconds to ensure similar conditions to the control group. This setup ensures that both groups have similar familiarity with the items and attributes except for the tactile group also receiving tactile experience. We expect WTP to increase among respondents who are able to physically interact with the materials being tested (Torquati et al. 2018; Krishna 2012), especially if they already feel positive towards the material. The corresponding null hypothesis is that the

² Thirty-second video in control group to familiarize respondents with the items to be considered.

interaction coefficients (described below) will equal zero, showing no effect of tactile experience on preferences.

After intervention, both groups answered five-point Likert-style questions rating the alligator hide. These statements include the quality of the material, how easy they anticipate it would be to work with, and their overall desire to work with the material. These questions can measure whether tactile experience influences consumers' perceptions of alligator hide. Moreover, they can be used as explanatory variables of preferences and WTP.

To conduct the tactile experiment, survey responses were administered in person for both the control and tactile groups with both drawn from the same population. Responses were gathered from several events geared towards crafters during the fall of 2023 (a full list of events appears Table A1 of the appendix). The average survey completion time was 16.9 min and 15.8 min in the control and tactile groups, respectively.

Data Analysis

We apply Random Utility Theory, the foundation of Discrete Choice Experiments (DCE), demonstrated in equation (1).

$$U_{ijt} = \alpha C_{ijt} + \beta X_{ijt} + \varepsilon_{ijt} \quad (1)$$

The utility for individual i arises from selecting alternative j within choice set t , considering the magnitude (i.e., cost) of the kits expressed as variable C_{ijt} , a set of observable attributes of the kits X_{ijt} , and an unobservable element ε_{ijt} . The parameters to estimate are α , indicating the assessed impact of price variation, and β , reflecting the assessed impact of other attributes on the decision.

While the conditional logit model (McFadden 1973) has served as the basis model, it assumed constant preferences across respondents. To address this constraint, we employ a mixed logit model to

accommodate variations in unobservable preferences among individuals (McFadden and Train 2000; Train 2009).

We calculate WTP of each attribute by using delta-method as shown in equation (2).

$$WTP_j = \left(\frac{\beta_j}{\alpha_j}\right) * -1 \quad (2)$$

The WTP for attribute j is computed as the preference for attribute j divided by price.

We use a mixed logit model to allow for unobservable preference heterogeneity across individuals (Train 2009; McFadden and Train 2000) as shown in equation (3).

$$U_{ijt} = \alpha C_{ijt} + (\beta + \eta) X_{ijt} [1 + Gator + beginner + Keychain + Luggage + (Gator * Wild) + (Gator * LA) + (Gator * Smallscar) + (Gator * Largescar) + (Gator * Largecale) + (Gator * Wild * Tactile) + (Gator * LA * Tactile) + (Gator * Smallscar * Tactile) + (Gator * Largescar * Tactile) + (Gator * Largecale * Tactile)] + \varepsilon_{ijt} \quad (3)$$

η is the vector of person i -specific deviations from the mean (β). Parentheses in the square brackets represent the interaction terms.

Results

Preliminary Results

The results discussed are based on a sample size of 120 respondents, 62 control and 58 tactile. Summary statistics for both the treatment and tactile group appear in Table A2 of the appendix. Significance tests show no evidence of any significant differences in observable demographic characteristics between the control and tactile groups. This includes age, gender, race, ethnicity,

educational attainment, and housing location. These results provide evidence that any difference between the two groups is attributable to the tactile intervention rather than other unobservable differences.

Results to the Likert statements on the perception of alligator hide in both groups appear in Table 3. There is a significant difference in the mean of all three statements between the control and tactile groups, indicating that tactile experience tends to change attitudes towards the product.

Attitudes towards alligator hide improved with tactile experience.

We find statistically significantly stronger agreement to the belief that alligator hide is a good quality material. Based on the other two Likert-style questions, we further find that a tactile experience significantly increases the belief that alligator hide is a flexible and easy material to use and that it is appealing to work with. These results suggest the importance of a tactile experience with alligator hide products to ensure that crafters have an accurate understanding of the material, especially if they have never worked with it before. It may alternatively be concluded that a tactile experience changes respondents' opinions about the crafting material.

