

LIVESTOCK SHOW ATTENDEES' ATTITUDES ABOUT AGRICULTURE AT THE
GREAT YORKSHIRE SHOW

A Thesis

by

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ABSTRACT

Society is distanced from agriculture. Therefore, consumers and producers lack opportunities to have firsthand interactions and experiences with each other. Lack of firsthand experiences, which are important to attitude development, creates confusion for consumers and affects their buying and voting decisions. Fairs, however, provide unique opportunities for consumers to experience agriculture up-close and in-person. Although fairs in the United States include agricultural elements, those in the U.K. like the Great Yorkshire Show (GYS) more heavily promote and feature them on their showgrounds. The purpose of this research, therefore, was to determine if attending a U.K. livestock show changed attendees' attitudes about agriculture and to compare attendees' attitudes to those of California State Fair (CSF).

The population consisted of GYS attendees at the livestock show on July 12 and 13, 2017. This study used mixed methods with quantitative and qualitative components. The instrument used in the quantitative component included a *then* and *now* semantic differential table with bipolar adjective pairs to measure attendees' attitudes about agriculture before and after the experience. Qualitative interviews were conducted using photo elicitation to learn about how attendees developed attitudes about agriculture prior to attending the GYS. Results indicated that GYS attendees had positive attitudes about agriculture before they attended the Show and had more positive attitudes after they attended the Show. Attendees had more positive before and after attitudes than CSF fairgoers. Further research is needed to better understand how GYS attendees developed

such positive attitudes about agriculture prior to attending the Show and what elements of the GYS experience were most influential to attendees' positive attitude development.

DEDICATION

I dedicate this thesis to my parents, grandparents, sisters, and dear friends, to cups of tea and classical music, and to the Gilmore Girls. I could not have traveled, researched, or written this thesis without you.

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CHAPTER I

INTRODUCTION

American agriculture has transformed significantly in the last century (Dimitri, Effland, & Conklin, 2005). At the beginning of the 20th century, 41 percent of the U.S. workforce was employed in the agricultural industry. By 1945, the number dropped to 16 percent, and in 2000, less than two percent of the workforce was employed in agriculture (Dimitri et al., 2005). Now, the U.S. population is more suburbanized and less knowledgeable about agriculture (Duncan & Broyles, 2006) because the average American has moved away, literally and figuratively, from production agriculture (Kellogg Commission, 1999). In fact, the Environmental Protection Agency (EPA, 2013) reported that less than one percent of the U.S. population claims farming, fishing, or forestry as their occupation and of that, only two percent are directly involved full time (EPA, 2013). Thus, “most Americans, whether young or old, have limited knowledge about agriculture and food production” (Frick, Machtmes, & Birkenholz, 1995, p. 44), which results in a disassociation between consumers and the source of their food (Godfrey & Wood, 2003).

Although America has the lowest per capita food cost of any country in the world, the general public is unaware of where its food comes from and how it is produced (NRC, 1988). This is not surprising considering society’s proximity to agriculture. Today, interactions between farming and non-farming communities are rare (Holloway, 2004). Lack of interaction has created a widening gap between the public and agriculture. Therefore, public views of agriculture do not always correspond with

reality (Rumble & Buck, 2011). As a result, “lay people might perceive livestock farming differently than experts, and ascribe different meanings to it, but their ‘reality’ is just as real” (Boogaard, Oostnig, Bock, & Wiskerke, 2011, p. 1463). Now, “shoppers’ perceptions of agriculture are largely based on clouded childhood memories, second-hand information and the occasional horror story in the media” (Godfrey & Wood, 2003, p. 1). Although the public lacks direct connection or access to agriculture (Frick et al., 1995), an increasing number of consumers want to know about their food, how it is produced, and where it is grown (Smith, 2014).

One of the few opportunities available for the general public to experience agriculture firsthand is at a local, county, state, regional, or national agricultural fair. “Due to a geographic distancing from agriculture, consumers’ ability to obtain firsthand knowledge of agriculture may be limited to a handful of experiences such as local, county, and state fairs” (Anderson-McCoon, Cartmell, & Terry, 2016, p. 21). Similarly, in the U.K., agricultural shows serve as sites and events where an attempted re-imagining of agriculture is in progress (Holloway, 2004). Therefore, the opportunity to interact with livestock animals at fairs may be a unique attraction not readily available at other special events (Lillywhite, Simonsen, & Archarya, 2013). In fact, most fairs offer animal exhibits where “the public has free access to barns where animals are housed and barriers between animals and the public are minimal” (LeJeune & Davis, 2004, p. 1440). Fairs, therefore, could help to decrease the gap that currently exists between consumers and producers because fairs, since their origination, have created opportunities for consumers to come face-to-face with farmers and livestock animals (Kniffen, 1949).

From the beginning, American fairs had a dual purpose to “educate and entertain, with special emphasis on the ‘to educate’” (Marsden, 2010, p. 25) and were the primary ways in which agricultural societies sought to educate farmers (Rasmussen, 1999). Agricultural fairs also allowed agricultural societies to educate farmers about new advantages and ways to improve livestock and crop production (Kniffen, 1949). Fair events consisted of educational activities, including farming implement demonstrations and livestock exhibits (Lauzon, 2010). By the mid-1800s, fairs “provided a morally legitimate and socially sanctioned reason for farm families to rest from their labors and travel to town to mingle and enjoy each other’s company” (Marsden, 2010, p. 25). However, by the mid-1800s, many fairs started incorporating entertainment events (Betts, 1953) to attract broader audiences.

The growing dominance of entertainment at fairs sparked conflict between those trying to preserve the traditional, agriculture-based fair and those focused on fostering the full economic potential of fairs (Lauzon, 2010). The time period between 1850 and 1870 was considered to be the “golden age of the fair” (Kniffen, 1949, p. 270) because, during those decades, there was large expansion of fairs, reflecting the overall prosperity of the agricultural industry in America (Kniffen, 1949). During this period, agricultural fairs began attracting a substantial audience among the broader public, and non-agricultural imperatives continued to trump the agricultural education mission of fairs (Lauzon, 2010). As the popularity of fairs grew, entertainment (e.g., horse racing, betting stalls, and freak shows) increased (Lauzon, 2010) and overshadowed fairs’ original mission of education (Kniffen, 1949).

Agricultural Fairs Today

Although fairs in the United States no longer existed solely to serve as a marketplace for trading farm products, sourcing farm supplies, and acquiring innovative farming practices (Acharya & Lillywhite, 2016), they still offered a mix of agricultural education and entertainment activities aimed at the general public (Marsden, 2010). They “provided a common place to meet, interact, and inform the general public about domestic agriculture in general and its direct impact on U.S. food supply chain in particular” (Acharya & Lillywhite, 2016, p. 1). Although agricultural education is not the primary objective of fairs, as it once was, fairs still provide opportunities to disseminate information about agriculture to producers and consumers, continue to attract a wide range of visitors, and provide a central venue for promoting agriculture (Lauzon, 2010).

A large body of research exists about agricultural literacy among youth and adult groups, but few studies exist that explore how agricultural fairs or livestock shows, more specifically, affect or influence the public’s attitudes about agriculture. “Shows are used to stage encounters and exchanges between farming and the non-farming public, which are increasingly rare in societies where many experience a distancing between themselves and the way their food is produced” (Holloway, 2004, p. 321). Thus, livestock shows may provide an opportunity for agricultural producers to have direct contact with an interested public (Godfrey & Wood, 2003). Connecting consumers with producers is important because consumer attitudes about agriculture influence the

agricultural industry via consumers' buying and voting power (Wachenheim & Rathge, 2002).

Agricultural shows in the United Kingdom (U.K.) are similar to those in America; however, unlike American agricultural fairs, they heavily promote agricultural education and provide attendees with many opportunities to learn about and experience agriculture.

U.K. Agricultural Fairs

In the U.K., the primary objectives of agricultural fairs, like the Great Yorkshire Show (GYS), are agricultural education and promoting rural life. According to the GYS website, the Show features the best of British farming and is England's premier agricultural show. The GYS is held annually from the second Tuesday of July until the following Thursday and attracts about 130,000 visitors over the three days. The Show has a main ring where agricultural-based entertainment like the Parade of Champions, sheep herding, and top livestock are displayed. Attendees can visit an art show, a hives and honey exhibit, and a fashion show. There is a discovery zone where kids can participate in hands-on activities based on a food and farming theme. There is also a forestry arena and a garden show, among many other exhibits. Unlike many fairs in the United States, the GYS provides a vast array of opportunities for consumers to connect with their food.

