CONSUMER PREFERENCES FOR WILLFUL IGNORANCE ON ANIMAL WELFARE PRACTICES USED IN SWINE PRODUCTION

By

ERYN BELL

Bachelor of Science in Animal Science

Middle Tennessee State University

Murfreesboro, Tennessee

2015

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
May, 2017

CONSUMER PREFERENCES FOR WILLFUL IGNORANCE ON ANIMAL WELFARE PRACTICES USED IN SWINE PRODUCTION

Thesis Approved:

Dr. Bailey Norwood

Thesis Adviser

Dr. Jayson Lusk

Dr. Derrell Peel

ACKNOWLEDGEMENTS

I would like to start out by thanking my family for their love and support in every aspect of my life. I would not be who I am today without having such a great support group. I would also like to thank my husband for his endless supply of patience and support through my graduate school experience! His encouraging words never ceased. I also owe a big thank you to my grandfather whose life-long influence gave me a passion for knowledge and agriculture. My family is my backbone and I can't thank them enough for the influence they have had on me.

I also owe a big thank you to my committee members Dr. Lusk and Dr. Peel. I would like to extend this thank you out to the entire Agricultural Economics Department for giving me such an amazing opportunity. I am truly grateful to have been given the opportunity to participate in such an incredible program and be influenced by so many talented people. I also want to say thank you to the great friends I had the honor of working alongside with. I could not have made it through graduate school without them! I feel truly blessed to have gotten to learn from and work with such wonderful people.

Lastly, I would like to thank my adviser and committee chair, Dr. Norwood. I could not have asked for a better mentor through graduate school. His intelligence, humility and humor provided me with the right tools to not only complete my thesis but also grow as a person through the process. His guidance as a mentor and friend is one I cherish greatly and will carry outside of the graduate school walls.

Name: ERYN BELL

Date of Degree: MAY, 2017

Title of Study: CONSUMER PREFERENCES FOR WILLFUL IGNORANCE ON ANIMAL WELFARE PRACTICES USED IN SWINE PRODUCTION

Major Field: AGRICULTURAL ECONOMICS

Abstract: Animal welfare issues have become more prevalent in the last decade, along with the amount of information consumers are receiving on farm animal production practices. Consumers are constantly being exposed to advertising containing information on animal welfare through various media outlets. Although some consumers may desire this information, others may not. Many participants in the food industry are catering to those who desire information, leaving those in the latter group at a disadvantage. Using swine as the farm animal of choice, we use specific questioning techniques to mitigate social desirability and affirmation bias to better gage Oklahoma population's desire for willful ignorance on swine production practices. In this survey we find that at least a quarter of respondents openly express the desire for willful ignorance when asked directly. However, this percentage increases to one third when respondents are asked indirectly. This finding shows that a significant portion of the population prefer to remain willfully ignorance and not receive information on farm animal production practices. When asked directly, respondents also reflect that they prefer willful ignorance for two main reasons: they trust the farmers and have more important issues to focus their time on. However, when asked indirectly respondents state that guilt aversion also plays a high role in their desire to remain willfully ignorant. Although consumers may be reticent to admit it, guilt aversion and the negative emotions that come with such information keep them from desiring information on farm animal production practices.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

CHAPTER I

INTRODUCTION

"Sometimes I wish there was an iPhone app that would help me forget where my iPhone was made," humored Stephen Colbert during his popular "confessions" sketch on *Late Night With Stephen Colbert* (Colbert, 2016). It is funny because it contains some truth. When people use their iPhone, they would rather not think about news articles describing the poor working conditions in China (Gough and Chen, 2014), where the iPhones are assembled. Instead, consumers would much rather focus on the iPhone's aesthetically pleasing frame, captivating screen, and mind absorbing apps. The idea of wanting to ignore unpleasant facts has been expressed in many popular sayings such as: ignorance is bliss, out of sight out of mind, and what you don't know can't hurt you. However, all of these phrases can be summed up into one much more crucial concept, the concept of *willful ignorance*.

There are many self-deception strategies, however, in this study we will focus on willful ignorance which can be understood as the active avoidance of information. Willful ignorance is a state where someone has an idea of how something works or is produced but chooses to remain uninformed on the specifics (Rice, 2013). This is similar to what many researchers have called strategic ignorance, which is the avoiding of information sources that may cause negative emotions (Bénabou and Tirole, 2016). One has to wonder if there are other products for which consumers prefer to remain willfully ignorant? Perhaps they would rather not know where or how

their clothes, makeup, technological devices, or food products are made? Even more specifically, perhaps they would rather not know how livestock raised for food are treated?

Animal welfare issues have become more prevalent in the last decade. Groups such as PETA, the Humane Society of the United States, and Mercy for Animals have captured the media's attention by exposing consumers to the practices of farm animal production. Consumers are being exposed to graphic videos and articles through social media, television, and magazines. Mercy for Animals came out with a study showing other activists how to gain the attention of consumers and spread awareness through the use of social media. They gave tips to post numerous videos, stir up emotions like sadness and anger, post quotes, link to news blogs, and use baby animals as examples (Bridgers, 2015). They found that by using these strategies you are more likely to get reposted and shared, gaining more media attention along with the attention of consumers.

One of the major animal welfare propositions that received heavy media attention was California's Proposition 2, the Prevention of Farmed Animal Cruelty Act. This state law requires that egg-laying hens, veal calves, and pregnant pigs have sufficient room to lie down, stand up, fully extend their limbs, and turn around freely within their enclosures. In 2010 Proposition 2 was extended, requiring all eggs sold in California, regardless of where the eggs were produced, had to meet California's Proposition 2 standards. Many farms and several states have sued California for this extension, but to no avail. This Proposition has led some producers to leave California and has driven up the price of production resulting in increased retail prices consumers have to pay (Larson, 2015). Since this Proposition was passed there has been an increase in the number of states who have banned the use of gestation crates, along with a number of food retailers who only use gestation crate free pork (Telesca, 2012).

It is apparent that these activist groups are gaining the attention of consumers, but it is not clear whether they are providing information the consumers want, or if they are forcing consumers to confront information they would rather ignore. Certainly there are differences across individuals. Some seek information on their own, whereas others do not, and there are some who avoid information all together. What percent of people are in this latter group? Focusing on swine production, the purpose of this research is to estimate and explain those percentages, helping policy makers and the food industry have a better sense of consumer preferences.

CHAPTER II

RELATED LITERATURE

Our first objective is to determine if consumers will explicitly express the desire for willful ignorance on animal welfare involving the swine industry. The second objective of this research is to understand why consumers prefer to be willfully ignorant—whether it is guilt aversion, farmer trust, or the fact that there are other issues to focus on.

Achieving these objectives is difficult because some people do not want to appear behaving in a socially unacceptable manner. They may prefer to be uninformed about animal production practices yet reticent to admit it. In order to "look good" many respondents misrepresent their true preferences, resulting in social desirability bias (Norwood and Lusk, 2011). How can surveys measure consumer preferences and attitudes in the presence of social desirability bias? One tool is inferred valuation.

Inferred valuation is the use of indirect questioning which involves asking what choices someone believes another person will make instead of asking them directly what they would do. Consumers are more likely to answer honestly when asked about how someone else behaves versus how they themselves behave. Lusk and Norwood (2009) conducted a survey using direct and indirect questioning techniques to mitigate social desirability bias when measuring the public's opinion on farm animal welfare. About 95% of respondents agreed or strongly agreed that it was important to them that animals on farms were well cared for. However, only 52% of respondents believed that the average American thinks that farm animal welfare is important.

This shows a 42.8 percentage point difference between the direct and indirect statements. Although answers to the indirect question are not necessarily more indicative of the person's preferences than the direct question, it often is (Chang, Lusk, and Norwood, 2009). That is, although 95% of people may truly care about farm animal welfare, 52% is probably a more accurate number.

Although this study uses indirect questioning to mitigate hypothetical bias, it should be noted that other methods exist. There are psychometric scales that have been developed to measure social desirability behavior, allowing researchers to correct for its' bias using statistical analysis. Another tool is an Information Display Matrix, IDM. IDM is a computer-based information gathering technique that records the information search process of individuals that precedes a choice. For example, a meat product might be presented in an internet survey, and the respondent given the opportunity to select various links to acquire more information about the product. There might be a link pertaining to the level of animal welfare, one for supplements used in production, and one for the type of feed used. Klink (2014) assumed through indirect questioning techniques and IDM that IDM might be one possibility to reduce this bias creating an estimate closer to real purchasing decisions. For instance, though people may say they care about farm animal welfare in their meat purchases, in an IDM only a minority of people may request information on the topic. Klink measured consumer preference for different ethical attributes of meat products by questionnaires and compared these results to the ones obtained using an IDM. Using the IDM they found that many consumers neglect about half of the attributes presented. This is especially true in regards to the labeling of ethical product characteristics such as animal welfare.

Several studies have found that consumers tend to ignore information that creates self-conflict or negative emotions (Bénabou and Tirole, 2016). They tend to show a lack of interest in product information that has to do with ethical issues and negative future impacts. Due to a

psychic cost of guilt, information is not always free and can trump the utility found from free information, meaning that free information doesn't always increase ones' utility. For example, Thunstrom et al. (2013) conducted a study measuring the number of consumers who accepted free information on the number of calories a meal contained. A constructed model showed that due to negative future impacts a choice can cause, respondents preferred to avoid the information so as to not feel the guilt that may come with their decision. About 58% of the participants in the experiment chose to ignore free information on calorie content, which the authors called strategic self-ignorance. Subjects who ignored information were found to consume significantly more calories. This study supports the idea that free information doesn't always increase ones' utility, but instead can actually decrease consumer utility. (Of course, there can be more than one type of utility, especially if individuals are modeled as possessing multiple selves, as in Alos-Ferrer and Strack (2014).) Ehrich and Irwin (2005) also found that consumers request ethical attribute information less frequently than non-ethical issues as an attempt to avoid anger and other negative emotions. Some consumers avoid the chance of learning to ensure they will feel good about certain purchasing behavior (Gino, Norton and Weber, 2016). Willful ignorance thus appears to be a strategy of maintaining positive emotions associated with purchases, but there are other logical reasons to choose ignorance.