Mixed Logit Results

Results from the mixed logit model appear in Table 4, which includes interaction terms (Tactile*) to distinguish how preferences change for those in the Tactile group. For the main effects, positive coefficients indicate the presence of that parameter (i.e. attribute), relative to the omitted reference category, increases the likelihood of that the product profile is selected, whereas negative coefficients decrease the likelihood of selection.

We first briefly consider the results of the main effects, which represent preferences in the control group. Variables that have a statistically significant positive effect on the probability that the respondent chooses a given kit are *Gator* and *Luggage*. The first result, *Gator*, indicates that

respondents, relative to the optout option that receives no kit, are more likely to choose a kit featuring alligator hide. Cow hide is not significant, meaning that respondents are indifferent between no kit and a cow hide kit. This implies greater interest in crafting with this new material, even without tactile experience. *Luggage* indicates that, relative to earrings, crafters are more likely to desire and choose a luggage tag.

Variables with a significant negative effect on the probability that the respondent chooses a given kit are the price of the kit and the associated skill level. The result of the variable *Price* indicates that crafters are less likely to select a given kit at a higher price, which is consistent with economic theory. The variable *Beginner* indicates that respondents are less likely to buy beginner-level kits relative to intermediate kits. This may imply that without tactile experience, respondents prefer to avoid beginner kits. All of the attributes specific to alligator hide are not significant, meaning that people may not care about origin, scar, and scale size of alligator hide without tactile experience.

Overall, the results from the control group indicate that, absent of a tactile experience, respondents appear to respond more to non-physical attributes of the product such as the item, price, and necessary skill. Further, respondents who do not interact with the items do not have preferences for alligator specific attributes. More broadly, it also suggests there is market potential for alligator hide luggage tag crafting kits among crafters, but they may be sensitive to the skill level and the price of the kit.

To understand how tactile experience affects preferences, we now consider the results of the interaction terms for those in the tactile group. Variables with a significant positive effect on the probability of selecting a kit are the material in the kit and skill level. *Cow* and *Gator* are significant. This result supports the conclusion that tactile experience increases the probability that a kit is chosen

relative to the control, regardless of the material³. *Beginner* is significant indicating that tactile experience increases the likelihood of selecting a beginner-level kit relative to intermediate kits. Thus, because we know that the control group dislikes beginner kits, respondents who can interact with the items are at least indifferent between beginner and intermediate kits. Whereas without tactile experience respondents are more likely to choose a kit based on nonphysical attributes like skill level, when they interact with the items, they are indifferent to this fact.

Neither *Price*, *Luggage* nor *Keychain* are significant, indicating tactile experience has no effect on preferences for types of kits or price sensitivity to kits. That is, because the tactile group is not significantly different from the control group, we know that they have the same preferences unless otherwise indicated. This is unsurprising since we would not expect the salience and experience of price and type of item to be affected by tactile experience.

The only variable with a significant negative impact on the probability of selecting a given kit is the presence of scars on the alligator hide. Both *Small-scar* and *Large-scar* indicate that, when respondents can interact with the goods being considered, the presence of scars reduces the probability that a given kit is selected. Because neither of these variables are significant absent of tactile marketing, this implies that while in general crafters may not care about scars on their alligator leather, when they are confronted with them in practice, they would prefer not to have them. It is unclear if this is due to perceived marketability (i.e. they believe they could charge less if they decide to sell it) or personal preferences.

Either way, the significance of *Cow*, *Gator*, *Small-scar*, and *Large-scar*, demonstrate that physically interacting with the good heightens consideration of physical attributes when deciding to purchase. In general, the results of the mixed logit model for the tactile group imply that crafters are

³ Presently, the variable *Cow* is marginally significant, though could become statistically significant once more data is collected.

willing to purchase leather-crafting kits regardless of the type of leather or item to be made. In the presence of tactile marketing, they are more sensitive to the physical attributes of the leather (i.e. scarring) and less sensitive to the non-physical attributes such as price, the type of good considered, or the skill level. Further, we find that among respondents in the tactile group alligator hide is preferred to cow hide.