Significance of Study

As society continues to move away from rural areas, knowledge about food, fiber, and producers will continue to decrease (Elliot, 1999). The evolving landscape of

agriculture has brought about disconnect between agricultural producers and consumers; this disconnect continues to grow and has generated a shift in consumer demand to know about agriculture (Perkins, 2010). In the United States, consumers' desire to know about food and agriculture prompts agriculturists and agricultural communicators to attempt to create awareness and understanding between both parties. Similarly and simultaneously in the U.K. there is concern about the public's attitudes about "mainstream" agriculture (Drummond, Campbell, Lawrence, & Symes, 2000). Agriculturists in the U.K. are experiencing a sense of "crisis" as they encounter ignorant public and unsympathetic politicians. "In response, those involved in farming have felt a need to begin a 're-imaging' of U.K. agriculture" (Holloway, 2004, p. 319). Thus, to simultaneously meet the demands of consumers to know more about agriculture and for the agricultural industry to improve attitudes about agriculture, agricultural communicators must better understand experiences that allow consumers to develop attitudes about agriculture.

The GYS gives attendees first-hand experiences of agriculture and rural life through demonstrations and exhibitions and also provides an opportunity for agricultural communicators to better understand how attendees' attitudes about agriculture are influenced by the experience of attending a show. This information could help agricultural communicators to develop more effective communications strategies, which could positively impact attitudes about agricultural products, practices, and production industries (Goodwin, Chiarelli, & Irani, 2011). Understanding how consumers develop attitudes about agriculture before and after the experience of attending the GYS

Livestock Show, therefore, could provide information that will help narrow the gap between producers and consumers.

CHAPTER II

LITERATURE REVIEW

In 2009, the National Research Council (NRC) reported that a majority of the U.S. population is unfamiliar with how food and fiber are grown and produced. Rapid changes in technologies and practices have advanced agricultural production, which has caused many individuals to leave the farm for alternative occupations (Goodwin et al., 2011). In 2009, the Environmental Protection Agency (EPA) reported that less than one percent of the population claims farming as their occupation and less than two percent of the population lives or works on farms (Womochil, 2007). With these numbers dwindling, a majority of the population is becoming further removed from production agriculture (EPA, 2009; Wachenheim & Rathge, 2002). In fact, nearly 90 percent of the American population is two to three generations removed from production agriculture (Leising, Pense, & Igo, 1998), and urban and suburban populations constitute a majority (EPA, 2009).

One result of society's separation from agriculture is a population that knows little about its food supply (Womochil, 2007). "Consumers think about food production constantly, yet know very little about how food is brought to the dinner table" (U.S. Farmers and Ranchers Alliance, 2011, para. 5). As the industrialization of agriculture has advanced and consumers have become further removed from the farm, farmers and consumers have become disconnected with each other (Duncan & Broyles, 2006; Zimelman, Wilson, Bennett, & Curtis, 1995). Additionally, conversation between consumers and producers is challenging because of consumers' limited agricultural

experience and producers' limited knowledge of today's consumer (Weatherell, Tregear, & Allinson, 2003; Zimbelman et al., 1995).

The limited interaction between consumers and producers creates a lack of understanding between the two parties. "The widening gap between those who produce and consume agricultural products has sometimes led to differing views between those who have an agricultural background and those who do not" (Goodwin et al., 2011, p. 21). Essentially, the steady rise of urbanization has transferred the future of agriculture to a group of people with an overwhelming lack of knowledge or support for agricultural issues (Kovar & Ball, 2013). Lack of understanding about agriculture can lead to public misunderstandings about issues (e.g., environmental impact of agriculture, utilization efficiency of resources in agriculture, and safety of the food supply; Nordstrom, Wilson, Kelsey, Marezki, & Pitts, 2000). Fewer people are directly involved in production agriculture and the complexity of agricultural issues continues to increase. Despite its lack of involvement, society must be agriculturally literate so that informed individuals can make educated decisions regarding agriculture (Pope, 1990). Overall, agriculturally literate Americans are more likely to support policies affecting agriculture than those Americans lacking agricultural literacy (Ryan & Lockaby, 1996).

Agricultural Literacy

Historically, society was deeply connected to agriculture (Kniffen, 1949); however, society currently lacks opportunities to become agriculturally literate. "Well into the twentieth century, close identification through daily contact with a common agrarian culture and heritage resulted in a shared sense of common knowledge that today

we call agricultural literacy” (Powell & Agnew, 2011). Agricultural literacy is defined as an “understanding of the food and fiber system [that] includes its history and current economic, social, and environmental significance to all Americans” (National Research Council (NRC), 1988, p. 1). A person possessing agricultural literacy would have the capacity to synthesize, analyze, and communicate basic information about agriculture (Frick et al., 1991). Although agricultural production is in high demand, agricultural literacy, or the basic understanding of agricultural principles, continues to decline rapidly (Doerfert, 2011).

In the United States, producers and consumers lack opportunities to engage with each other because most of society has moved away from the farm (Rumble & Irani, 2014). As consumers become geographically distanced from agriculture, their connection to agriculture and literacy as it relates to agriculture declines (Wachenheim & Rathge, 2002). Scholars have suggested this disconnect and the resulting decrease in agricultural literacy among consumers threatens the future success of U.S. agriculture (Igo & Frick, 1999). Agricultural literacy is a current issue not only in the American society but also in the global society. Knowledge and understanding of agriculture is necessary as the global population expands, creating compounding issues of feeding the world while establishing and maintaining sustainable and viable food and fiber production (Kovar & Ball, 2013).

Despite their growing distance from agriculture, consumers are becoming more involved and have a larger impact on agricultural policy (Wachenheim & Rathge, 2002). The 98 percent of the population no longer residing on farms and ranches hold an

extremely wide range of moral and religious beliefs about human's relationship with other animals. These beliefs can affect consumers' attitudes about agriculture and could carry more weight in future policy decisions than traditional economic and scientific arguments could (Becker, 1992). Wachenheim and Rathge (2002) explained that knowing people's attitudes about agriculture is important because attitudes can influence legislative priorities and negative attitudes could hinder farm policy. Thus, the future of U.S. agriculture depends on the industry's ability to narrow the communication gap between those who produce and those who consume food (Igo & Frick, 1999).

An agriculturally literate society could lessen current challenges facing agriculture through good decision-making and necessary support (Kovar & Ball, 2013). Thus, it is crucial that additional efforts be made to educate the public about agriculture and natural resources (Doerfert, 2011; National Research Council, 1988). Producers realize the need for agricultural educational activities directed at the average consumer (Turnbull, 2002) and that communication needs to be improved (Goodwin et al., 2011). Thus, producers must take on the responsibility of educating consumers about the role of production agriculture (Grimes, 2010). However, to do so, producers need to understand consumers' attitudes about agriculture.

Attitudes

Attitudes are people's general predispositions to evaluate other people, objects, and issues either favorably or unfavorably. Formally, an attitude can be defined as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” (Fishbein & Ajzen, 1975, p. 6). In accordance with this

definition, consumer's attitudes about agriculture can directly impact their buying and voting decisions in either a positive or negative way. For example, people's attitudes of farming and the countryside are influenced by many factors, such as the region where they live, their relationship to agriculture, the information provided by media, and collective representations of how farming was or should be (Boogaard et al. 2011).

Additionally, if people have limited experiences with or knowledge about agriculture, they cannot accurately develop attitudes about it. Wachenheim & Rathge (2002) conducted a study of 584 north central U.S. residents, which determined how perceptions of agriculture were affected by residency. The study showed that people who worked with livestock, or had relatives who did, were more supportive of current agricultural policy than those who did not (Wachenheim & Rathge, 2002). Consumers' lack of experience and knowledge of agriculture generates uncertainty and can have negative effects on those who are involved in the agricultural industry. Ultimately, consumers base their attitudes on past experiences and knowledge, but they currently have little opportunity to engage with agriculture because only two percent of the population is involved in agriculture (Womochil, 2007).

Public's Attitude about Agriculture

U.S. consumers lack opportunities to gain experience with and knowledge about agriculture, which leads to ambiguity. As a result, "shoppers' perceptions of agriculture are largely based on clouded childhood memories, second-hand information and the occasional horror story in the media" (Godfrey & Wood, 2003, p. 1). According to Duncan and Broyles (2006), industry, family, media, and other secondary and tertiary

sources influence attitudes about agriculture because of the disconnect between consumers and producers. The American society has become further and further removed from agriculture and a basic understanding of the source of food. As a result of this disconnect, more people question common agricultural practices, particularly practices in the field of animal agriculture.