Another possible reason for avoidance of information is trust in farmers. Surveys have shown that the majority of consumers trust farmers (Fyksen, 2016). Several studies have also shown that consumers are becoming increasingly detached from their food source. In a recent study conducted by U.S. Farmers and Ranchers Alliance, 72 percent of consumers stated that they knew nothing or very little about farming or ranching (USFRA, 2011). There is a specific psychological chain that has been created where ignorance about an issue leads to dependence, which can lead to government trust, and thus avoidance of information about that issue (Stepherd and Kay, 2012). This could be applied, instead of to the government, to the farmer. Consumers

are becoming more detached from farms and are not well-informed on production practices. With the public's positive view of farmers and their lack of agricultural literacy, consumers may feel unqualified to process information about the raising of farm animals, and thus ignore the information while assuming farmers are behaving ethically.

As food markets are increasingly catering to animal welfare concerns by providing labels like Animal Welfare Approved, the claim that consumers are avoiding information may seem odd. Note, however, that some consumers may be avoiding the information that others are seeking. If this is the case then it points to possible drawbacks from using legislation rather than markets to provide the level of animal welfare consumers want. If gestation crates in swine production are banned, for instance, this limits the ability of markets to provide cheaper pork to people less concerned with sow welfare.

As animal welfare concerns rise, both the food and livestock markets are being impacted by new rules and regulations on animal husbandry in farm animal production practices. A few examples of this impact include the ban on gestation crate use in Florida, Arizona, California, Oregon, Colorado, Maine, Michigan, Ohio and Rhode Island. Popular food retailers including McDonald's and Burger King have also followed the trend moving to crate-free sources in order to increase animal welfare. In these states consumers are losing the choice between gestation crate pork products and gestation crate free pork products. Tonsor, Olynk, and Wolf (2009) conducted a study that focused on examining whether or not a ban on the use of gestation crates created a private loss stemming from a reduction in selection of products. They found that if pork products were adequately labeled, identifying as either gestation-crate free or not, there was no economic support justifying a ban on the use of gestation crates for the purpose of improving general consumer welfare, and that imposing a ban harms consumers overall. They also found that it is actually a small group within the population that wants such bans. Considering also that those with extreme political views or those who are extreme activists have a higher turnout rate in

elections (Bénabou and Tirole, 2016), perhaps the voter majorities that approve bans on gestation crates mask the presence of people who do not approve the ban, but also do not vote.

Objectives

This research seeks to measure and explain the prevalence of willful ignorance regarding food, focusing specifically on pork production. Pork production is chosen due to the animal welfare debates within the industry and its' importance to the state of Oklahoma. The first objective will determine if consumers will explicitly express the desire for willful ignorance regarding pork production. The second objective will help us understand why consumers prefer to be willfully ignorant: whether it is guilt aversion, farmer trust, or the fact that there are other ethical issues to focus on (*e.g.*, poverty, the environment, food security). Answering these questions will provide policymakers a more accurate perception of consumer preferences for farm animal welfare, and will hopefully encourage prudent animal welfare policies.

The overall objective of this thesis is to study the role of willful ignorance in consumer preferences for animal welfare.

The specific objectives are to answer the following three questions using an internet survey of Oklahoma residents:

- What percentage of people will admit, when directly asked, to being willfully ignorant on how pork is produced?
- What percentage of people would deliberately choose not to receive information on the treatment of pregnant swine?
- To what extent is willful ignorance explained by (a) trust in the farmer (b) a greater concern for issues other than animal welfare or (c) fear the information would make them experience guilt?

CHAPTER III

METHODOLOGY

An Internet survey was administered through the marketing firm Qualtrics in June 2016 to a random sample of Oklahomans who have computers and Internet access. Qualtrics uses active market research panels as well as social media advertising and digital fingerprinting technology to obtain a representative sample of the population. When an individual is invited to take a survey from Qualtrics no details about the survey are provided in order to avoid self-selection bias on certain topics. Respondents were unaware that the topic involved farm animal welfare issues when asked to participate in the survey.

Qualtrics was required to select a sample that contains demographic profiles similar to that of Oklahomans, and we asked that all counties of the state be covered. The survey was administered until 1,000 complete responses were achieved. As the survey was administered Qualtrics monitored the speed of the answers, and for quality control, excluded all individuals who appeared to be answering questions excessively fast. Shown in Table 1 are select demographics of survey respondents compared to that of Oklahoma's population, as measured by the Census Bureau's American Community Survey (Geolytics, 2016). Not surprisingly for an Internet survey, senior citizens are underrepresented in the sample. The sample is comprised of more whites, females, college graduates, and many more households with an unemployed member, but all of these are discrepancies that can be corrected through sample balancing. As will be shown later, sample balancing has only minuscule changes in the results, so despite the

sample departures from Oklahoma's demographic profile the sample represents the attitudes of the state well.

Table 1. Demographic Profiles of Oklahomans Measured by the Internet Survey and the American Community Survey

Percent of…	Internet Survey Respondents	American Community Survey Respondents
Whose age is…		
Less than 18	0%	0%
18-24	12%	14%
25-34	23%	18%
35-44	15%	16%
45-54	20%	18%
55-64	19%	16%
65 or older	11%	18%
Whose education level is…		
No high school diploma	3%	13%
High school diploma	40%	56%
Associate's degree	18%	7%
Bachelor's degree	26%	16%
Graduate degree	13%	8%
Ethnicity: white only	87%	73%
Female	70%	51%
With income…		
$19,999 or less	16%	20%
$20,000 to $99,999	70%	63%
$100,000 or more	14%	17%
With unemployed member	20%	6.77%

[a] Sources: American Community Survey

The survey contains four main components, but only the first and third sections pertain to the present study. The full survey is available in Appendix A.

1. The first set of questions cover demographic information like those in Table 1 but also location, marital status, political party affiliation and agricultural background.

2. The second section elicits attitudes towards a state-level initiative and is not relevant to this study.
3. The third section is in regards to willful ignorance and achieves the three aforementioned objectives. Note that if another study sought to replicate this survey with the same population of respondents but with different or no preceding sections the results might be expected to differ.
4. The fourth section measures the individuals' food security and is not relevant to this study.

Objective 1: Measuring Admissions of Willful Ignorance

Our first objective is to measure the percentage of Oklahoma residents who will admit to being willfully ignorant on how pork is produced. Measuring the extent to which actual willful ignorance occurs is difficult because people may not be completely self-aware that they are choosing ignorance, and even if they are aware they may be hesitant to admit it. Due to this obstacle the absolute frequency of willful ignorance is prone to be larger than the frequency of admissions of willful ignorance, making these admissions a lower-bound estimate.

This survey measures admissions to displaying willful ignorance by using swine production as an example. Respondents were asked the degree to which they agree with the following statement: *So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised*. The way this statement is phrased makes it clear that regardless of the method the animal is raised, there is no effect on the safety or taste of the meat, and thus should only affect negative by-products from production, such as animal welfare.

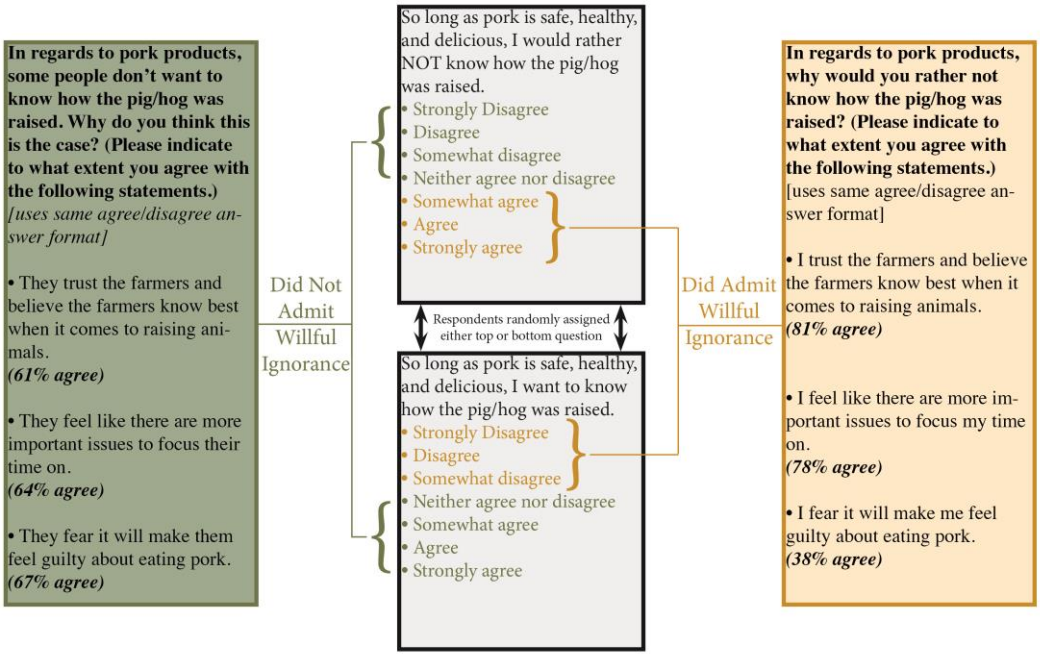
In order to avoid leading the respondent to a certain response, since people tend to exhibit an affirmation bias and agree with statements, half of the subjects were asked a positive version of the statement, as shown in Figure 1: *Even if pork is safe, healthy, and delicious, I want to know*

how the pig/hog was raised. The interchangeable use of the negative (*I do not want to know*) and positive (*I want to know*) versions of the statement is used to avoid affirmation bias.

Figure 1 shows how the statements were presented to the respondent and how their responses were categorized. Respondents report their agreements with each statement on a scale from 1 to 7, where 1 is strongly disagree, 2 is disagree, 3 is somewhat disagree, 4 is neither agree nor disagree, 5 is somewhat agree, 6 is agree, and 7 is strongly agree. An individual is said to admit to willful ignorance in the negatively worded question if they answered: 'somewhat agree', 'agree', or 'strongly agree'. Admissions of willful ignorance in the positively-worded question is characterized by 'strongly disagree', 'disagree', or 'somewhat disagree'. Because 'neither agree nor disagree' reflects ambivalence it is not interpreted as an admission of willful ignorance.

As discussed in the literature review, consumers are more likely to answer honestly when asked about how someone else behaves versus themselves. In order to avoid social desirability bias, respondents who did not admit to willful ignorance were then asked the extent to which they agree or disagree with the following indirect statement: *So long as pork is safe, healthy, and delicious, the average American would rather NOT know how the pig/hog was raised*. Just as before, only half of these respondents answered this question, with the other half being asked a positive version of the statement: *Even if pork is safe, healthy, and delicious, the average American wants to know how the pig/hog was raised*. Since consumers are less concerned about making others look good, these statements allow the respondents to answer more truthfully and focus on being honest (Lusk and Norwood, 2009).