Mixed Logit Results with Likert-response interactions

As a robustness check, we run the mixed logit model with interactions for each of the Likert statements shown in Table 2. These model results appear in Table A3. These statements are labeled as Good Quality, Easy, and Appealing, and higher values indicate more agreement with each corresponding statement. Several patterns emerge. Agreement with *Good Quality Material* and *Appealing to Work With* affect preferences, whereas *Easy to Use* has no effect. The results suggest as agreement with alligator hide being a good quality material that is appealing to work with increases, the likelihood to choose it over the optout option also increases. In general, they show that attitudes towards alligator hide affect preferences, and in conjunction with the significantly higher agreement in the Tactile group towards the statements, support our conclusion from the results in Table 4, that a tactile experience increases the probability of selecting a given kit.

WTP

We estimate mean WTP based on the mixed logit model results with results shown in Table 5. For cowhide leather crafting kits, mean WTP is not significantly different from 0 for the control group, indicating no demand or interest among crafters for cow-hide crafting kits. WTP for the Tactile group is \$29.3, demonstrating a substantial increase following a tactile experience. For the alligator hide leather crafting kits, we find that WTP is \$31.2 for the control and \$96.5 for Tactile. In general, we find that there is significant demand for alligator hide crafting kits, regardless of if tactile marketing is employed or

not. The significantly higher WTP in the tactile group for both cowhide and alligator hide imply the success of tactile marketing on influencing preferences for crafting kits.

We similarly find that WTP increases following the tactile intervention for beginner level kits from negative nineteen dollars to nearly five dollars. WTP for beginner kits is statistically significant before the intervention, but it loses significance among those in the tactile group. This indicates that while beginner level kits have a negative WTP and are thus definitely not preferred among the control group, respondents who have a tactile experience have a statistically significantly higher WTP for such kits. It can thus be concluded that compared to the control group where the associated skill level of the kit has a negative effect on WTP, respondents in the tactile group are at least indifferent to the skill level of the kits. This supports the finding that respondents in the tactile group, relative to the control, are less responsive to non physical attributes of the items (such as skill level) when determining their WTP.

On the other hand, we find that the tactile experience has a negative effect on WTP for alligator kits that include a small scar. WTP in the control group is significantly higher at about seven dollars whereas it falls to nearly negative fourteen dollars in the tactile group. Although the WTP in the control group is significantly higher than the tactile group, the presence of scars is not statistically significant in determining WTP in the control group. This is likely due to the tactile experience which brings salience to the scars whereas the control group cannot see and feel the kits as closely. This result further supports the results of the model where respondents rely more on physical attributes in forming their preferences when they are able to interact with the items, but not in the control. All other variables have no significant difference in WTP between control and tactile group.

Discussion and Conclusion

Despite research on the importance of sensory experiences in forming preferences for food and drink products, no studies examine how WTP for materials, in our case study alligator hide, change after a tactile experience. Our results imply that tactile experience is effective at increasing demand for leather crafting kits. WTP for cow hide kits and alligator hide kits increased roughly fourfold and twofold, respectively. We also find that absent of tactile marketing, respondents are more likely to rely on non-physical attributes such as the price of the kit or the item to be made to determine WTP while when they can interact with the item, they will rely more on the physical attributes of the items such as scar size. Further, the fact that alligator hide has a consistently positive WTP indicates that this market represents a potential source of demand for alligator hides. Tactile marketing may be employed to further bolster demand.

Studies should continue to try and understand what factors are significant in determining WTP for alligator hides to better establish the market potential for such crafting kits. They may consider a separate DCE which focuses on attributes for WTP. Future work may also work to identify different potential markets to understand if tactile marketing consistently increases demand among different groups.

While our intervention showed that attitudes improved with tactile experience, this may be specific to our context of alligator hide and the items used. Tactile experience with other products may harm attitudes towards the product, with a corresponding decrease in WTP. We are somewhat limited by focusing on only crafters as a source of demand. Future studies may hope to identify other markets by employing tactile marketing strategies like ours. This may further support our findings that tactile marketing is effective or on the other hand show that this is just a phenomenon among crafters. Either way will help to contextualize our findings among goods in general.