Boogaard et al. (2011) sought to gain insight into people's perceptions of dairy farming. They found that people who had first-hand connection to agriculture had a more positive image of farmers and of the farm animals' quality of life. Boogaard et al. (2011) also learned that people with more experience of agriculture such as those who lived in rural areas, worked in agriculture, or had visited a farm were more positive about contemporary dairy farming. Boogaard et al. (2011) found that people's knowledge and experience had an effect on their view of livestock farming. In addition, quantitative findings showed that people who have more knowledge about and/or experiences with farming have more positive views of animal farming and are more accepting of modern ways of treating farm animals. Boogaard et al. (2011) also found that supplying people with factual information did not have much effect on their opinions about agriculture and that supplying factual knowledge using campaigns or newsletters might, therefore, have a limited impact. The Boogaard et al. (2011) study helps to illustrate how important first-hand experiences are to attitude development.

Although society lacks opportunities for first-hand experiences with agriculture, Smith (2014) reported that an increasing number of consumers want to know about their food, how it is produced, and where it is grown. It is becoming increasingly apparent

that consumers care about the economy and environment and the impact agriculture has on them (Wachenheim & Rathge, 2002). Although they care about the impact agriculture has on society, consumers have remarkably little knowledge regarding modern agriculture practices (Grimes, 2010). “In response, those involved in farming have felt a need to begin a ‘re-imagining’ of agriculture” (Holloway, 2004, p. 319). Consumer interest in knowing about food and agriculture has prompted agriculturalists to attempt to create awareness and understanding between both parties. By understanding how consumers develop attitudes about agriculture and the ways in which they interpret messages, agriculturalists are better able to develop effective communications strategies, which can positively impact attitudes about agricultural products, practices, and production industries (Goodwin et al., 2011). Information about how consumers develop attitudes about agriculture, therefore, is key to narrowing the gap between producers and consumers.

Due to the increased disconnect from the agricultural industry, consumers’ ability to gain first-hand experiences with agriculture is rare in society. “While there are billions of animals grown or caught for food in the United States, many Americans do not have direct contact with these animals until they cross their plates as food” (Freeman, 2009, p. 169). Because of the widening gap between consumers and producers, many consumers are now more likely to develop their attitudes about agriculture based on depictions in children’s books, news media, social media, and television advertisements or commercials rather than from in-person experiences. Aside from attending agricultural

fairs, which provide a unique opportunity for the public to experience agriculture, few opportunities exist for consumers to interact with animals, especially large farm animals.

History of Agricultural Fairs

Agricultural fairs have and continue to be an important part of the agricultural industry. “The agricultural fair is steeped in tradition and history” (Lillywhite et al., 2013, p. 218). In fact, the contemporary American county or state fair has its historical antecedents in the European and English fairs of the Middle Ages (McCarry & Olson, 1997). Fairs began as special gatherings where farmers could disseminate knowledge amongst themselves and to the general public. Today, fairs allow attendees to see many aspects of agriculture or animals they may otherwise never see. They create opportunities for consumers to come face-to-face with farmers and livestock animals, learn about agricultural technologies, and experience the diversity that exists in the agricultural industry.

The first American fair was held in Windsor, Nova Scotia, in 1765, according to the International Association of Fairs and Exhibitions (n.d.). In September 1811, Elkanah Watson earned the title of *Father of U.S. Agricultural Fairs* when he organized the Berkshire Agricultural Society in Pittsfield, Massachusetts. He created an event known as the cattle show, which had an exhibition of animals as well as a contest for cattle, oxen, sheep, and swine (International Association of Fairs and Exhibitions, n.d.). At the cattle show, “premiums were awarded to the individual for superior accomplishment as demonstrated in competitive displays and the essence of the American agricultural fair emerged” (Kniffen, 1949, p. 266). In the early 1800s, after the

success of the original fairs, agricultural societies recognized an opportunity to disseminate information about agriculture within the farming community and to the general public.

The creation of American agricultural fairs was a direct result of efforts by agricultural societies, like the antecedent English fair of similar nature, to improve agriculture. Agricultural societies were a product of the Agricultural Revolution of the 18th century. In this period, there was a “commercialization of agriculture to meet increased demand for food created by the Industrial Revolution and its accompanying urbanization” (Kniffen, 1949, p. 266). During the same time period, in the United States, the farming population expanded from 22 million people in 1880 to 32 million people in 1910 (Olmstead & Rhode, 2006). Agricultural societies, therefore, were organized out of a need for agricultural instruction and social activities in farming communities (Sanford, 2016). Early agricultural societies “held meetings, published treatises, and, most important, hosted annual fairs to encourage their neighbors to adopt improved farming methods” (Rasmussen, 1999, p. 3). One of the main ways agricultural societies supported and improved agriculture was by hosting agricultural fairs.

Agricultural fairs were the primary ways in which agricultural societies sought to educate farmers (Rasmussen, 1999) about new advantages and ways to improve livestock and crop production (Kniffen, 1949). Such educational activities consisted of farming implement demonstrations and livestock exhibits (Lauzon, 2010). Fairs, therefore, became a place for farmers to view new machinery and advances in the methods of crop and livestock cultivation (Sanford, 2016). Perhaps, just as importantly,

fairs brought the community together to celebrate the harvest, the pinnacle of the past year's labor (Neely, 1935). Agricultural societies' missions to promote and improve agriculture stemmed from the time period's focus on the application of scientific thought to livestock breeding, equipment, and farming practices. To accomplish their mission, agricultural societies used fairs as events to display the 'best' livestock and innovations, and as mechanisms for disseminating new farming techniques and good practice from elite to all farmers (Holloway, 2004). "Viewing a livestock exhibit would force farmers to consider what distinguished a blue-ribbon cow from the herd" (Rasmussen, 1999, p. 9). The goal of livestock exhibits was to educate farmers so that they could not only select the best livestock animal but also appreciate the good qualities and detect the bad ones.

From the beginning, fairs had a dual purpose to "educate and entertain" (Marsden, 2010, p. 25). Early fairs in America were rural celebrations that appealed to farming communities. By the mid 1800s, fairs "provided a morally legitimate and socially sanctioned reason for farm families to rest from their labors and travel to town to mingle and enjoy each other's company" (Marsden, 2010, p. 25). However, by this time, many fairs started to incorporate entertainment events (Betts, 1953) to attract broader audiences. By the late 1850s, fairs were so popular that a town's population could double or triple during the event (Lauzon, 2010). The time period 1850 to 1870 was considered to be the golden age of the fair because, during these decades, there was large expansion of fairs, reflecting the overall prosperity of the agricultural industry in America (Kniffen, 1949). Increasing numbers of exhibits, exhibitors, and visitors led to

the need for professional fair managers to coordinate the moving parts (Neely, 1935). During the golden age, county fairs began to attract a substantial audience among the broader public, and non-agricultural imperatives began to outshine the agricultural education mission of fairs (Lauzon, 2010). As the popularity of fairs grew, entertainment such as horse racing, betting stalls, and freak shows began to dominate (Lauzon, 2010). The prominence of entertainment created a conflict (Kniffen, 1949) as it began to overshadow the fair's original mission of agricultural education (Lauzon, 2010).

The growing dominance of entertainment at fairs created conflict between those trying to preserve the traditional agricultural-based fair and those focused on fostering full economic potential of fairs (Lauzon, 2010). Ultimately, in America, agricultural societies as the driving force behind fairs concluded, "fairs could be places of both education and entertainment" (Lauzon, 2010). However, despite the structural and demographic changes that have occurred over time, fairs today continue to attract a wide range of visitors and still provide a central venue for promoting agriculture (Lauzon, 2010). Although fairs originally began as means to educate agricultural producers about modern farm practices (Godfrey & Wood, 2003), they no longer exist solely to serve as a marketplace for trading farm products, sourcing farm supplies, and acquiring innovative farming (Lillywhite et al., 2013). Today's fairs offer a mix of agricultural education and entertainment activities aimed at the general public (Marsden, 2010) and "provide a common place to meet, interact, and inform the general public about domestic agriculture in general and its direct impact on U.S. food supply chain in particular"

(Acharya & Lillywhite, 2016, p. 1). Therefore, fairs provide opportunities to disseminate information about agriculture to producers and consumers.

Because fair attendees are primarily from the urban and suburban populace and are unfamiliar with modern agricultural operations (Blackburn, 1999; Lauzon, 2010), few have a personal connection to the industry (Sanford, 2016). Yet, they can be influenced by experiences and interactions with agriculturists (Godfrey & Wood, 2003). Because of this, agricultural societies and fairs have in the past worked to incorporate public education into business, competition, spectacle, and consumption (Holloway, 2004) in an effort to educate the public about farming (Godfrey & Wood, 2003).