Figure 1. Expressions of Willful Ignorance Among 1,000 Oklahomans in an Internet Survey



The percent of people who express willful ignorance will be the main result of the study, but an investigation into how responses differ across demographics will also take place. Tabulated results will show the percent who express willful ignorance across different demographic categories, and are useful for showing unconditional demographic effects (unconditional in the sense that changes in one demographic does not assume other demographic variables are held constant). For conditional effects, showing the impact of one demographic variable holding other variables constant, an ordered logit model is used.

The demographics considered are as followed. Age is accounted for by a dummy variable X_{Young} and X_{Old} which equal one if the person is 18-34 or older than 54 years of age, respectively. Males are indicated by the dummy variable X_{Male}, and those with at least a bachelor's degree is designated by the dummy variable $X_{College}$. One question asked their political affiliation by having them choose from the following categories: consistently conservative, mostly conservative, mixed, mostly liberal, and consistently liberal. Those who answer 'mostly liberal' or 'consistently

liberal' are denoted by the dummy variable $X_{Liberal}$. The respondent's familiarity with agriculture was measured by having them select from the following options: I grew up on a family farm, I have worked on a farm, I have spent considerable time on a farm, and I have little exposure to agriculture. Those who choose the last option are assigned a value of 1 in the dummy variable $X_{Noag.}$

Recall that the question about willful ignorance is expressed in two ways, and how the question is expressed will likely influence the person's attitude. Thus, the dummy variable $X_{PVersion}$ is used to denote respondents who saw the positively worded question: "... I want to know ..." as opposed to "… I do not want to know …". When respondents face the positively worded questions the order of their responses is reversed so that the dependent variable will express the same sentiment toward willful ignorance as the negatively worked question. That is, if the subject answered "7 = strongly agree" to the question "I want to know how farm animals are raised" the value of '7' is changed to '1' so that a higher value denoted a greater tendency towards willful ignorance. The relationship between the subjects' answers to each version of the question and how their answers are coded for in the ordered logit model is given in the table below. Regardless of how the question is worded, a larger dependent variable denotes greater willful ignorance.

Table 2. Illustration of Dependent Variable Coding for Different Versions of Willful Ignorance Question

"I do not want to know how farm animals are raised"	Value of dependent variable, Y	"I want to know how farm animals are raised"	Value of dependent variable, Y
Strongly disagree	1	Strongly disagree	7
Disagree	2	Disagree	6
Somewhat disagree	3	Somewhat disagree	5
Neither agree nor disagree	4	Neither agree nor disagree	4
Somewhat agree	5	Somewhat agree	3
Agree	6	Agree	2
Strongly agree	7	Strongly agree	1

The ordered logit model used in this study is shown in the following equation, where y^* is an unobserved, latent attitude towards willful ignorance and $\in$ is a random variable following a Type I Extreme Value distribution. Logistic distribution, which has a mean of zero and a variance of $\pi^2/3$ (the full Logistic distribution also has a scale parameter, but for estimating ordered logit models the scale parameter is set equal to one).

(1) $y^* = \beta X + \varepsilon = \beta_0 X_{Young} + \beta_1 X_{Old} + \beta_2 X_{Male} + \beta_3 X_{college} + \beta_4 X_{Liberal} + \beta_5 X_{Noag} + \beta_6 X_{PVersion} + \in$

In (1) y^*indicates to what extent they agree or disagree with the statement they were presented with. It is an unobserved variable where a higher value indicates greater agreement. Although the variable itself cannot be observed, information about it can be inferred by answers to the question. For instance, if the person answers "1" for strongly disagree to the negatively worded question or strongly agree to the positively worded question, that indicates a low amount

of willfull ignorance and the value of y^* is assumed to be some value less than or equal to μ_1, which is an unknown parameter that must be estimated jointly with the ordered logit model. Likewise, if they express a high amount of willful ignorance with a dependent variable of '7' then y^* is assumed to be greater than μ_6. The categorization of the respondent's agreement to the statement is assumed as follows:

(2) y = 1 if $y^* \leq \mu_1$

y = 2 if $\mu_1 < y^* \leq \mu_2$

y = 3 if $\mu_2 < y^* \leq \mu_3$

y = 4 if $\mu_3 < y^* \leq \mu_4$

y = 5 if $\mu_4 < y^* \leq \mu_5$

y = 6 if $\mu_5 < y^* \leq \mu_6$

y = 7 if $\mu_6 < y^*$

The cumulative distribution function of Logistic distribution is F(z) = $\{\exp(z)\}(1 + \exp(z))^{-1}$, and so the probability that y* is less than a threshold $\mu_1$equals the probability that $\in \leq \mu_1 - \beta X$, or F($\mu_1 - \beta X$) = $\{\exp(\mu_1 - \beta X)\}(1 + \exp(\mu_1 - \beta X))^{-1}$. Thus, the probability that a respondent answers y = i equals:

(3) P(y = i) = $\{\exp(\mu_i - \beta X)\}(1 + \exp(\mu_i - \beta X))^{-1} - \{\exp(\mu_{i-1} - \beta X)\}(1 + \exp(\mu_{i-1} - \beta X))^{-1}$

The probability of observing the sample that is collected among n = 1, 2, …, N people, given the parameters β, μ_i is then the following likelihood function, where $I(y_n = i)$ is an

indicator function that equals one if true and zero if false. In ordered logit estimation, the coefficients are chosen by maximizing the natural logarithm of this likelihood function.

$$(4)\ \prod_{n=1}^{N}\prod_{i=1}^{7}[\mathrm{P}(y_n = i)]^{I(y_n=i)}$$

Once the parameters are estimated, they can be inserted into the utility function and used to predict y* for any one person, where the value of ∈ is assumed zero. Suppose that y* = 1, and μ_1 = 1.2. According to (2) this means that the person likely selected y = 1, or strongly disagree. However, if we assume a different set of values for X and y* = 1.2, this means that the person now selected y = 2 or perhaps something larger (depending on the value of μ_1), and thus are more likely to exhibit willful ignorance.

Objective 2: Documenting Decisions to be Willfully Ignorant

Our second objective is to determine the percentage of Oklahoma residents who would deliberately choose not to receive information on the treatment of pregnant hogs. The survey measures this by presenting respondents with the following option: *You can either see a picture how pregnant hogs are housed on a typical farm or a picture of a blank page*. The way the statement is phrased neither leads the respondent to believe the image will be a positive image or a negative one, in order to refrain from response bias, but those who believe the hogs are probably treated inhumanely will expect the picture to be disturbing and may wish to avoid it. Figure 2 displays how the question was presented to the respondent and how their answers were categorized. The background of the figure also shows the picture shown to subjects. The respondents were presented randomly with one of the three time options: no time limit, 10 seconds, or 20 seconds. This was done to determine if time has an effect on the respondents' action to display willful ignorance or to not display willful ignorance. Time serves as a price one must pay for willful ignorance, and depending on the subjects' eagerness to complete the survey

quicker, one would expect that fewer individuals will opt for willful ignorance (choosing the blank page) as the number of seconds it must be viewed increases from 0 to 10 to 20.

Figure 2. Choosing Willful Ignorance in a Sample of 1,000 Oklahomans in an Internet Survey

To determine the number of Oklahoma residents who would deliberately choose not to receive information on the treatment of pregnant hogs, the percentage of respondents who chose a blank page and displayed willful ignorance is calculated for each of the three questions. If the differences in percentages between the three questions appear large, statistical tests will be used to determine if they are indeed statistically different.

Objective 3: The Role of Three Explanations for Willful Ignorance

Our third objective is to determine to what extent willful ignorance is explained by (a) trust in the farmer (b) a greater concern for issues other than animal welfare or (c) fear the information would make them experience guilt. With this objective we will run into similar problems as the first objective. Determining the actual reason why respondents display willful ignorance can be difficult because people may not be sure why they choose self-ignorance and

even if they do they may not be willing to admit the real reason why. Respondents may feel more comfortable stating that they display willful ignorance because they trust the farmer or they have a greater concern for other issues versus admitting that the information would make them experience guilt. If social desirability bias influences the results it would decrease the percentage of people who select avoiding guilt, and increase the percentage who select the other two options.

This survey measures why willful ignorance is displayed by asking respondents to indicate to what extent they agree with the following statements: *I trust the farmers and believe the farmers know best when it comes to raising animals; I feel like there are more important issues to focus my time on; I fear it will make me feel guilty about eating pork*. Figure 1 (previously shown) shows how the question was displayed to the respondent. Respondents are presented with the same 1 to 7 ranking scale as used in previous questions. As shown by Figure 1, if respondents did not admit to willful ignorance they are asked to rank the same statements, but instead of answering for themselves they are asked to answer for the average American.

To determine to what extent willful ignorance is explained by (a) trust in farmers (b) a greater concern for issues other than animal welfare or (c) fear the information would make them experience guilt, percentages of respondents who agreed with each of these statements is calculated

CHAPTER IV

FINDINGS

As discussed previously there are two types of consumers, those who desire information on how their food is raised and those who do not. Many companies are tailoring to those who desire information leaving those in the latter group left with information they do not want to see for various reasons. Our goal in these findings is to estimate how many people in the Oklahoma population are interested in this information, and how many consumers are in the latter, less studied group. To take it one step further we will also analyze why the two types of consumers prefer or do not prefer information and what demographics are affecting their stance.