Despite the apparent demand for alligator hide among crafters, it is still unclear how other considerations affect crafters preferences. In this way, our model may not provide a complete picture for our WTP estimates because crafters base their decisions on factors that are not included in the survey. For example, WTP for the items may be determined by perceived marketability of the final product or ethical concerns of end consumers. Further research may work with crafters to understand more clearly how they feel about the goods that they value.

Another consideration is our reliance on hypothetical responses without actual payment. Such questions often exhibit hypothetical bias, with hypothetical WTP often exceeding real WTP (Penn and Hu 2018). This means that the increased WTP caused by the tactile intervention is likely smaller than what is observed if done with actual purchase decisions.

References

- Alfnes, Frode, Atle G Guttormsen, Gro Steine, and Kari Kolstad. 2006. "Consumers' willingness to pay for the color of salmon: a choice experiment with real economic incentives." *American Journal of Agricultural Economics* 88 (4): 1050-1061.
- Belleau, Bonnie D, Yvonne B Marquette, and Teresa A Summers. 2004. "Practical techniques for designing with exotic leather: American Alligator and Emu." *Clothing and Textiles Research Journal* 22 (1-2): 53-60.
- Combris, Pierre, Pascale Bazoche, Eric Giraud-Héraud, and Sylvie Issanchou. 2009. "Food choices: What do we learn from combining sensory and economic experiments?" *Food quality and Preference* 20 (8): 550-557.
- Dobush, Grace. 2017. "Onward and Upward! New Survey Indicates the Craft Industry is Growing in Dollars and Scope." Accessed Jan 15, 2024. <https://craftindustryalliance.org/craft-industry-growing-in-dollars-scope/>.
- Harlow, Harry F. 1958. "The nature of love." *American psychologist* 13 (12): 673.
- Hung, Yung, and Wim Verbeke. 2018. "Sensory attributes shaping consumers' willingness-to-pay for newly developed processed meat products with natural compounds and a reduced level of nitrite." *Food Quality and Preference* 70: 21-31.
- Krishna, Aradhna. 2012. "An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior." *Journal of consumer psychology* 22 (3): 332-351.
- Krishna, Aradhna, and Maureen Morrin. 2008. "Does touch affect taste? The perceptual transfer of product container haptic cues." *Journal of Consumer Research* 34 (6): 807-818.
- Lederman, Susan J, and Roberta L Klatzky. 1987. "Hand movements: A window into haptic object recognition." *Cognitive psychology* 19 (3): 342-368.
- Lefebvre, Sarah, and Marissa Orlowski. 2019. "Can, cup, or bottle? The influence of beverage vessel on taste and willingness to pay." *International journal of hospitality management* 76: 194-205.
- Louisiana Department of Wildlife and Fisheries. 2021. *LOUISIANA'S ALLIGATOR 2020-2021 ANNUAL REPORT*. Coastal & Nongame Resources Division. https://www.wlf.louisiana.gov/assets/Resources/Publications/Alligator/2020-2021_Alligator_Annual_Report.pdf.
- Lusk, Jayson L, John A Fox, Ted C Schroeder, James Mintert, and Mohammad Koochmaraie. 2001. "In-store valuation of steak tenderness." *American Journal of Agricultural Economics* 83 (3): 539-550.
- Malone, Trey, and Jayson L Lusk. 2017. "Taste trumps health and safety: Incorporating consumer perceptions into a discrete choice experiment for meat." *Journal of Agricultural and Applied Economics* 49 (1): 139-157.
- McCabe, Deborah Brown, and Stephen M Nowlis. 2003. "The effect of examining actual products or product descriptions on consumer preference." *Journal of Consumer Psychology* 13 (4): 431-439.
- McFadden, Daniel. 1973. "Conditional logit analysis of qualitative choice behavior."