Livestock Shows

Consumers have lost trust in agriculture, especially in animal production practices (e.g. Grunert, 2005; Kanis, Groen, & De Greef, 2003; Vanhonacker & Verbeke, 2014). As a result, there continues to be a need to communicate effectively with consumers about agriculture so that they learn about and observe their food (Graves, 2005). Livestock shows at fairs provide an opportunity to “stage encounters and exchanges between farming and non-farming publics, which are increasingly rare in societies where many experience a distancing between themselves and the way their food is produced” (Holloway, 2004, p. 321). “Livestock farming does not have the same meaning to every non-farmer citizen and images of livestock farming may vary from the highly idyllic to the very shocking” (Boogaard et al., 2011, p. 1459). Therefore, livestock shows are a key aspect of the overall spectacle that fairs strategically link to entertainment to educate the non-farming public (Holloway, 2004). Livestock shows at

fairs can serve as opportunities for the public to further develop their knowledge and attitudes about agriculture (Holloway, 2004).

Livestock shows provide a contrast to everyday life and an opportunity to present a particular image of farming to consumers. They can reach audiences not normally sought after in agricultural education and allow visitors to experience the variety of the agricultural industry (Turnbull, 2002). They are a “convergence of agricultural and non-agricultural functions, entities, and people at a particular place and time” (Holloway, 2004, p. 320), which allows show organizers to present information about agriculture to large numbers of consumers (Holloway, 2004). In addition to viewing the livestock, show attendees can hear judges’ commentary and conversation between livestock exhibitors and attendees, which can be valuable in overcoming a perceived knowledge gap and improving the image of farming (Holloway, 2004). Livestock shows provide experiences and images of farming that may influence public attitude about agriculture (Holloway, 2004) and provide an opportunity for agricultural producers to have “direct contact with an interested public” (Godfrey & Wood, 2003, p. 3).

The idea of connecting town and country and informing consumers about farming has a history extending back to the emergence of fairs (Holloway, 2004). Many fairs are beginning to respond to the negative image of farming among the non-farming public by incorporating agricultural education into entertainment components of fairs (Holloway, 2004) and by “bringing visitors, livestock and farmers into contact at livestock shows” (Holloway, 2004, p. 322). Several agricultural shows in the United Kingdom, such as the Great Yorkshire Show (GYS), governed by the Yorkshire

Agricultural Society (YAS), are seeking opportunities to combine agricultural education with entertainment to narrow the gap between producers and consumers and to improve the agricultural education component.

Yorkshire Agricultural Society

A group of 50 leading agriculturists, led by the third Earl of Spencer, founded the YAS in October 1837 when they met at the Black Swan Hotel in Coney Street, York, U.K. to discuss the future of the farming industry (Percival, 2008). “These men set out to engineer the improvement of English agriculture in a number of key directions: in reforming (but not revolutionizing) the landlord-tenant relationship, in education, in the dissemination of information on better farming practice and economic conditions, and in the applications of science” (Hall, 1987, p. 19). According to the first transactions for the Yorkshire Agricultural Society (1837), the YAS’s objective was to hold an annual meeting for the exhibition of farming stock, implements, and general promotion of agriculture. The society planned to hold a meeting successively, in different parts of the County and for the first meeting be held at York, in August 1938. The overall goal of the group was to improve and develop agriculture and to hold an annual agricultural show of excellence.

The setting up of agricultural associations in the 1830s and 1840s was part of a general effort to revitalize and redirect farming (Joy, 2008). When the YAS was founded, agriculture was the primary economic driver in Yorkshire and there was a widespread enthusiasm for setting up agricultural associations (Hall, 1987). This was largely due to the need to revitalize agriculture in England after the Napoleonic wars

(Joy, 2008). Low yields, low prices, high receipts, rise in rent, and terrible wheat, barley, and oat prices (Hall, 1987) created a deep need for systematic rural reform. Therefore, wealthy landowners and gentry sought to improve agriculture by providing leadership to the whole agricultural community, small and large farmers alike and by establishing agricultural societies and hosting agricultural shows (Hall, 1987).

John Charles Spencer, third Earl Spencer (May 30, 1782 – October 1, 1845) was a British statesman (Hall, 1987). According to the U.K.'s history of people website, he was better known by the courtesy title of Lord Althorp, which he bore during his father's lifetime. He was educated at Cambridge and had a robust political career. He was “a leading livestock breeder who was immensely respected by farmers” (Joy, 2008, p. 8). Lord Althorp's services to English agriculture in all departments were constant and considerable. In addition, he was the first president of the Royal Agricultural Society (founded 1838).

According to an article published in the *Yorkshire Post*, 10 months after the original meeting in 1938, the newly formed society staged the inaugural Yorkshire Agricultural show in the Barracks Yard in Fulford, York (Hall, 1987). As was common at the time period, the Yorkshire Show did not have a permanent site and moved to showgrounds around the country. Originally intended as a peripatetic event, the Show was held in all the main centers of population (Joy, 2008) and moved to Leeds, Northallerton, and Hull in subsequent years (Hall, 1987). Although original Show organizers intended for the Show to change locations annually, they realized that the

costs associated with moving it yearly might not be in the Show's best long-term interest (Joy, 2008).

Great Yorkshire Show

By 1843 the Yorkshire Agricultural Society Show had become known as the Great Yorkshire Show by popular acclamation rather than in any official sense (Joy, 2008). Originally, the Show was a one-day event, but it quickly grew and, in 1848, expanded to four days (Hall, 1987). In 1949, the innovative decision was taken by the YAS to build a permanent showground. The Harrogate site was purchased by the YAS for £16,500—making it the first agricultural show in the U.K. to have its own site (Joy, 2008). The GYS was held on its new site for the first time in 1951. The first Show attracted almost 54,000 visitors, and in 1952, the then Princess Elizabeth visited the Show and became Patron. In 1957, attendance topped the 100,000-attendee mark for the first time, and visitor numbers have grown steadily since (Joy, 2008).

The GYS is the largest agricultural fair in England, but the Royal Welsh Show and the Royal Highland Show surpass it in size in the U.K. It is held annually from the second Tuesday of July until the following Thursday (three days). The Great Yorkshire Show is one of the most prestigious and attractive of all agricultural shows; it presents the very best of British farming and food along with a unique mix of entertainment and competition (Joy, 2008). According to its website, the GYS features the best of British farming and is England's premier agricultural show. About 130,000 people attend the Show each year. In 2017, more than 12,000 competitive entries came to the Show, 8,000 of which were livestock that flocked from across Great Britain to be put in front of the

260 judges, who are identifiable by their signature bowler hats and crooks (GYS website). The Show has a main ring where agricultural-based entertainment like equestrian sports and sheep herding take place. The GYS has top livestock on display and a discovery zone where kids can participate in hands on activities based on a food and farming theme. Additionally, on the showground there is a cheese and dairy show, agricultural seminars, an art show, a hives and honey exhibit, a fashion show, a forestry arena, and a garden show, just to name a few.

The GYS gives attendees a first-hand experience of agriculture and rural life through demonstrations and exhibitions and insight into the very latest in the agricultural industry. Annually, the GYS “educates, demonstrates, informs, and inspires” (Joy, 2008, p. 7) by displaying the great diversity that exists in the agricultural industry. The showground “features state-of-the-art agricultural techniques and technology, has room for presentations by educational institutions and research groups, and generally provides a valuable forum not only for purchasing things but also for exchanging ideas” (Hall, 1987, p. 204). People from all over the U.K. attend to socialize, learn about the latest agricultural technologies, shop, and be entertained. In 2008, Show Patron HRH Prince Charles reflected on the GYS’s impact:

Agriculture has changed beyond all recognition since the Show first began, but there are some things that have remained constant. The remarkable spirit of the Yorkshire farmers, the beauty of the land for which they care and their commitment to quality. The Great Yorkshire Show has been their showcase for generations and it is as important today as it was in 1838—when the first Show

was held. The role of the Show in linking consumers with producers, educating the public in how food is grown and spreading good practice amongst farmers while celebrating some of the finest livestock—and equestrianism—is crucial (Joy, 2008, p. 1).

The GYS is still dedicated to its original mission of supporting the agricultural industry. According to the GYS website, its charitable objectives include supporting and promoting agriculture, rural, and allied industries; championing the role of farmers as providers of high quality produce, encouraging consumers to choose healthy and local produce; advancing and encouraging agricultural research and greater understanding and empathy with farming and the countryside amongst the general public and particularly children; advancing and encouraging the protection and sustainability of the environment, and remaining true to its main objective of providing an annual agricultural show.

The YAS is the guiding force behind the GYS achieving its mission. The Society is focused on educating the future generations and encouraging the agricultural community. Under its guidance, the showground is no longer just the preserve of the GYS. Today, in addition to the Show, the Society hosts several educational programs including free courses for teachers, a farmhouse breakfast, countryside days, and vegetable or fruit box competitions. It also hosts the annual event Countryside Live, which has become well established. As of 2008, an excess of a million visitors are now welcomed to the GYS showground every year (Joy, 2008).