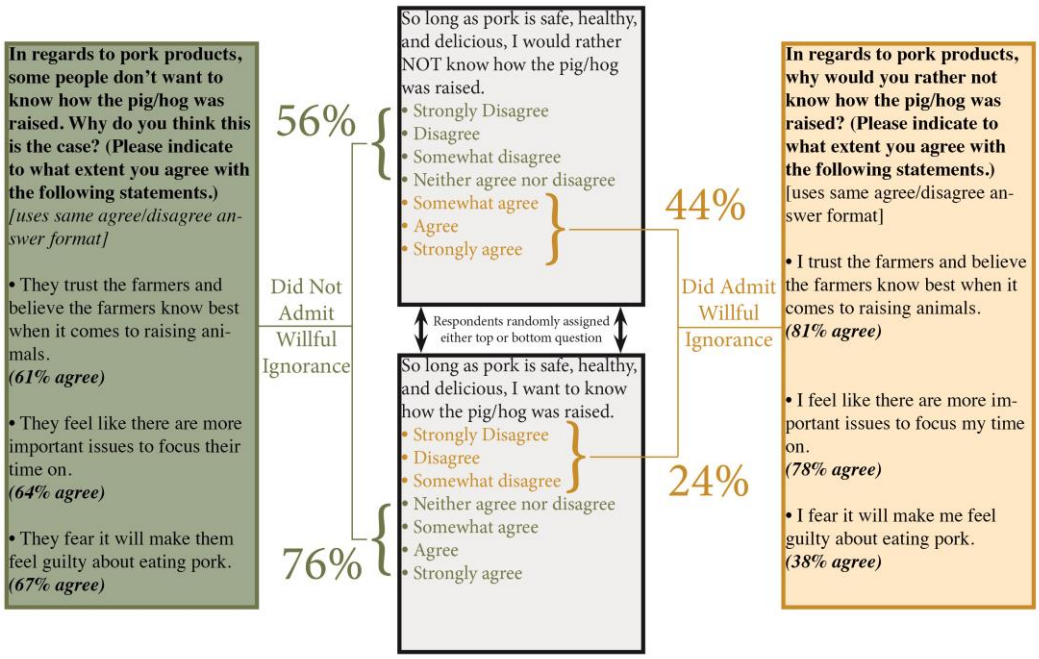
Expressions of Willful Ignorance

A previous Figure 1 demonstrated the question used to ask people whether they admit to possessing willful ignorance regarding how swine are housed. This figure is updated with the results below, demonstrating that 24 - 44% confessed to willful ignorance. The actual percent depended on how the question was worded. When respondents were presented with the negatively worded direct statement (*e.g.*, I would rather *not* know) 56% indicated they indeed did want to know how the animal was raised while 44% did not, so roughly half expressed willful ignorance. When presented with the positively phrased statement (*e.g.*, I *want* to know) only 24% preferred ignorance, reducing expressions of willful ignorance by almost half. This reflects the affirmation bias, where people prefer to agree rather than disagree with statements. While the desire to remain uninformed about pork production methods was highly sensitive to how the

survey question was asked, it still remains that at least a quarter of the survey respondents preferred being uninformed.

As discussed in the methods section, neither agree nor disagree was not interpreted as an admission of willful ignorance. When presented with the positively worded statement (*e.g.*, I *want* to know) approximately 17% of respondents chose neither agree nor disagree. When presented with the negatively worded statement (*e.g.*, I would rather *not* know) approximately 15% of respondents chose neither agree nor disagree. These percentages were calculated to show the amount of those were indifferent to the question, however were interpreted as not admitting willful ignorance.

Figure 3. Expressions of Willful Ignorance Among 1,000 Oklahomans in an Internet Survey, With Answers



The results in Figure 3 may exhibit a bias because the sample demographics differed somewhat from the demographics of the state. However, using sample balancing (also known as

raking) to account for differences in average age, percent white ethnicity, education, unemployment status, and income generated similar results, as shown in Table 3 below. Whatever demographic differences exist between the sample of respondents and the Oklahoma population do not seem to bias the results. Because weighted and unweighted results are so similar, only the unweighted results are shown hereafter.

Table 3. Unweighted and Weighted Results for Direct Willful Ignorance Questions

	So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised.		**Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised.**	
Percentage of respondent who…	Unweighted	Weighted[a]	Unweighted	Weighted[a]
Agreed	44.27%	46.55%	75.61%	74.35%
Disagreed	55.73%	53.45%	24.39%	25.65%

[a] Weighted results are acquired by using a sample balancing macro developed by Nicholas Winter at the University of Virginia. The macro was set to adjust the raw percentages to correct for differences in age, ethnicity, education, unemployment status, and income between the sample and the Oklahoma population. Population statistics were acquired from the American Community Survey using years 2010-2014.

These results strongly suggest that willful ignorance is demonstrated by a considerable portion of the subjects, especially given the fact that there are probably some people who choose willful ignorance but are reticent to admit it, even in an anonymous survey question. Thus, the numbers here are a lower-bound to the true percentages. The strategic desire to avoid information is not resigned to a few rare individuals, but a considerable portion of the Oklahoma, and likely the U.S. as well.

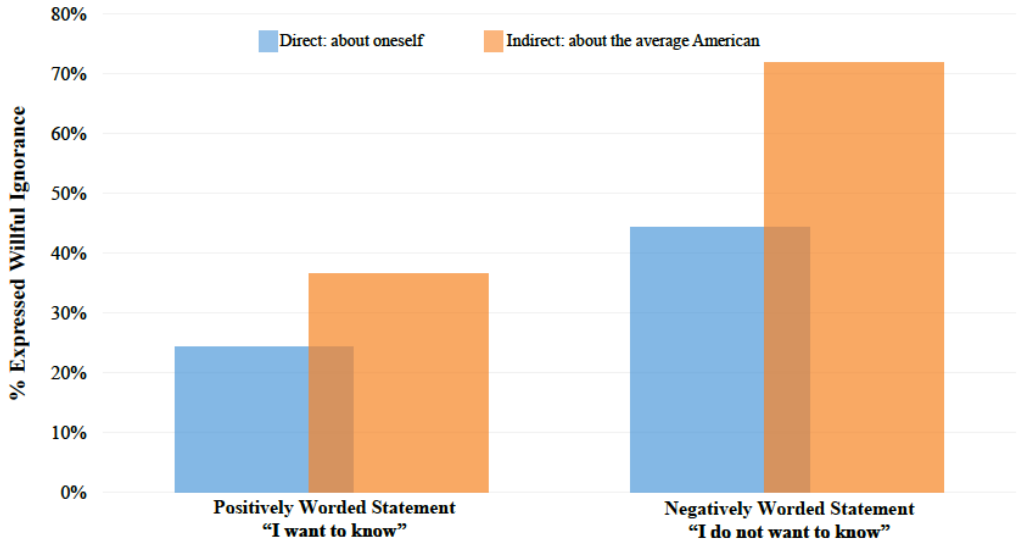
The scientific literature has documented a tendency for people to present themselves in a socially desirable manner whenever they are being observed, whether this observed behavior

concerns an action or even an answer to a survey question. However, people are less inclined to make other people appear socially desirable, and some studies have found that asking a person how the average person/American thinks can actually predict that person's behavior better than asking what they themselves think (Chang, Lusk, and Norwood, 2009; Epley and Dunning, 2000; Fisher, 1993; Lusk and Norwood, 2009). Perhaps a more accurate measure of the percent of respondents who exhibit willful ignorance can be found by asking whether the "average American" wants to know how swine are raised? Regardless of how respondents answered the direct willful ignorance question, they were presented with an indirect question asking if they believed the average American would want to know how swine are raised.

As shown below in Figure 4, 72% of respondents agreed that the average American would rather not know how swine are raised when presented with the negatively worded statement (*e.g the average American would rather not know*). Almost two-thirds of respondents believe that the average American would rather be willfully ignorant. This is a much larger percentage of people when compared to the 44% of people who admitted to themselves being willfully ignorant. Other respondents were presented with the positively phrased statement (*e.g. the average American wants to know*), and only 36% believed that the average American would rather be willfully ignorant. Compare this to the 24% of respondents who admitted to being willfully ignorant when asked directly and we can see another large increase in the number of those who express willful ignorance. When respondents are asked in an indirect way, as in they are not actually answering for themselves but for someone else, they are more willing to admit that people may not desire information on how farm animals are raised. These results show that more of the public may desire willful ignorance than are willing to admit it. Although we cannot pinpoint the exact percentage of people who express the desire for willful ignorance, a reasonable assumption is that the answer lies somewhere between the direct and indirect version of the question results.

However, some of the differences between the direct and indirect answers might be attributable to the fact that the survey reports the direct results for the average Oklahoman, yet asks the respondents to speculate about the average American. This differences could thus be influenced not only by social desirability bias but differences between Oklahomans and the United States as a whole.

Figure 4. Expression of Willful Ignorance



There are many reasons someone may choose not to have information about pork production, and it is likely most individuals behaving in a willfully ignorant manner have not thought deeply about why they behave this way. Some may not even be conscious of it. This makes understanding the motives for willful ignorance difficult to explore and impossible to fully understand. Still, some insight can be acquired by presenting those who expressed willful ignorance with some potential motivations for doing so, and asking whether those motivations apply to them. As shown in Figure 3, three justifications were given: trust in farmers, more important issues than animal welfare to consider, and aversion to guilt. This three-item list is of course not exhaustive, but they should be sufficient for providing insights into the motivations for willfully ignorant behavior.

The right side of Figure 3 shows the percent who agreed with each statement, among only those who expressed willful ignorance. A large majority of respondents said that they display willful ignorance because they trust farmers or have more important issues to focus their time on. A much smaller percentage stated that it was due to fear that it would make them feel guilty about eating pork. Those who did not express willful ignorance were asked to indicate why they believed some Americans did. As shown in the left side of Figure 3, the percentage of those who agreed with trust in farmers and more important issues decreased while the percentage of those who agreed that it would make them feel guilty increased from 38% to 67%. Those admitting to willful ignorance are reticent to say it is due to guilt aversion, but others who are speculating on the motivations of other willfully ignorant people list guilt-avoidance as a major cause.

This finding isn't surprising. Admitting that one would feel guilty about eating pork means that one would have to know or suspect that how hogs are raised may not pass what society deems as right. Guilt aversion is one of the highest drivers for willful ignorance, but is also something that would be seen as negative in society's eyes, making respondents less likely to admit it when answering the question directly versus indirectly (Thunstrom *et. al.*, 2013). Because of this, respondents are much more likely to state that they don't mind not knowing how farm animals are raised because they have full trust in farmers and feel like they don't need to worry about the care of the animal. Stating that they focus their time on bigger more important issues is also a guilt-free reason as to why they express willful ignorance. There can be many other reasons why someone would express or not express the desire for willful ignorance, and these factors are likely to vary with education, background, and other demographic characteristics.

Ordered Logit Model for Demographic Effects

Demographics can play a large role in consumers' preferences and attitudes towards animal welfare topics. Education level, gender, political affiliation, age and farm experience all might have an effect on how a consumer interprets and responds to questions regarding the health and welfare of farm animals. To better understand these demographics and how respondents answered the direct willful ignorance questions, tabulated results were calculated shown below by Table 4.