- McFadden, Daniel, and Kenneth Train. 2000. "Mixed MNL models for discrete response." *Journal of applied Econometrics* 15 (5): 447-470.
- Peck, Joann. 2011. "Does touch matter? Insights from haptic research in marketing." In *Sensory marketing*, 17-31. Routledge.
- Peck, Joann, and Terry L Childers. 2003. "To have and to hold: The influence of haptic information on product judgments." *Journal of marketing* 67 (2): 35-48.
- Peck, Joann, and Jennifer Wiggins. 2006. "It just feels good: Customers' affective response to touch and its influence on persuasion." *Journal of Marketing* 70 (4): 56-69.
- Penn, Jerrod, and Wuyang Hu. 2018. "Understanding Hypothetical Bias: An Enhanced Meta-Analysis." *American Journal of Agricultural Economics* 100 (4): 1186-1206.
<https://doi.org/https://doi.org/10.1093/ajae/aay021>.
<https://onlinelibrary.wiley.com/doi/abs/10.1093/ajae/aay021>.
- Pense-Lheritier, Anne-Marie, C Guilabert, MA Bueno, M Sahnoun, and M Renner. 2006. "Sensory evaluation of the touch of a great number of fabrics." *Food quality and preference* 17 (6): 482-488.
- Piqueras-Fiszman, Betina, and Charles Spence. 2011. "Do the material properties of cutlery affect the perception of the food you eat? An exploratory study." *Journal of sensory studies* 26 (5): 358-362.
- Schaber, Friedemann. 2023. *Leather futures: How leather can be used as a material of choice for the future*. Royal College of Art (United Kingdom).
- Torquati, Biancamaria, Tiziano Tempesta, Daniel Vecchiato, and Sonia Venanzi. 2018. "Tasty or sustainable? The effect of product sensory experience on a sustainable new food product: An application of discrete choice experiments on Chianina Tinned Beef." *Sustainability* 10 (8): 2795.
- Train, Kenneth E. 2009. *Discrete choice methods with simulation*. Cambridge university press.

Tables

Table 1: List of Studies Examining Tactile Experience with Consumer Attitudes and Preferences

Citation	Main Findings	Focus	WTP?
Food Related Studies			
Alfnes et al. 2006	Examines how WTP changes for different attributes, namely color; Increases for color, but study does not focus on tactile experience	Taste and Sight	Yes
Combris et al. 2009	Employs a blind taste test and informational treatment to understand consumer preferences for wine, ignores tactile experiences; Finds that WTP increases for an informational treatment over a blind taste test	Taste and Information	Yes
Krishna and Morrin 2008	Examines how taste expectations and WTP change for different tactile experiences (sturdiness of cup); People with lower Need for Touch are more sensitive to tactile experience and thus have a WTP that is different	Touch	Yes
Lefebvre and Orłowski 2019	Examines how taste expectations and WTP change for different service vessels; Identifies a lack of tactile experience as a limitation of the study but generally finds that respondents have different preferences for different vessels	Other	Yes
Lusk et al. 2001	Investigates how WTP for steak changes based on taste for a control and an information treatment; Finds that WTP increases among the informational treatment	Taste and Information	Yes
Malone and Lusk 2017	Examines preference formation for meats based on different attributes including health, safety, and taste; WTP increases most for expected taste	Sight and Information	No
Piqueras-Fizman and Spence 2011	Explores how preferences for yogurt change with spoons of different materials; Finds increased agreement to liking quality of the food but not specific in defining tactile experience	Taste And Touch	No
Torquati et al. 2018	Explores how WTP and preferences change before and after a taste test and informational treatment; Finds that WTP is significantly different among respondents who like the products after tasting them	Taste and Information	Yes
Non-Food Studies			

Citation	Main Findings	Focus	WTP?
McCabe and Nawlis 2003	Examines preferences for different items following an informational, visual, or tactile treatment; Finds that products with material characteristics such as textiles and fabrics benefit from tactile marketing	Touch and Information	No
Peck and Childers 2003	Examines preference formation for different products controlling for a tactile experience; Finds that among respondents who had a high level of need for touch, tactile experiences reduced regret and frustration in purchases	Touch and Information	No
Peck and Wiggins 2006	Examines how a tactile experience can influence donations to a charity; Finds an increase in altruistic/generous behavior among respondents who have a tactile experience	Touch and Sight	No