Anderson-McCoon et al. (2016) Study

Careful study of the literature yielded no research conducted to understand the impact that a fair like the GYS has on attendees', and more specifically, attendees' attitudes about agriculture. However, research has been conducted at the California State Fair (CSF), which is a traditional U.S. fair. The Anderson-McCoon et al. (2016) study showed that attending the livestock show and viewing livestock exhibits at the CSF increased attendees' attitudes toward livestock exhibits in a positive way. Although the CSF does not focus its educational and entertainment components on agriculture like the GYS does, it still had a positive influence on attendees. In 2016, Anderson-McCoon et al. conducted a study at the CSF to determine if visiting livestock exhibits at a state fair impacted fairgoers' attitudes toward livestock exhibits. The objectives of the study were to collect demographic information about fairgoers at the CSF, identify the fairgoers' attitudes about livestock fair exhibits at a state fair before and after viewing the livestock exhibits, and determine if visiting the livestock exhibits impacted fairgoers' attitudes about livestock fair exhibits (Anderson-McCoon et al., 2016).

Every year at the CSF, members of 4-H and FFA organizations enter exhibits to demonstrate competencies related to their projects (Anderson-McCoon et al., 2016). The fair, which runs for two weeks in July, is held in the State's capital city of Sacramento (California State Fair, n.d.). The 12-day fair has carnival rides, concerts, horse racing, shopping, a classic car show, freestyle motocross, and many other non-agricultural attractions. Thus, agriculture, more specifically the livestock show, comprises only a small part of the overall experience of attending the CSF.

The population in the Anderson-McCoon et al. (2016) study consisted of adult fairgoers who attended the CSF on July 14, 2012, and the sample was composed of people near the livestock exhibits. In the study, 395 responses were deemed usable. Anderson-McCoon et al. (2016) administered the instrument after fairgoers visited the livestock animal exhibits. The instrument required participants to retrospectively assess their initial opinion of the livestock exhibits and consisted of 11 demographic questions (e.g., participants' age, sex, race, ethnicity, education, 4-H and FFA experience, and residency; Anderson-McCoon et al., 2016). The instrument had questions about how long fairgoers spent in the exhibits, and why they attended the fair. The instrument included two tables of semantic differential scales (Osgood, Suci, & Tannenbaum, 1965) to assess fairgoers' attitudes before and after viewing exhibits. The *then* scales sought to describe participants' attitudes about youth livestock exhibits before viewing the exhibits and the *now* scales sought to describe participants' attitudes after visiting the exhibits. In each table, participants indicated their agreement with/disagreement to the statement.

The typical participant in the Anderson-McCoon et al. (2016) study was a middle-aged, suburbanite female with at least some higher education. She never owned livestock, wasn't involved in 4-H or FFA, and did not work in agriculture (Anderson-McCoon et al., 2016). She viewed the livestock exhibits briefly. The study found that the change between participants' attitudes regarding livestock exhibits held by fairgoers before and after viewed the exhibits was statistically significant with a medium effect size. Therefore, the researchers concluded that youth livestock exhibits influenced fairgoers' attitudes in a positive way. The most noticeable changes were opinions of the

cleanliness and beauty of the exhibits. Attitudes changed in a positive manner, indicating participants clarified previous ambiguity they had regarding the exhibits (Holloway, 2004). Given the medium effect size, the study concluded that, although attending the livestock show increased attendees' attitudes toward youth livestock show, exhibits could be more impactful.

Although Anderson-McCoon et al. (2016) conducted their study in the United States, it supported a British movement to improve perceptions and knowledge of agriculture by increasing communication, interaction, and imagery between farming and non-farming publics (Holloway, 2004). Holloway (2004) stated times of convergence between experts and non-experts, such as fairs, could improve consumer attitudes and increase their knowledge and understanding of agriculture. Anderson-McCoon et al. (2016) recommended that a qualitative study be conducted to glean a deeper understanding of how participants' attitudes are formed and altered because "determining what aspects most significantly impact fairgoers' opinions can lead to improved communications strategies by exhibitors" (Anderson-McCoon et al., 2016, p. 30). Thus, a comparison between livestock show attendees' attitudes about agriculture before and after attending the CSF livestock show and the GYS livestock show might help to better understand the impact that attending a fair whose primary focus is the promotion of agriculture has on attendees' attitudes about agriculture.

Theoretical Framework

Social cognitive theory. This study analyzed the influence that attending the GYS livestock show had on show attendees' attitudes about agriculture from the

perspective of the social cognitive theory, which explains psychosocial functioning in terms of triadic reciprocal causation (Bandura, 1986). In the past, human behavior has often been described in terms of unidirectional causation, in which behavior is shaped and controlled either by environmental factors or by internal characteristics (Bandura, 1989). Social cognitive theory, however, explains psychosocial functioning based on a transactional view of self and society where “personal factors in the form of cognitive, affective, and biological events, behavioral patterns, and environmental events all operate as interacting determinants that influence each other bidirectionally” (Bandura, 2001, p. 265–66). People, therefore, are both products and producers of their environment.

Social cognitive theory forms a framework for understanding psychosocial factors that influence human thought, affect, and behavior (Bandura, 1986) and for predicting and altering human behavior (Stallones, Vela Acosta, Sample, Bigelow, & Rosales, 2009). “Most external influences affect behavior through cognitive processes rather than directly” (Bandura, 2001, p. 267). Cognitive factors help determine which environmental experiences will be observed, what meaning will be conferred on them, whether they leave any lasting effects, what emotional impact and motivating power they will have, and how the information they convey will be organized for future use (Bandura, 2001).

Each component of the social cognitive theory may have a dominant effect on the others, allowing different stimuli to influence human thought, affect, and behavior in a variety of ways (Young, Lipowski, & Cline, 2005). This study used the key constructs of

the social cognitive theory to better understand the components of GYS attendees' experiences that shaped or changed their attitudes. The social cognitive theory provided a framework to help understand the cognitive processes that attendees experienced at the Show and the impact the Show had on their thoughts or behaviors. This information is critical to understanding the influence that attending the GYS livestock show had on attendees

Reciprocal determinism. The triadic model of reciprocal determinism is central to the social cognitive theory (Bandura, 1989). Thus, I used elements of the reciprocal determinism construct, including symbolizing capacity, vicarious capability, and self reflection to analyze how attending a livestock show influenced GYS attendees' attitudes about agriculture before and after attending and to identify and describe the factors related to changes. Reciprocal determinism suggests that internal factors such as thoughts, beliefs, and personality traits are not enough to influence what someone learns; the environment and present behaviors must be acknowledged as having just as much impact (Bandura, 1989). Thus, in this study, while observing a livestock show, attendees experienced the reciprocal interaction of personal, environmental, and behavioral factors, which ultimately influenced their experience.

In society, people learn by observing the environment around them and processing what they see into their own behaviors and thoughts (Burnett, Enyeart Smith, Wessel, 2016). Reciprocal causation represents the two-way influence between behavior and the environment. This relationship is reciprocal because in everyday life, people's behavior alters their environmental conditions and, in turn, behavior is altered by the

very conditions it creates (Bandura, 1989). The reciprocal relationship influences “expectations, beliefs, self-perceptions, goals and intentions, which give shape and direction to behavior” (Bandura, 1989, p. 3). Ultimately, people’s thoughts, beliefs, and feelings affect behavior (Bandura, 1986). “Behavior determines which of the many potential environmental influences will come into play and what forms they will take” (Bandura, 1989, p. 5). Therefore, environmental influences may contribute to determining how behavior is developed and initiated.

The environment is not a fixed entity that inevitably impinges upon individuals. Therefore, behavior and environment are not isolated from each other. However, when mobility is constrained, certain elements of the physical and social environment may affect individuals (Bandura, 1989) though many elements of the environment do not function as an influence until they are stimulated by the applicable behavior. For example, livestock shows cannot influence show attendees unless they actually attend the show just like “lecturers do not influence students unless they [students] attend their [lectures’] classes” (Bandura, 1989, p. 4). For the environment to have an influence on an individual, the potential environment must become the actual environment. This depends on one’s behavior because one must choose to become a part of an environment (e.g. attend the GYS; Bandura, 1989). Thus, behavior and environment are elements that contribute to cognition through their reciprocal relationship.

People affect the nature of their experienced environment through selection and creation of situations (Bandura, 1989). In this study, attendees selected to attend the GYS livestock show and, therefore, helped to create their environment. “In acting as

agents over their environments, people draw on their knowledge and cognitive and behavioral skills to produce desired results. In acting as agents over themselves, people monitor their actions and enlist cognitive guides and self-incentives to produce desired personal changes (Bandura, 1989). “They are just as much agents influencing themselves as they are influencing their environment” (Bandura, 1989, p. 45). Therefore, livestock show attendees influence the livestock show simply by serving as the audience. After all, the GYS provides a livestock show for the public and agricultural producers.