Table 4. Demographic Tabulated Results for Direct Willful Ignorance Questions

	So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised.			Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised.		
	Agree	**Disagree**	**Responses**	**Agree**	**Disagree**	**Responses**
Gender						
Male	48%	52%	156	74%	26%	143
Female	43%	57%	350	76%	24%	345
Age						
18-34	46%	54%	167	72%	28%	178
35-64	42%	58%	280	77%	23%	255
65+	49%	51%	59	80%	20%	55
Income						
0-US$49,999	40%	60%	262	76%	24%	253
US$50,000-$99,999	47%	53%	175	74%	26%	160
US$100,000+	52%	48%	69	77%	23%	75
Education						
Non BS	42%	58%	307	76%	24%	294
BS	47%	53%	199	75%	25%	194
Politics						
Conservative	49%	51%	214	74%	26%	204
Liberal	43%	57%	87	81%	19%	79
Mixed	40%	60%	205	75%	25%	205
Ag Background						
Grew up on farm	34%	66%	73	74%	26%	74
Some time spent on farm	40%	60%	139	86%	14%	133
Little exposure to farms	49%	51%	294	71%	29%	281

For this table strongly disagree, disagree, and somewhat disagree were combined to create the disagree category. Strongly agree, agree, and somewhat agree were also combined to create the agree category. All neither agree nor disagree were excluded as well as responses with unknown demographics.

Table 4 shows us the unconditional demographic effects, giving us a beginning idea of how different demographics may influence attitudes towards information about farm animal

welfare. When looking at the gender effect a higher percentage of males expressed a desire for willful ignorance over females, regardless of how the question was asked. Females were found to have a higher concern for how farm animals are raised. The age demographic displayed an interesting mix of results. When asked in the negatively phrased way (*e.g. I would rather not know*), those above the age of 65 displayed the highest desire for willful ignorance, however when asked in the positively phrased way (*e.g. I want to know*) those between the ages of 18-34 displayed the highest desire for willful ignorance—those above 65 moved down to the lowest. Perhaps the elderly are more prone to affirmation bias?

Similar results were found when respondents' incomes were analyzed. Income levels were broken up into three categories, those whose household income is below $50,000, those whose household income is between $50,000 and $99,999, and those whose household income exceeds $100,000. When presented with the negatively phrased statement those who had a household income over $100,000 displayed the highest desire for willful ignorance, while those who made below $50,000 displayed the lowest desire. However when presented with the positively phrased statement those in the middle income category displayed the highest level of willful ignorance while those in the highest income category expressed the lowest desire. However, the percentages across age groups for the positively phrased statement are very similar. There was little variation in responses across education levels for the positively phrased statement, but in the negative statement those with more education exhibit a greater amount of willful ignorance.

The last demographic effect analyzed was politics. We broke this category into three classifications: conservative (mostly or consistently), liberal (mostly or consistently) and mixed. We included the mixed category because many people today share views from both ends of the spectrum and cannot solely dedicate themselves as strictly one or the other. Conservatives were found to have the highest desire for willful ignorance across both question types while liberals

and mixed displayed the lowest desire. Conservatives and liberals tend to have very different stances on farming and animal welfare, with Liberals expressing more concern for animal welfare (Pricket, Norwood and Lusk, 2010). Based on these differing views, these results are reasonable.

The tabulated results are useful but do not indicate whether differences in responses across demographics are statistically significant. Moreover, they measure unconditional demographic effects, meaning as one demographic variable changes other demographics change also. To assess statistical significance and measure conditional effects, an ordered logit model was used. For the ordered logit model we combined the results for both the positively and negatively phrased direct willful ignorance questions, but since the phrasing of the question does impact responses a dummy variable for the positively phrased question was included in the model. For any coefficient, a positive and statistically significant number shows that they are more likely to have a desire for willful ignorance while a negative coefficient shows that they are less likely to display willful ignorance. All demographics, except *Old* and *Education*, were statistically significant for these combined questions.

Now that all other demographics are held constant Table 5 shows us that the *Younger* demographic, those under 35, have a higher desire for willful ignorance. This goes against popular belief and media portrayal that younger generations have a stronger concern for animal welfare while older generations have been more careless with animal welfare. *Male* was also shown to have a higher desire for willful ignorance. In previous studies regarding animal welfare issues females were found to show more concern for animal welfare issues than males, which was also displayed in this study.

Those in the *Liberal* category were found to have less desire for willful ignorance. This is not surprising; those who consider themselves as liberal generally express higher concern for animal welfare issues. With animal welfare issues being such a heated topic in the political scene

those who strongly affiliate themselves as either liberal or conservative generally show very different opinions on farm animal welfare. One of the biggest concerns the agricultural world is facing today is the fact that consumers are becoming increasingly separated from their food source. With the number of consumers directly tied to agriculture decreasing, there are many people within the population who have never been exposed to a farm. In our study *Noag*, those who have never been exposed to a farm, strongly expressed the desire for willful ignorance.

The variable *PVersion*, which equaled one for the positively phrased statement, also came in as highly significant. As expected, those presented with the positively phrased question were less likely to express the desire for willful ignorance. Respondents tend to have a desire to agree with the surveyor, or answer in the way that the question is leading. Because of this, asking the question in both a positive and negative way is important to better understand consumer's true preferences and for interpreting the results as accurately as possible.

Table 5. Ordered Logit Results for Direct Willful Ignorance Questions

Explanatory Variable	***Coefficient (Standard Error in Parenthesis)***
Young	0.30* (0.13)
Old	0.16 (0.14)
Male	0.26* (0.12)
College	0.09 (0.12)
Liberal	-0.70* (0.15)
Noag	0.46* (0.12)
PVersion	-0.59* (0.11)

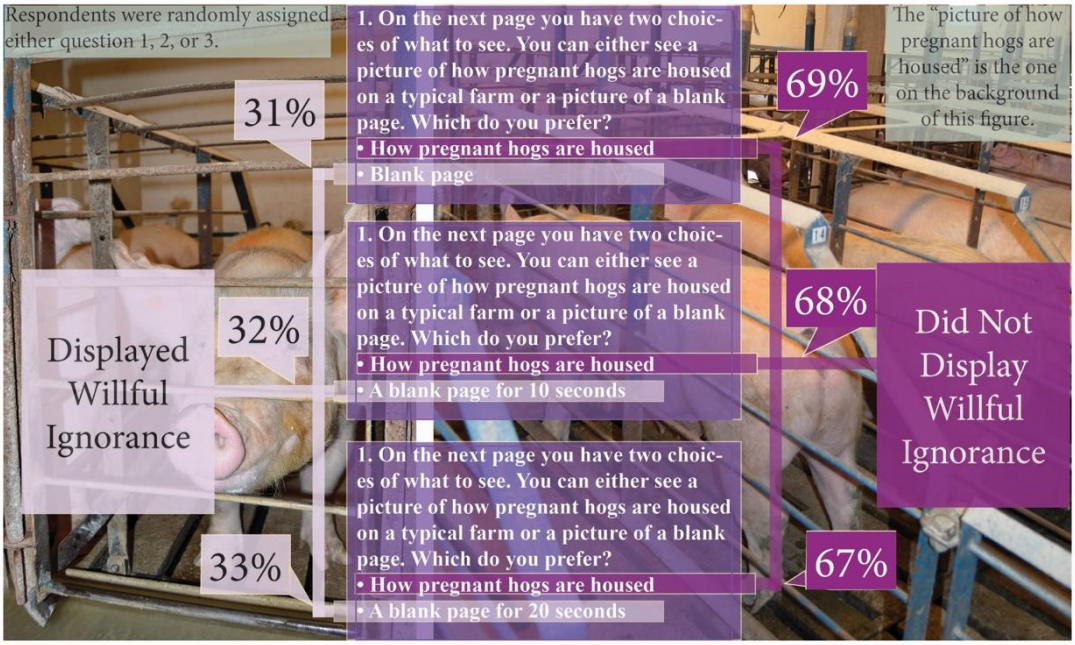
* Indicates statistical significance at the 5% level.

Displays of Willful Ignorance

As discussed before, social desirability bias has a way of concealing the truth. How someone answers a survey may differ completely from how they actually act in the moment. Behind closed doors, consumers are much more likely to express their true behavior versus when they are being watched. Just like asking a consumer if they would want information in the future versus if they want to view information right now, would most likely leave you with two different results.

To help gauge if consumers display willful ignorance more accurately, we asked them to choose to view either a blank page or a picture of how pregnant swine are housed. Shown in Figure 5, respondents were randomly presented with viewing a blank page or a picture of how pregnant pigs are housed for no time limit, 10 seconds, or 20 seconds. Regardless of the amount of time, approximately a third of respondents chose to view a blank page instead of a picture of how pregnant hogs are housed. If they chose the blank page then they opted for willful ignorance. The other two-thirds of respondents chose to view the picture of how pregnant hogs are housed, not displaying willful ignorance.

Figure 5. Choosing Willful Ignorance in a Sample of 1,000 Oklahomans in an Internet Survey, With Answers



The different time lengths were chosen to determine some type of cost payoff, as in how much time are consumers willing to pay to remain willfully ignorant. Oddly enough, regardless of how much time one would have to pay to remain willfully ignorant, almost the same number of respondents chose willful ignorance. This perhaps shows us that those who desire willful ignorance strongly want to stay uninformed, never minding the price they have to pay to stay that way. This is surprising because only one fourth of respondents stated that they express the desire for willful ignorance. However, based on these results, approximately one third of respondents display willful ignorance. Of the 218 individuals who did not finish the survey, all but 2 quit taking the survey before they could submit a choice between a blank page and the picture. Thus, those who were discouraged from finishing the survey tended to do so before they could be presented with the picture of a blank page for 20 seconds, so the long time period did not result in a higher number of non-respondents than a 10 second or zero second time period. This finding

reinforces the fact that how consumers answer questions that obtain no risk are different from when they are presented with something that involves risk, in this case involves them viewing how swine are raised and thus possibly making them feel negative emotions. This also shows that our results are a lower bound estimate for the amount of consumers who prefer to remain willfully ignorant.

CHAPTER V

CONCLUSION

Farm animal welfare is a sensitive topic that is being placed in front of consumers with increasing frequency through various media outlets. Although it may be a small group of activists leading this increase in the display of information, they are having a high impact on the industry and the everyday consumer. Legislation is being passed altering farm animal production policy, large food retailers are changing their standards, and marketing strategies are becoming more information based. With all of these changes coming from both the policy and marketing aspects of the industry it can be easy to overlook what the average American consumer wants. Do they prefer having all of this information on how farm animals are raised when they go into a restaurant or grocery store? Or would they rather remain uninformed and willfully ignorant?

An internet survey was administered to consumers across the state of Oklahoma to measure consumer preferences for willful ignorance on farm animal welfare topics. The demographics of those who participated in this study matched closely with the demographic profiles found across the state of Oklahoma and thus can be used as a statewide view on willful ignorance. Using pork production as the farm animal of choice due to its importance to many people in Oklahoma, questions used in this survey focused on determining if consumers desired information on how swine are raised and the reason behind this desire or lack thereof. Questions were presented to the respondent in multiple ways in order to minimize affirmation bias and social desirability bias.