Table 2: Attributes and Levels of DCE

Attribute (# of levels)	Description	Levels
Material (2)	The leather material of the kit	Cowhide, Gatorhide
Location (2)	Whether the alligator was from Louisiana or not	Louisiana, US
Production method (2)	Whether the alligator was farm-raised or wild-caught	Farm-raised, Wild-caught
Scale Size (2)	The size of the alligator scale	Small, Large
Scars (3)	Whether alligator hide have scar and its size	None, Small, Large
Item (3)	The type of item featured in the kit	Earring, Luggage tag, Keychain
Skill level (2)	The level of difficulty to assemble the kit	Beginner, Intermediate
Price (4)	The price of the kit	\$8, \$16, \$24, \$32

Table 3: Likert Scale Related to Quality of Alligator Hide

Statement ¹	Control (n=62)	Tactile (n=58)	p-value ²
Good quality material	4.13	4.81	< 0.001
Flexible and easy material to work with	2.79	3.47	< 0.001
Appealing to work with	3.6	4.26	< 0.001

¹Calculated as 1 (Strongly disagree) to 5 (Strongly agree).

²Relies on a t-test of equal means in the control and tactile group, respectively.

Table 4: Mixed Logit Results

	Main Effects (Control)		Standard Deviation		Treat interaction	
	Coef	Std. Err.	Coef	Std. Err.	Coef	Std. Err.
Price	-0.039***	0.011			-0.005	0.015
Cow	-0.355	0.635	2.768***	0.439	1.642*	0.934
Gator	1.225*	0.649	3.255***	0.501	3.021***	1.059
Beginner	-0.742**	0.312	1.176***	0.316	0.952**	0.447
Keychain	0.529	0.370	1.550***	0.408	0.537	0.521
Luggage	0.677*	0.398	2.021***	0.387	0.612	0.576
Gator*Wild ¹	0.097	0.279	0.706***	0.271	-0.200	0.402
Gator*LA ¹	0.192	0.403	1.480***	0.401	-0.427	0.556
Gator*Smallscar ¹	0.278	0.271	0.052	0.594	-0.885**	0.383
Gator*Largescar ¹	-0.354	0.619	1.682**	0.680	-1.468*	0.794
Gator*Largescale ¹	-0.294	0.368	1.595***	0.435	0.392	0.511
H ₀ : Cow=Gator	0.032				0.186	
LL	-734.35					
AIC	1532.71					
N respondents	120					

*, ** and *** significant at $p < 0.1$, 0.05 and 0.01 respectively.

¹Alligator hide alternative specific attributes.

Table 5: WTP based on Mixed Logit

	Control	Treat
Cow	-9.0 ^A	29.3 ^{**B}
Gator	31.2 ^{*A}	96.5 ^{***B}
Beginner	-18.9 ^{** A}	4.8 ^B
Keychain	13.4 ^A	24.2 ^{** A}
Luggage	17.2 ^A	29.3 ^{*** A}
Gator*Wild	2.5 ^A	-2.4 ^A
Gator*LA	4.9 ^A	-5.3 ^A
Gator*Smallscar	7.1 ^B	-13.8 ^{* A}
Gator*Largescar	-9.0 ^A	-41.4 ^{*** A}
Gator*Largescale	-7.5 ^A	2.2 ^A

*, ** and *** significant at $p < 0.1$, 0.05 and 0.01 respectively.

WTP and significance are calculated by delta method.

Testing equality of WTP, the same letter (A) indicates equality, where (B) indicates that the corresponding WTP is significantly larger than (A).