Symbolizing capability. People’s ability to use symbols is an important component of the social cognitive theory. “An extraordinary capacity for symbolization provides humans with a powerful tool for comprehending their environment and creating and regulating environmental events that touch virtually every aspect of their lives” (Bandura, 2001, p. 267). Symbols provide people with a resource to better understand and manage their environment. “People process and transform passing experiences by means of verbal, imaginal and other symbols into cognitive models of reality that serve as guides for judgment and action” (Bandura, 1989, p. 9). In the cognitive process, external influences affect behavior because they help to determine which environmental events are observed, what meaning is derived from them, the lasting effects they might have, the motivating influence or emotional impact they have, and how information received will be organized and used in the future (Bandura, 1989).

It is through the use of symbols that people process and transform transient experiences into cognitive models that serve as guides for judgment and action. Symbols allow people to give these experiences “meaning, form, and continuity” (Bandura, 1989,

p. 9), which serve as “vehicles of thought” (Bandura, 1989, p. 9). Symbols formed through environmental experiences are, therefore, important to the development of attitude and future action. The livestock show at the GYS is rich with symbols of agriculture. Therefore, understanding how attendees interpret and use these symbols to shape attitudes about agriculture is important to this study.

Vicarious capability. Observational learning, monitoring, and self-reflection are components of vicarious capability. Through time, humans developed an advanced capacity for observational learning that enables them to acquire knowledge, attitudes, and values through information conveyed by actual and symbolic modeling (Bandura, 1986). If people had evolved to be able to develop knowledge and skills only from direct experience, knowledge generation would be severely limited. However, through information conveyed in modeling influences, people can expand their knowledge and skills. In fact, “virtually all learning phenomena resulting from direct experience can occur vicariously by observing people's behavior and the consequences of it” (Bandura, 1989, p. 362). Thus, observational learning influences cognition and behavior.

Humans’ ability to learn through observation enables them to expand their knowledge and skills on the basis of information conveyed by modeling influences. In fact, nearly all learning phenomena that occur as a result of direct experience can occur deliberately, inadvertently, or vicariously by observing people's behavior and its consequences for them (Bandura, 1986; Rosenthal & Zimmerman, 1978). However, models portrayed symbolically or through pictorial means also convey a great deal of

information about behavior patterns and the effects they have on the environment (Bandura, 1989).

The observational learning construct is applied in this study to better understand how attending the GYS influenced attendees' attitudes about agriculture. At the GYS livestock show, attendees' participated in the experience through observation of producers showing and caring for livestock and judges ranking show entries based on the conformation of the animal. Livestock show attendees, therefore, have many opportunities to experience livestock animals firsthand and to engage in observational learning. These interactions are rare in society; thus, the symbolic models of livestock provide a key component for attendees to derive knowledge from observational learning.

Humans use observational learning to expand knowledge and skills rapidly through information conveyed by the rich variety of models. Much of people's learning is aimed at developing cognitive skills on how to gain and use knowledge for future use (Bandura, 1989). In social cognitive theory, learning from the effects of actions is a special case of observational learning. "In learning by direct experience, people construct conceptions of behavior from observing the effects of their actions; in learning by modeling, they derive the conceptions from observing the structure of the behavior being modeled" (Bandura, 1989, p. 46). People's ability to learn from modeled experiences enables them to glean valuable pieces of information from a new experience, such as attending a livestock show.

According to Bandura (1989), modeling is not merely a process of behavioral mimicry. "People may adopt functional patterns of behavior, which constitute proven

skills and established customs, in essentially the same form as they are exemplified” (Bandura, 1986, p. 24). It is through such circumstances that modeling influences contribute to the development of rules for reproductive and innovative behavior. “In this form of abstract modeling, observers extract the rules governing the specific judgments or actions exhibited by others” (Bandura, 1989, p. 363). After people learn the rules, they can apply them to evaluate events and make decisions that extend beyond what they have seen or heard. The ability to use modeling when experiencing something new is relevant to this study because most consumers are distanced from agriculture; thus, attending a livestock show and experiencing agriculture firsthand is unfamiliar. So, the construct of modeling is an important factor in understanding how viewing livestock at a show influences judgment and courses of action relating to agriculture.

Modeling affects the adoption of new social practices and behavior patterns by instructing people about new ways of thinking and behaving by informative demonstration or description (Bandura, 1986). Much of the population is no longer directly involved in agriculture. Therefore, the GYS Livestock Show provided, for some, a rare opportunity to experience animal agriculture and subsequently an opportunity to develop new ways of thinking and behaving in regards to agriculture due to the informative experience. In addition, “learning from models may take varied forms, including new behavior patterns, judgmental standards, cognitive competencies, and generative rules for creating new forms of behavior” (Bandura, 1989, p. 23). Therefore, livestock animals and their owners at the GYS serve as models and portray accurate examples of animal agriculture and attendees may use these models to shape their future

attitudes about agriculture.

Self-reflection. People's distinct ability to reflect upon oneself and the adequacy of one's thoughts and actions is another prominent component of Bandura's social cognitive theory. "People are not only agents of action but self-examiners of their functioning" (Bandura, 2001, p. 269). People's ability to distinguish between accurate and defective thinking is a key function of effective cognition. Using self-reflection, "people generate ideas, act on them, or predict occurrences from them" (Bandura, 2001, p. 269). Through this process, people can judge results against the adequacy of their thoughts and, accordingly, make changes to them. Overall, "the validity and functional value of one's thoughts are evaluated by comparing how well thoughts match some indicant of reality" (Bandura, 2001, p. 269). Because 98 percent of people are removed from production agriculture, they do not have an environment that would allow them to experience or observe the reality of agriculture.

Observing other people's interactions with the environment provides a check on the correctness of one's own thinking. Essentially, people evaluate the soundness of their views by checking them against what others believe. However, "the constraints of time, resources, and mobility impose severe limits on the places and activities that can be directly explored for the acquisition of new knowledge and competencies" (Bandura, 2001, p. 269). Without firsthand interactions with different environments, distorted media versions of social reality can nurture shared misconceptions of people, places, and things (Hawkins & Pingree, 1982). Given societies' proximity to agriculture, attitudes toward animal agriculture might be a good example of this.

For a large portion of the population, fairs provide the only interaction with animal agriculture or agriculture in general. Livestock shows, therefore, provide an opportunity for consumers to connect with producers and for producers to reconsider their own relationships with consumers (Holloway, 2004). This is important because consumers' attitudes about agriculture influence the agricultural industry via consumers' buying and voting power (Wachenheim & Rathge, 2002). Therefore, there is a need for agricultural communicators and social scientists to further investigate how the public's attitudes about animal agriculture and agriculture in general are influenced by attending livestock shows so that "interested parties can more positively influence social acceptance of contemporary livestock farming" (Boogaard et al., 2011).

Purpose, Objectives, and Questions

The purpose of this study was to determine if attending a U.K. Livestock Show changed attendees' attitudes about agriculture. This purpose was met using three research objectives and seven research questions.

R O1: Determine if attending the Great Yorkshire Show Livestock Show changed livestock show attendees' attitudes about agriculture.

RQ 1.1: What were the GYS Livestock Show attendees' attitudes about agriculture before attending the show?

RQ 1.2: What were the GYS Livestock Show attendees' attitudes about agriculture after attending the show?

RQ: 1.3: What were the differences among GYS Livestock Show attendees' demographics (location of residence, livestock ownership, Young Farmer

participation, work in agriculture, relative who lives on farm, and time spent at show) and their attitudes about agriculture after attending the show?

RO 2: Compare GYS Livestock Show attendees' changes in attitude about agriculture to fairgoer's changes in attitude about youth livestock exhibits at the California State Fair (CSF).

RQ 2.1: How were characteristics of the GYS Livestock Show attendees different from those of the CSF Livestock Show fairgoers?

RQ 2.2: How were GYS Livestock Show attendees' changes in attitudes about agriculture different from CSF fairgoers' attitudes about youth livestock exhibits?

R O 3: Explore how GYS Livestock Show attendees formed attitudes about agriculture before and after the experience using social cognitive theory.

RQ 3.1: What cognitive, behavioral, and environmental elements influenced livestock show attendees' attitudes about agriculture before attending the GYS Livestock Show?

RQ 3.2: What cognitive, behavioral, and environmental elements of GYS Livestock Show attendees' experience influenced their changes in attitude about agriculture?