Several important findings came from this survey. First, a significant portion of respondents openly stated they would rather remain willfully ignorant when it comes to knowing how farm animals are raised. Although the results changed based on how the question was asked it can still be concluded that at least a quarter of respondents openly stated they preferred to remain willfully ignorant. An even larger portion of respondents believe the average American would rather remain willfully ignorant. Based on how the question was asked at least a third of respondents claimed that the average American would rather not know how farm animals are raised. Due to social desirability bias and the fact that some people who choose willful ignorance would rather not admit it, we can see that a considerable portion of people in Oklahoma, and possibly the American public, would rather remain willfully ignorant on how farm animals are raised. One way to improve this part of the survey would be expand the options respondents have to choose from. Although the options given from strongly disagree to strongly agree allow respondents to measure their preferences on a large scale, it is hard for those who already know how farm animals are raised to answer the question. For example, some consumers may already know how swine are raised and therefore can't necessarily say that they want or do not want to know. Perhaps options such as "already know but would rather not know" or "already know and prefer knowing" could be added to the options they have to choose from.

Respondents stated that they preferred to remain willfully ignorant for two main reasons: they trust the farmers and have more important issues to focus their time on. However, when answering for the average American respondents stated that guilt aversion played just as high of a role as trust in farmers and more important issues do. Many people may put their trust in farmers, but guilt aversion and the negative emotions caused by this information also plays a large role in their decision to remain willful ignorant—they are just more reticent to admit it. These are important findings when it comes to food retailers' marketing tactics. This study shows that consumers may not desire certain types of information, especially information dealing with the

how farm animals are raised. It would be beneficial for food retailers' to keep in mind what type of information consumers desire when it comes to the labeling they include on their packaging.

It was also found that the younger population and those who have never been exposed to a farm have a higher desire for willful ignorance, countering popular belief. Consumers are increasingly being separated from their food source and this trend will likely continue as it has the last several decades. With those who have never been exposed to a farm having a desire for willful ignorance, we are likely to see an increase in the number of those who will share this same desire.

Adding to these findings, we also had the consumers participate in a tradeoff between their time and willful ignorance. Regardless of the amount of time a respondent had to view a blank page versus a picture of how pregnant hogs are housed a third of respondents chose to view a blank page avoiding the picture. One would typically expect to see a decline in the number of those who chose willful ignorance as the time they had to view the blank page increased, however this was not the case. This shows that those who prefer to remain willfully ignorant feel so strongly that they disregard the time price they have to pay to keep their willful ignorance.

These results may seem surprising, given the considerable public attention paid to animal welfare issues. There may be specific groups and people who have a strong desire for information and openly express this desire, but there is a significant group within the population that do not. There is a large portion of the population who actually experience a decline in utility over information on how farm animals are raised. For a future study, instead of focusing on only Oklahoma, it would be helpful to study preferences for willful ignorance across the United States. This would widen demographics as well as give others the opportunity to look at preferences across different regions. Over the next several years there will be continued changes in legislation, food retailers' standards, and marketing strategies when it comes to farm animal

welfare. Many activist groups will continue to have a say in legislation and marketing, however it is important for policy makers and food retailers to keep in mind what the average American consumer wants when it comes to the products they buy and the animal welfare information that comes with them.

REFERENCES

Alós-Ferrer, C., & Strack, F. (2014). From dual processes to multiple selves: Implications for economic behavior. *Journal of Economic Psychology, 41*, 1-11. doi:10.1016/j.joep.2013.12.005.

American Community Survey. State level summary data using years 2010-2014. Data purchased from GeoLytics.

Bénabou, R., & Tirole, J. (2016). Mindful Economics: The Production, Consumption, and Value of Beliefs. *Journal of Economic Perspectives, 30*(3), 141-164. doi:10.1257/jep.30.3.141.

Bridgers, J. (2015, September 22). Social Media for #AnimalProtection. Retrieved February 02, 2017, from http://worldanimal.net/world-animal-net-blog/item/381-social-media-for-animalprotection.

Chang, J. B., Lusk, J. L., & Norwood, F. B. (2009). How Closely Do Hypothetical Surveys and Laboratory Experiments Predict Field Behavior? *American Journal of Agricultural Economics, 91*(2), 518-534. doi:10.1111/j.1467-8276.2008.01242.x.

Ehrich, K. R., & Irwin, J. R. (2005). Willful Ignorance in the Request for Product Attribute Information. *Journal of Marketing Research, 42*(3), 266-277. doi:10.1509/jmkr.2005.42.3.266.

Epley, N., & Dunning, D. (2000). Feeling "holier than thou": Are self-serving assessments produced by errors in self- or social prediction? *Journal of Personality and Social Psychology, 79*(6), 861-875. doi:10.1037//0022-3514.79.6.861.

Fisher, R.J. (1993). Social desirability bias and the validity of indirect questioning. *The Journal of Consumer Research, 20,* 303-315. doi: 10.1086/209351.

Fyksen, J. (2016, February 10). Survey: Consumers trust farmers. Retrieved February 22, 2017, from http://www.agriview.com/briefs/regional/survey-consumers-trust-farmers/article_5f4b69f6-280e-56ab-a0c6-b6feda09cf5a.html.

Gino, F., Norton, M. I., & Weber, R. A. (2016). Motivated Bayesians: Feeling Moral While Acting Egoistically. *Journal of Economic Perspectives, 30*(3), 189-212. doi:10.1257/jep.30.3.189.

Gough, Neil and Brian X. Chen. (September 4, 2014). Groups Accuse Apple Supplier in China of Labor Violations. *The New York Times*. Accessed January 30, 2017 at

https://www.nytimes.com/2014/09/05/business/Apple-Supplier-Is-Accused-of-Labor-Violations.html?_r=0.

Katsir, J. (Writer), Hoskinson, J. (Director), & Colbert, S. (Producer). (2016, January 08). Episode 67 [67]. In *The Late Show with Stephen Colbert*. New York, New York : CBS.

Klink, J., Langen, N., & Hartmann, M. (September, 2014). The individual search behavior of consumers visualized by means of sequence analysis. *GEWISOLA, 54*.

Larson, Katharine. March, 2015. "High Egg Prices in California Due to Implementation of New Laws." *Cultivate, 7*:22.

Lusk, J. L., & Norwood, F. B. (2009). Direct Versus Indirect Questioning: An Application to the Well-Being of Farm Animals. *Social Indicators Research, 96*(3), 551-565. doi:10.1007/s11205-009-9492-z.

Norwood, F. B., & Lusk, J. L. (2011). Social Desirability Bias in Real, Hypothetical, and Inferred Valuation Experiments. *American Journal of Agricultural Economics, 93*(2), 528-534. doi:10.1093/ajae/aaq142.

Prickett, Rob, Norwood, F.B., & Lusk, J.L. (2010). Consumer Preferences for Farm Animal Welfare: Results From a Telephone Survey of U.S. Households. *Animal Welfare*, *19*:335-347.

Rice, S. (2013). Three Educational Problems: The Case of Eating Animals. *Journal of Thought, Summer 2013*: 112-127.

Shepherd, S., & Kay, A. C. (2012). On the perpetuation of ignorance: System dependence, system justification, and the motivated avoidance of sociopolitical information. *Journal of Personality and Social Psychology, 102*(2), 264-280. doi:10.1037/a0026272.

Telesca, J. (2012, July 23). Retailers Move Away From Gestation Stalls. Retrieved March 06, 2017, from http://www.supermarketnews.com/blog/retailers-move-away-gestation-stalls.

Thunström, L., Nordström, J., Shogren, J.F., Ehmke, M. & Veld, K.V. (2013). Strategic Self-Ignorance. Working Paper, Dept. of Econ., Lund University.

Tonsor, G. T., Olynk, N., & Wolf, C. (2009). Consumer Preferences for Animal Welfare Attributes: The Case of Gestation Crates. *Journal of Agricultural and Applied Economics, 41*(03), 713-730. doi:10.1017/s1074070800003175.

USFRA. (2011, September 22). Nationwide Surveys Reveal Disconnect Between Americans and their Food. Retrieved February 16, 2017, from http://www.fooddialogues.com/press-release/antibiotics/nationwide-surveys-reveal-disconnect-between-americans-and-their-food.

APPENDICES

APPENDIX A: Survey Sample and Code

Q122 Greetings from the Department of Agricultural Economics at Oklahoma State University (OSU). We are conducting an internet survey to study the attitudes of Oklahoma citizens regarding food issues. At no point in the survey do we ask for your name or contact information, so your answers are completely anonymous. Your participation in this survey is, of course, voluntary, and you may cease your participation at any point in the survey. If you have any questions about your rights as a survey participant, you may contact the OSU IRB Office at 405-744-3377 or irb@okstate.edu. If you wish to contact the principal investigator of this research, please contact Bailey Norwood at 405-744-9820 or bailey.norwood@okstate.edu. Thank you.

Q28 First, please tell us a few things about yourself, and remember your answers are confidential.

Q129 Are you a resident of Oklahoma?

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To End of Block

Q50 What is your age?

- ❍ less than 18 (1)
- ❍ 18-24 (2)
- ❍ 25-34 (3)
- ❍ 35-44 (4)
- ❍ 45-54 (5)
- ❍ 55-64 (6)
- ❍ 65 or older (7)

If less than 18 Is Selected, Then Skip To End of Survey

Q30 What is your gender?

- Female (1)
- Male (2Other (3)

Q125 What is your marital status?

- married (1)
- divorced (2)
- widowed (3)
- I have a life partner but am not married (4)
- separated but still married (5)
- never married (6)
- other (7)

Q32 What is your annual (pre-tax) household income (income from all earners who reside at your house)?

- $9,999 or less (1)
- $10,00 to $19,999 (2)
- $20,00 to $29,999 (3)
- $30,00 to $39,999 (4)
- $40,00 to $49,999 (5)
- $50,00 to $59,999 (6)
- $60,00 to $69,999 (7)
- $70,00 to $79,999 (8)
- $80,00 to $89,999 (9)
- $90,00 to $99,999 (10)
- $100,000 to $109,999 (11)
- $110,000 to $119,999 (12)
- $120,000 to $129,999 (13)
- $130,000 or more (14)

Q34 How many people reside in your household (including yourself and all ages)?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- more than 6 (7)

Q124 How many people under the age of 18 reside in your household?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- more than 6 (7)

Q131 Which county is your permanent residence?