Figures

Figure 1: Sample DCE Choice Set




	Cow hide item	1 st Gator hide item	2 nd Gator hide item
Appearance of finished item			
		Large scale	Small scale with small scar
Sourcing	US	Louisiana Wild-caught	US Farm-raised
Skill Level	Intermediate	Beginner	Beginner
Price	\$30	\$40	\$10

Figure 2: Treatment Group Product Box



Appendix

Table A1: List of Events attended (Fall 2023)

Date	Event Name	Location
10.1	Annual meeting with friends of the LSU textile & costume museum	School of Human Ecology, LSU
10.7	Makers Faire	East Baton Rouge Parish Library, Main Branch
10.14	Embroidery Guild of America	East Baton Rouge Parish Library, Main Branch
10.25	TAM 4037 Draping class (Juniors, Seniors)	School of Human Ecology, LSU
10.26	TAM 3037 Flat Pattern class (Sophomores, Juniors)	School of Human Ecology, LSU
11.13	TAM 2037 Intro to Apparel Construction class (Freshman, Sophomore)	School of Human Ecology, LSU
11.13	TAM 2037 Intro to Apparel Construction (Freshman, sophomore)	School of Human Ecology, LSU
11.14	Threadheads Crochet Club	East Baton Rouge Parish Library, Greenwell Springs Branch
11.29	Social Sewing and Quirky Quilting	Lovett Road Park
12.5	Let's Knit Together	East Baton Rouge Parish Library, Zachary Branch
12.7	Quilting class	My Sewing Shoppe, LLC

Table A2: Sample Summary Statistics across Treatments (%)

Variable	Control	Treat	Total
N	62	58	120
Age			
18-24	53.2	44.8	49.2
25-34	4.8	8.6	6.7
35-44	4.8	5.2	5.0
45-54	3.2	15.5	9.2
55-64	12.9	6.9	10.0
65+	21.0	19.0	20.0
Chi-square(7)= 15.252, p-value= 0.033			
Gender			
Male	12.9	12.1	12.5
Female	87.1	87.9	87.5
Chi-square(2)= 1.088, p-value= 0.580			
Race			
Asian	3.2	6.9	5.0
Black	19.4	15.5	17.5
White	75.8	75.9	75.8
Other	1.6	1.7	1.7
Chi-square(3)= 1.062, p-value= 0.786			
Ethnicity			
Hispanic	8.2	7.0	7.6
Not Hispanic	91.8	93.0	92.4
Chi-square(1)= 0.058, p-value= 0.809			
Education			
High school or less	16.1	22.4	19.2
Some college	41.9	29.3	35.8
Bachelor's degree	30.7	36.2	33.3
Graduate/Advance	11.3	12.1	11.7
Chi-square(4)= 2.812, p-value= 0.590			
House location			
Urban	9.7	10.3	10.0
Suburban	56.5	70.7	63.3
Small town/Rural	33.9	19.0	26.7
Chi-square(2)= 3.469, p-value= 0.176			

Table A3: Robustness Check-Mixed Logit Results with Likert Scale

	Main ¹	Good Quality ²	Easy ³	Appealing ⁴
Price	-0.015	0.002	-0.002	-0.007
Cow	-6.595**	1.796***	-0.248	-0.132
Gator	-7.601***	1.340**	-0.454	1.433**
Beginner	0.118	-0.080	-0.248	0.164
Keychain	2.293	-0.612	0.460	-0.009
Luggage	0.050	0.187	0.487	-0.332
Gator*Wild	-0.437	0.639*	-0.088	-0.544*
Gator*LA	0.694	-1.216**	0.179	1.035**
Gator*Smallscar	0.739	0.003	-0.068	-0.167
Gator*Largescar	-2.027	1.179*	-0.189	-0.903*
Gator*Largescale	-0.179	0.315	-0.275	-0.128
Standard Deviation				
Cow	2.795***			
Gator	2.937***			
Beginner	1.323***			
Keychain	1.556***			
Luggage	2.174***			
Gator*Wild	0.961***			
Gator*LA	1.573***			
Gator*Smallscar	0.268			
Gator*Largescar	0.786			
Gator*Largescale	1.927***			
H₀: Cow=Gator	0.751	0.541	0.745	0.087
LL	-725.49			
AIC	15558.99			
N respondents	120			

*, ** and *** significant at $p < 0.1$, 0.05 and 0.01 respectively.

¹Main effects show preferences without interaction of Likert scale and optout is the omitted reference group.

²With interaction of Likert scale statement “To me, alligator hide is a good quality material.”

³With interaction of Likert scale statement “To me, alligator hide is flexible and easy material to work with.”

⁴With interaction of Likert scale statement “To me, alligator hide is appealing to work with.”