CHAPTER III

METHODS

I designed this mixed methods study to determine Great Yorkshire Show (GYS) livestock show attendees' attitudes about agriculture and to determine if attending the livestock show influenced their attitudes about agriculture. "A mixed methods study involves the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research" (Tashakkori & Teddlie, 2003, p. 212). I selected a mixed methods study design because, according to Webb, Campbell, Schwartz, & Sechrest (1966), the confidence in the findings derived from a study using both a quantitative and qualitative research strategy can be enhanced by using more than one way of measuring a concept. In addition, "a more complete set of research questions can be achieved by including both quantitative and qualitative methods" (Bryman, 2012, p. 644). Thus, strength of findings can be achieved by using a mixed methods study.

Venkatesh, Brown, & Bala (2013) identified three advantages of mixed methods research. First, it enables researchers to simultaneously address confirmatory and explanatory research questions and, therefore, evaluate and generate theory at the same time. Second, it enables researchers to provide stronger inferences than a single method or worldview. Third, it provides an opportunity for researchers to produce a greater assortment of divergent and/or complementary views, however, it is important to note that mixed methods research does not replace either a quantitative or a qualitative

approach but rather draws from the strengths and minimizes the weaknesses of both methods (Creswell, 2003).

I used a quantitative research design in the first phase of this research to identify attitudes about agriculture before and after attending the GYS Livestock Show. Quantitative methods provided me the ability to generalize, establish facts, statistically describe the population (Bryman, 2012), and compare attendees' attitudes about agriculture before and after the experience. I also conducted a qualitative study because quantitative research alone fails to provide explanation or further description regarding observations and emotional expression of participants' thoughts (Bryman, 2012). "A quantitative study tends to bring out a static picture of social life, [and] qualitative research is more processual" (Bryman, 2012, p. 645). A qualitative study helped me better understand how GYS Livestock Show attendees shaped their attitudes about agriculture before attending the event, what elements of the experience changed their attitudes, and how changes in attitudes about agriculture could affect their decisions after attending the show.

I conducted research at the GYS in Harrogate, U.K., because it is a traditional agricultural fair, unlike many fairs in the United States. The daily attendance of the GYS is comparable to that of the California State Fair (CSF), which is where Anderson-McCoon et al. (2016) conducted their study. The GYS, like the CSF, is a major attraction and has a large livestock show. It is one of the largest agricultural shows in the U.K., and it is also highly committed to providing opportunities for consumers and

producers to connect. Therefore, the GYS administrators were interested in findings from this study.

Quantitative Study

Study design. I selected a quantitative *then/now* data collection method to assess GYS Livestock Show attendees' attitudes about agriculture before and after their experience. The instrument required participants to retrospectively assess their initial attitudes about the livestock show. This *then-now* approach is an accepted procedure for collecting attitudinal data (Townsend & Wilton, 2003). Other strengths of the *then/now* method are that it reduces incomplete data sets, is convenient for both the researcher and participant, and is effective when describing attitude change as a result of attending a program (Griner-Hill & Betz, 2005; Colosi & Dunifon, 2006).

Furthermore, I chose the *then/now* data collection method instead of a pretest/posttest because I wanted to remove response shift bias from my study. Response-shift bias is a source of contamination of self-report measures and is a threat to internal validity (Howard & Dailey, 1979). To eliminate the detrimental effects of response shifts, retrospective measures can be used as substitutes for the traditional self-reported pretest (Howard & Dailey, 1979). In this study, livestock show attendees retrospectively assessed their experience. This method captured how they perceived the "changes they made in knowledge, skills, attitudes or behaviors" (Colosi & Dunifon, 2006, p. 5), which enhanced study validity. In fact, Howard & Dailey (1979) found "self-reported measures of change that used retrospective pretests to remove response-

shift bias demonstrated significantly greater validity than measures of change that used traditional self report pretests” (Howard & Dailey, 1979, p. 144).

Disadvantages of the *then/now* data collection method are that participants could be unable to accurately recall attitudes and behaviors held in the past or they could experience effort justification bias, which occurs when they report improvement (many times subconsciously) to justify the time and energy they have invested in program attendance (Hill & Betz, 2005). Due to cognitive dissonance, participants could report improvement even if it did not occur in an effort to meet their own expectation that they should have changed (Colosi & Dunifon, 2006). In addition, evaluation data are collected from participants who complete the program and not from the entire group of participants. Thus, “evaluations that rely solely on a post then pre design may overinflate program success by the mere fact that those sampled are only those that successfully complete the program” (Colosi & Dunifon, 2006, p. 6). Therefore, the data rely on feedback from those who found the program worthwhile or for some other reason were able to complete the program.

Population and sample. I sampled from the target population as approved by the Texas A&M University Institutional Review Board (IRB; #055799; Appendix A). The target population for this study was attendees of the GYS in Harrogate, North Yorkshire, U.K. According to the 2011 U.K. Census, 598,376 people resided in North Yorkshire. Forty-nine percent of residents were males and 51 percent were females. Ninety-four percent of residents were born in the U.K. and six percent were born elsewhere. Ninety-seven percent of the population was Caucasian and 2.7 percent were from other ethnic

groups. Five percent of males and 1.9 percent of women were employed in agriculture, forestry, and fishing. Thus, these were demographic characteristics of those who, perhaps, attended the GYS in 2017.

According to data collected at the GYS, 133,542 people attended the GYS in 2017. The average attendee was 49 years old; 39 percent of attendees were male and 61 percent were female. The working status profile of attendees consisted of 54 percent working full time, 17 percent working part time, four percent in education, four percent not working, and 21 percent retired. In addition, data collected at the GYS showed that five percent of attendees worked in agriculture and one percent work in farm-related business. Additionally, eight percent were from a farming family, and 50 percent were not from a farming background but were interested in it. Show attendees spent an average of the 6.5 hours at the GYS.

The sample for this study was adult GYS Livestock Show attendees who attended the show on July 12 or 13, 2017. I asked people near the livestock show ring two questions to determine if they fit the parameters of the study: 1) Are you 18 or older? and 2) Did you attend the livestock show?. If the participant was 18 or older and attended the show, he or she was eligible to participate. This resulted in a sample of 556 attendees, with 545 providing responses deemed usable. This sample was representative of people who attended the GYS Livestock Show and were near the livestock exhibits during the Show between 9:00 a.m. and 4:00 p.m.

Instrument. The instrument included two tables of semantic differential scales (Osgood et al., 1965) to assess livestock show attendees' attitudes about agriculture

before and after attending the livestock show. I used a semantic differential scale because Anderson-McCoon et al. (2016) study used the same scale to provide an effective measure of participant attitudes toward a given object, event, or concept. Osgood (1965) first developed semantic differential scales, which are a reliable way to measure attitudes (Shields, 2006). A semantic differential scale comprises dichotomous terms separated by a seven-point scale designed to objectively measure three attitudinal factors: evaluative, potency, and activity (Osgood et al., 1965). “They [semantic differentials] can be applied to any investigation where people’s opinion[s] on any subject are sought, and are very adaptable” (Shields, 2006, p. 116).

I made small modifications to the Anderson-McCoon et al. (2016) instrument to adapt it for attendees of the GYS. I deleted the 4-H and FFA questions and replaced them with one question about Young Farmer membership. North Yorkshire does not have 4-H or FFA, so it is not relevant to ask them about membership in either organization. However, in the U.K., the Young Farmer Club is similar to 4-H and FFA in the United States and, therefore, an appropriate question for the instrument. In addition, I changed the question on the *then/now* questionnaire to read, “Please rate the concept “Livestock shows at the Great Yorkshire Show are” according to how you FELT BEFORE/AFTER attending the livestock show by placing an X along the scale,” instead of “Youth Livestock Exhibits at the California State Fair Are...”

The instrument contained five demographic questions: attendees’ age, sex, education, Young Farmer experience, and residency. I also asked participants how long they spent in the livestock show area, if they worked in agriculture, if they had a relative

who lived on a farm, and why they attended the GYS. I developed demographic questions based on questions presented in the 2010 U.S. census, in the 2011 U.K. census, and those in the Anderson-McCoon et al. (2016) study.

The instrument contained two tables of semantic differential scales, a *then* and a *now* table. A semantic differential is composed of dichotomous terms separated by a seven-point scale (Osgood et al., 1965). Participants' responses on the *then* scales described their attitudes about agriculture before attending the livestock show and the *now* scales described participants' attitudes about agriculture after attending the livestock show. In each table, participants indicated their attitudes by responding to the stem statement "Livestock shows at the Great Yorkshire Show are?" They did so by marking an X in one of the seven undefined steps between a pair of polar opposite adjectives, which indicated the direction and degree of their opinion. Dichotomous word pairs in this study were, "Good" and "Bad," "Pleasant" and "Unpleasant," "Happy" and "Sad," "Dirty" and "Clean," "Important" and "Unimportant," "Beautiful" and "Ugly," "Successful" and "Unsuccessful," "Boring" and "Interesting," "Honest" and "Dishonest," "Positive" and "Negative," "Kind" and "Cruel," and "Valuable" and "Invaluable."