- Adair (1)
- Alfalfa (2)
- Atoka (3)
- Beaver (4)
- Beckham (5)
- Blaine (6)
- Bryan (7)
- Caddo (8)
- Canadian (9)
- Carter (10)
- Cherokee (11)
- Choctaw (12)
- Cimarron (13)
- Cleveland (14)
- Coal (15)
- Comanche (16)
- Cotton (17)
- Craig (18)
- Creek (19)
- Custer (20)
- Delaware (21)
- Dewey (22)
- Ellis (23)
- Garfield (24)
- Garvin (25)
- Grady (26)
- Grant (27)
- Greer (28)
- Harmon (29)
- Harper (30)
- Haskell (31)
- Hughes (32)

- Jackson (33)
- Jefferson (34)
- Johnston (35)
- Kay (36)
- Kingfisher (37)
- Kiowa (38)
- Latimer (39)
- LeFlore (40)
- Lincoln (41)
- Logan (42)
- Love (43)
- McClain (44)
- McCurtain (45)
- McIntosh (46)
- Major (47)
- Marshall (48)
- Mayes (49)
- Murray (50)
- Muskogee (51)
- Noble (52)
- Nowata (53)
- Okfuskee (54)
- Oklahoma (55)
- Okmulgee (56)
- Osage (57)
- Ottawa (58)
- Pawnee (59)
- Payne (60)
- Pittsburg (61)
- Pontotoc (62)
- Pottawatomie (63)
- Pushmataha (64)
- Roger Mills (65)
- Rogers (66)
- Seminole (67)
- Sequoyah (68)
- Stephens (69)
- Texas (70)
- Tillman (71)
- Tulsa (72)
- Wagoner (73)
- Washington (74)
- Washita (75)
- Woods (76)

- Woodward (77)
- Not sure (78)
- I do not live in Oklahoma (79)

If I do not live in Oklahoma Is Selected, Then Skip To End of Block

Q132 Please enter the zip code of your permanent residence below.

Q101 Are you registered to vote in Oklahoma?

- Yes (1)
- No (2)
- Not sure (3)

Q102 Do you plan to vote in the next presidential election in November of 2016?

- Yes (1)
- No (2)
- Not sure (3)

Q103 Did you vote in the last presidential election?

- Yes (1)
- No (2)
- Not sure (3)

Q120 Is anyone in your household unemployed but looking for work?

- Yes (1)
- No (2)

Q127 Is anyone in your household fully employed?

- Yes (1)
- No (2)

Q121 Does your household rent or own your place of residence?

- Rent (1)
- Own / have mortgage (2)
- Other (please specify) (3) _____

Q81 How do you answer when someone asks, "What religion are you?"

- ❍ Christian (1)
- ❍ Jewish (2)
- ❍ Muslim (3)
- ❍ Buddhist (4)
- ❍ Unitarian/Universalist (5)
- ❍ Hindu (6)
- ❍ Other (please describe) (7) _____
- ❍ No religion (8)

Q82 Do you belong to a religious organization in your area, such as a church?

- ❍ Yes, and I attend regularly (1)
- ❍ Yes, but I attend infrequently (2)
- ❍ No (3)

Q36 Are you responsible for buying food and/or cooking for others on a regular basis (like a spouse or child)?

- ❍ Yes (1)
- ❍ No (2)

Q38 Which of the following best describes your race or ethnicity? Please check all that apply to you.

- ❑ American Indian or Alaska Native (1)
- ❑ Asian (2)
- ❑ Black or African American (3)
- ❑ Native Hawaiian (5)
- ❑ Other Pacific Islander (6)
- ❑ White (7)
- ❑ Other (8)

Q128 Are you Hispanic?

- ❍ Yes (1)
- ❍ No (2)

Q42 Are you a vegan or vegetarian?

- ❍ No (1)
- ❍ I am a vegetarian (2)
- ❍ I am a vegan (3)

Q52 What is your highest level of education?

- ❍ No high school diploma (1)
- ❍ high school diploma (2)
- ❍ associate's degree (3)
- ❍ bachelor's degree (4)
- ❍ graduate degree (5)

Q69 When it comes to politics, what best describes how you usually think of yourself?

- ❍ Consistently Conservative (1)
- ❍ Mostly Conservative (2)
- ❍ Mixed (3)
- ❍ Mostly Liberal (4)
- ❍ Consistently Liberal (5)

Q66 Which of the following best describes your agricultural background?

- ❍ I grew up on a family farm (1)
- ❍ I have worked on a farm (2)
- ❍ I have spent considerable time on a farm (3)
- ❍ I have little exposure to agriculture (4)

Q67 Please check ALL organizations in which you have participated

- ❑ FFA (1)
- ❑ 4-H (2)
- ❑ I took an agricultural class in high school (3)
- ❑ I have competed in livestock shows (4)
- ❑ Other agricultural organization (please list) (5) _____
- ❑ None of the above (6)

Q93 On November 8, 2016 the following proposition will appear on the Oklahoma Ballot when you go to vote for the U.S. President. Below, in green, is how Proposition 777 will appear on the ballot.Proposition 777This measure adds a new section of law to the State Constitution. It adds Section 38 to Article 2. It protects the rights of farmers and ranchers to engage in farming and

ranching practices. It prohibits the Legislature from passing laws that would take away the right to employ agricultural technology and livestock production without a compelling state interest. It provides for interpretation of the section.

Q52 Please indicate the extent to which you agree or disagree with the following statements regarding Proposition 777.

	Strongly disagree (22)	Disagree (23)	Somewhat disagree (24)	Neither agree nor disagree (25)	Somewhat agree (26)	Agree (27)	Strongly agree (28)
I knew about this proposition before taking this survey (13)	❍	❍	❍	❍	❍	❍	❍
I would vote in favor of this proposition (18)	❍	❍	❍	❍	❍	❍	❍
This proposition would prevent BAD regulations of farms (1)	❍	❍	❍	❍	❍	❍	❍
This proposition would prevent GOOD regulations of farms (2)	❍	❍	❍	❍	❍	❍	❍
This proposition would be GOOD for the State of Oklahoma (4)	❍	❍	❍	❍	❍	❍	❍
This proposition would be BAD for the State of Oklahoma (12)	❍	❍	❍	❍	❍	❍	❍

Q85 Would you like to see a list of groups supporting and opposing Proposition 777, followed by an opportunity to revise your answers to the previous questions?

- ❍ Yes, show me the list (1)
- ❍ No, proceed with rest of survey (2)

Q105 Here is information on the groups supporting and opposing Proposition 777.
Supporting Prop 777 Opposing Prop 777 Oklahoma Farm Bureau Oklahoma Stewardship Council Oklahoma Cattleman's Association Oklahoma Municipal League Oklahoma Pork Council Sierra Club American Farmers & Ranchers Humane Society of the U.S.

Q106 Here is information on the groups supporting and opposing Proposition 777.
Opposing Prop 777 Supporting Prop 777 Oklahoma Stewardship Council Oklahoma Farm Bureau Oklahoma Municipal League Oklahoma Cattleman's Association Sierra Club Oklahoma Pork Council Humane Society of the U.S. American Farmers & Ranchers

Q110 Now that you have seen the groups who support and the groups who oppose Proposition 777, you will be given an opportunity to revise your previous answers, if you wish to do so.

Q104 Recent research on decision making shows that choices are affected by context. Differences in how people feel, their previous knowledge and experience, and their environment can affect choices. To help us understand how people make decisions, we are interested in information about you. Specifically, we are interested in whether you actually take the time to read the directions; if not, some results may not tell us very much about decision making in the real world. To show that you have read the instructions, please ignore the question below about how you are

feeling and instead select the "none of the above" option as your answer. Please select the word that best describes how you are currently feeling.

- ❍ Interested (1)
- ❍ Distresed (2)
- ❍ Excited (3)
- ❍ Upset (4)
- ❍ Strong (5)
- ❍ Guilty (6)
- ❍ Scared (7)
- ❍ Hostile (8)
- ❍ Enthusiastic (9)
- ❍ Proud (10)
- ❍ Irritable (11)
- ❍ Alert (12)
- ❍ Ashamed (13)
- ❍ Inspired (14)
- ❍ Nervous (15)
- ❍ Determined (16)
- ❍ Attentive (17)
- ❍ Jittery (18)
- ❍ Active (19)
- ❍ Afraid (20)
- ❍ None of the above (21)

Q11 So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised.

- ❍ Strongly disagree (15)
- ❍ Disagree (16)
- ❍ Somewhat disagree (17)
- ❍ Neither agree nor disagree (18)
- ❍ Somewhat agree (19)
- ❍ Agree (20)
- ❍ Strongly agree (21)

Q19 So long as pork is safe, healthy, and delicious, the average American would rather NOT know how the pig/hog was raised.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat disagree (3)
- ❍ Neither agree nor disagree (4)
- ❍ Somewhat agree (5)
- ❍ Agree (6)
- ❍ Strongly agree (7)

Answer If So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Somewhat agree Is Selected Or So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Agree Is Selected Or So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Strongly agree Is Selected

Q35 In regards to pork products, why would you rather not know how the pig/hog was raised?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I trust farmers and believe the farmers know best when it comes to raising animals (1)	❍	❍	❍	❍	❍	❍	❍
I feel like there are more important issues to focus my time on (2)	❍	❍	❍	❍	❍	❍	❍
I fear it will make me feel guilty about eating pork (3)	❍	❍	❍	❍	❍	❍	❍

Answer If So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Neither agree nor disagree Is Selected Or So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Somewhat disagree Is Selected Or So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Disagree Is Selected Or So long as pork is safe, healthy, and delicious, I would rather NOT know how the pig/hog was raised. Strongly disagree Is Selected

Q13 In regards to pork products, some people don't want to know how the pig/hog was raised. Why do you think this is the case? (Please indicate to what extent you agree with the following statements.)

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
They trust farmers and believe the farmers know best when it comes to raising animals. (1)	❍	❍	❍	❍	❍	❍	❍
They feel like there are more important issues to focus their time on. (2)	❍	❍	❍	❍	❍	❍	❍
They fear it will make them feel guilty about eating pork (3)	❍	❍	❍	❍	❍	❍	❍

Q62 Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised.

- Strongly disagree (15)
- Disagree (16)
- Somewhat disagree (17)
- Neither agree nor disagree (18)
- Somewhat agree (19)
- Agree (20)
- Strongly agree (21)

Q63 Even if pork is safe, healthy, and delicious, the average American wants to know how the pig/hog was raised.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Answer If Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised. Neither agree nor disagree Is Selected Or Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised. Somewhat disagree Is Selected Or Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised. Disagree Is Selected Or Even

if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised. Strongly disagree Is Selected

Q64 In regards to pork products, why would you rather not know how the pig/hog was raised? (Please indicate to what extent you agree with the following statements.)

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I trust farmers and believe the farmers know best when it comes to raising animals. (1)	❍	❍	❍	❍	❍	❍	❍
I feel like there are more important issues to focus my time on. (2)	❍	❍	❍	❍	❍	❍	❍
I fear it will make me feel guilty about eating pork (3)	❍	❍	❍	❍	❍	❍	❍

Answer If Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised. Somewhat agree Is Selected Or Even if pork is safe, healthy, and delicious, I want to know how

the pig/hog was raised. Agree Is Selected Or Even if pork is safe, healthy, and delicious, I want to know how the pig/hog was raised. Strongly agree Is Selected

Q65 In regards to pork products, some people don't want to know how the pig/hog was raised. Why do you think this is the case? (Please indicate to what extent you agree with the following statements.)

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
They trust farmers and believe the farmers know best when it comes to raising animals. (1)	❍	❍	❍	❍	❍	❍	❍
They feel like there are more important issues to focus their time on. (2)	❍	❍	❍	❍	❍	❍	❍
They fear it will make them feel guilty about eating pork (3)	❍	❍	❍	❍	❍	❍	❍

Q40 On the next page you have two choices of what to see. You can either see a picture of how pregnant hogs are housed on a typical farm or a picture of a blank page. Which do you prefer?

- ❍ How pregnant hogs are housed (1)
- ❍ Blank page (2)

Q59 On the next page you have two choices of what to see. You can either see a picture of how pregnant hogs are housed on a typical farm or you can watch a blank page for 10 seconds. Which do you prefer?

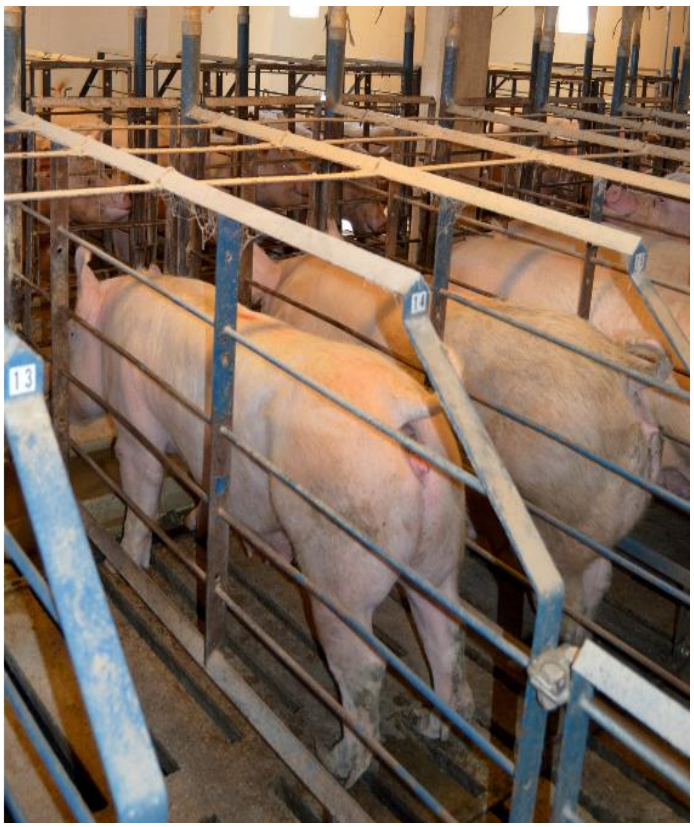
- How pregnant hogs are housed (1)
- A blank page for 10 seconds (2)

Q97 On the next page you have two choices of what to see. You can either see a picture of how pregnant hogs are housed on a typical farm or you can watch a blank page for 20 seconds. Which do you prefer?

- How pregnant hogs are housed (1)
- A blank page for 20 seconds (2)

Answer If On the next page you have two choices of what to see. You can either see a picture of how pregnan... How pregnant hogs are housed Is Selected Or On the next page you have two choices of what to see. You can either see a picture of how pregnan... How pregnant hogs are housed Is Selected Or On the next page you have two choices of what to see. You can either see a picture of how pregnan... How pregnant hogs are housed Is Selected

Q45



Answer If On the next page you have two choices of what to see. You can either see a picture of how pregnan... Blank page Is Selected

Q114

Page intentionally left blank

Q78 Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

Answer If On the next page you have two choices of what to see. You can either see a picture of how pregnan... A blank page for 10 seconds Is Selected

Q79

Page intentionally left blank

Q76 Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

Answer If On the next page you have two choices of what to see. You can either see a picture of how pregnan... A blank page for 20 seconds Is Selected

Q77

Page intentionally left blank

Q94 IF it was the case that pigs/hogs experienced low levels of well-being on Oklahoma farms ...

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Farmers would promptly detect the problem and fix it on their own (1)	❍	❍	❍	❍	❍	❍	❍
Animal advocacy groups would make the public aware of the problem (2)	❍	❍	❍	❍	❍	❍	❍
The problem would probably not get fixed and the public would not know about it (3)	❍	❍	❍	❍	❍	❍	❍
A new law or regulation would be passed to fix the problem (4)	❍	❍	❍	❍	❍	❍	❍
Consumers would buy less pork (5)	❍	❍	❍	❍	❍	❍	❍
People would start selling more humane pork (6)	❍	❍	❍	❍	❍	❍	❍

Q96 Hogs/pigs raised for food in Oklahoma ...

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Are treated poorly (1)	❍	❍	❍	❍	❍	❍	❍
Are happy and content (2)	❍	❍	❍	❍	❍	❍	❍
Do not suffer but could be treated better (3)	❍	❍	❍	❍	❍	❍	❍

Q125 Please answer the following questions concerning your ability to acquire adequate food.

Q126 Below are several statements that people have made about their food situation. For these statements, please indicate whether the statement was often true, sometimes true, or never true for you/your household in that last 12 months.

Q127 "The food that I/we bought just didn't last, and I/we didn't have money to get more." Was that often, sometimes, or never true for you/your household in the last 12 months?

- ❍ Often true (1)
- ❍ Sometimes true (2)
- ❍ Never true (3)
- ❍ Don't know or refuse to answer (4)

Q128 "I/we couldn't afford to eat balanced meals." Was that often, sometimes, or never true for you/your household in the last 12 months?

- ❍ Often true (1)
- ❍ Sometimes true (2)
- ❍ Never true (3)
- ❍ Don't know or refuse to answer (4)

Q129 In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?

- ❍ Yes (1)
- ❍ No (2)
- ❍ Don't know or refuse to answer (3)

Answer If In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food? Yes Is Selected

Q130 If you answered yes to the previous question, how often did this happen? The previous question stated: In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?

- ❍ Almost every month (1)
- ❍ Some months but not every month (2)
- ❍ Only 1 or 2 months (3)
- ❍ Don't know or refuse to answer (4)

Q131 In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

- ❍ Yes (1)
- ❍ No (2)
- ❍ Don't know or refuse to answer (3)

Q132 In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?

- ❍ Yes (1)
- ❍ No (2)
- ❍ Don't know or refuse to answer (3)

Q133 Please check all sources from which you acquire free or subsidized food.

- ❑ SNAP (Supplemental Nutrition Assistance Program) Program, formerly known as Food Stamps (1)
- ❑ WIC (Women, Infants, and Children) Program (2)
- ❑ Food Pantries (3)
- ❑ Free community meals (4)
- ❑ My children receive free meals at school (5)
- ❑ My children are given food to bring home by their school (6)
- ❑ None of the above (7)

APPENDIX B: IRB Approval

Oklahoma State University Institutional Review Board

Date:	Wednesday, May 18, 2016
IRB Application No	AG1614
Proposal Title:	Willful ignorance in farm animal welfare
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 5/17/2019

Principal Investigator(s):

F. Bailey Norwood
426 Ag Hall
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☐ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

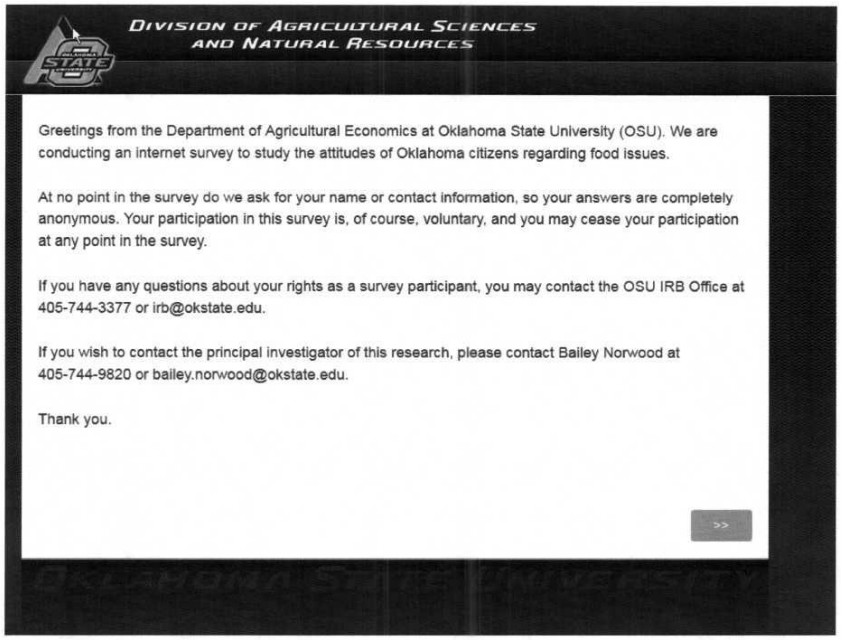
As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Scott Hall (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Hugh Crethar, Chair
Institutional Review Board



Okla. State Univ.
IRB
Approved 5-18-16
Expires 5-17-19
IRB # AG-16-14

VITA

Eryn Bell

Candidate for the Degree of

Master of Science

Thesis: ERYN BELL

Major Field: Agricultural Economics

Biographical:

Education:

Completed the requirements for the Master of Science in Agricultural Economics at Oklahoma State University, Stillwater, Oklahoma in May, 2017.

Completed the requirements for the Bachelor of Science in Animal Science at Middle Tennessee State University, Murfreesboro, Tennessee in 2015.