Although each scale was undefined on the instrument, each step was assigned a numerical value for analysis based on the proximity to each word. Higher numerical values represented a more positive attitude by participants; lower values indicated a less positive or negative attitude. The middle box, number four, indicated a neutral feeling between the words. The more positive of the bipolar adjectives was on the left side of the

then scale and the more negative was on the right side. However, to ensure an accurate portrayal of the participants' attitudes, and based on results of the Anderson-McCoon et al. (2016) pilot study, I reversed coded three of the word pairs so that the more negative of the two words was on the left and the more positive on the right. I also reversed the numerical values associated with each box for these three pairs, which kept the higher values next to the positive word. Although the word pairs did not appear in the same order on the posttest portion, I reversed coded the same three pairs.

Validity. Anderson-McCoon et al. (2016) used this instrument in their study and it was “reviewed for content and face validity by a panel of five experts from the College of Agricultural Sciences and Natural Resources at Oklahoma State University and individuals involved in livestock shows and youth competitions” (Anderson-McCoon et al., 2016, p. 32). In addition, for this study, the executive director of the GYS and a panel of three people associated with the livestock show, from North Yorkshire, U.K., reviewed the instrument to ensure that the questions were culturally accurate, appropriate, and understandable. Additionally, I completed pilot tests at the Sacramento County Fair in California and at the Howden Show in the U.K. to determine face validity of my instrument. The pilot study allowed me to practice the data collection process and examine the reliability of my instrument. From the pilot studies, I determined the data collection method was an effective way to recruit participants. Verbal feedback from participants indicated they were willing to participate and the questionnaire was easy to understand.

Reliability. Anderson-McCoon et al. (2016) determined reliability of their instrument (.85 for the *then* table and .83 for the *now* table); however, because I modified that instrument, I conducted two pilot studies to test my questionnaire and data collection process. I conducted the first pilot study at the Sacramento County Fair in California from 9:30 a.m. to 11:30 a.m. on May 26, 2017. Thirty-six people participated in the study. My research assistant and I set up a table near the livestock show ring during the beef, swine, and goat show. I approached livestock show attendees near the livestock show ring, asked if they would complete a questionnaire, gained their consent, and provided instructions. My research assistant sat at the table, distributed questionnaires and writing utensils, and collected completed questionnaires.

Following the pilot study, I conducted a reliability analysis on the *then* items and the *now* items by calculating Cronbach's alpha. Cronbach's alpha reliability coefficient ranges between zero and one. The closer Cronbach's alpha coefficient is to one the greater the internal consistency of the scale (Gliem & Gliem, 2003). The Cronbach's alpha coefficient was .90 for the *then* scale and .67 for the *now* scale. The *now* responses in the questionnaire yielded a rather low internal consistency of the scale because there was little variability within the 12 items, with no variability in one of the items. Thus, the item with no variability was excluded from the analysis altogether. However, the *then* responses yielded a highly acceptable internal consistency.

I conducted the second pilot study at the Howden Show in North Yorkshire County, U.K. The show is 43 miles southeast of the GYS. Fifty people participated in the study. My research assistant and I set up a table near the livestock show ring during

the beef and swine show. I hung a banner off the front of the table that had an American Flag and the Texas A&M University symbol and said, “Texas A&M University, Master’s of Agricultural Communications, Thesis Research Project,” to help draw attention to the table. I approached and asked livestock show attendees near the livestock show ring if they would complete a questionnaire, gained consent, and provided instructions. My research assistant sat at the table, distributed questionnaires and writing utensils, and collected completed questionnaires. This pilot study provided an opportunity to practice data collection at a show in the U.K. and to ensure that the data collection method and questionnaire were culturally appropriate. In the pilot I evaluated each of the three constructs: evaluative, potency, and activity (Isaac & Michael, 1982). From this pilot study I learned that show attendees were eager and willing to complete the questionnaire and that it took less than 10 minutes to complete. Feedback from participants indicated that the questionnaire was easy to understand.

Data collection. I administered the instrument to livestock show attendees at the GYS who were near the livestock show ring after they experienced the livestock show on July 12 and 13, 2017, from 9 a.m. to 4 p.m. I chose not to provide an incentive to survey participants because the GYS executive director advised that it was not needed nor culturally appropriate.

I positioned the data collection table next to the main livestock show ring during the beef and swine show, in a high traffic area. I used two long, folding tables and two chairs. I hung a banner off the front of the table that had an American Flag and the

Texas A&M University logo and said “Texas A&M University, Master’s of Agricultural Communications, Thesis Research Project” to help draw attention to the table.

My research assistant assisted me in the data collection process. She helped me keep the data collection process organized while I approached participants. She sat at the data collection table where participants filled out their questionnaire. She attracted attention to the booth, distributed questionnaires and writing utensils, provided basic instructions about the questionnaire, collected completed questionnaires, organized data collection materials, and provided guidance to the other volunteers. She did not approach, recruit, or gain consent from any participants because then she would be considered “engaged in the research,” which was forbidden by IRB.

To ensure consistency in survey administration, I was the only person who responded to questions regarding the instrument and had participants, especially those in pairs or groups, complete the questionnaire independently. Therefore, once my assistant had attendees’ attention, I asked each attendee two questions to determine if they were eligible to participate in the study. 1) Are you 18 or older?, and 2) Did you attend the livestock show?. If the attendee was 18 or older and attended the livestock show, he or she was eligible to participate. If they were under 18, they were thanked for stopping but were told they were ineligible. However, if they qualified based on the first question but had yet to attend the livestock show, they were asked to return to the table to complete the questionnaire once they had attended the show.

If the livestock show attendee qualified to participate, I asked them to go to the data collection table where a volunteer instructed them on how to fill out the

questionnaire. I instructed participants to read information sheet (Appendix B) on the front side, fill out the demographic information, and then proceed to the back of the form. Volunteers showed them sides of the two tables represented their before and after responses. The questionnaire took each participant less than 10 minutes to complete. I told participants to turn in their completed questionnaire to a volunteer seated behind the table. The person collecting the questionnaires checked for completion. If there were large vacancies in the participants' responses, participants were asked to fill in those blank areas. If participants chose not to complete their questionnaire in its entirety, my research assistant placed it in a separate file.

Data analysis. I analyzed the quantitative data using Version 23 of the Statistical Package for Social Sciences (SPSS). I calculated descriptive statistics (e.g., mean, standard deviation, frequency, and/or percentage) on measurable variables including participants' responses about their age, sex, education level, residency, Young Farmer participation, length of time spent viewing the livestock show, whether they had a relative who lived on a farm, and occupation.

To achieve the first research objective, which was to determine if attending the GYS Livestock Show changed livestock show attendees' attitudes about agriculture, I evaluated the frequencies of responses to the *then* and the *now* sets of semantic differential scales. I calculated the percentages and means for constructs associated with the semantic differentials. I compared the sum of the *then* item responses and sum of the *now* item responses using a paired-samples *t* test to determine whether a statistically significant difference occurred in participants' attitudes before and after attending the

livestock show. The Cronbach's alpha coefficient was .92 for the *then* items and .92 for the *now* items. I set the confidence level a priori at $\alpha = .05$. To determine the practical significance, I calculated a Cohen's *d* effect size to demonstrate the practical significance the exhibits had on participants' attitudes (Cohen, 1992). To determine the effect size, I divided the mean difference by the pooled standard deviation (Thalheimer & Cook, 2002). To establish this value, I subtracted the *then* mean from the *now* mean and divided it by the pooled standard deviation ($75.81 - 73.28 / 9.4 = .27$). According to Cohen (1992), .27 represents a small effect size.

Then, to see what differences existed among GYS Livestock Show attendees' demographics (location of residence, livestock ownership, Young Farmer participation, work in agriculture, relative who lives on farm, and time spent at show) in relationship to their attitudes about agriculture after attending the Show, I analyzed the data using repeated measures ANOVA with a between-subjects variable.

I analyzed the second research objective, to compare GYS livestock show attendees' changes in attitude about agriculture to fairgoer's changes in attitude about agriculture in the Anderson-McCoon et al. (2016) study, by comparing the results of this study to those of the Anderson-McCoon et al. (2016) study. To do so, I compared frequency, percentages, and results of the paired sample *t* tests to those in the Anderson-McCoon et al. (2016) study to determine differences in the practical significance of the shift in participants' attitudes.

The quantitative portion of the study was done to determine if attending a livestock show changed attendees' attitudes about agriculture, but it did not show how

and why attendees formed attitudes before and after attending the GYS Livestock show. Therefore, I was interested in gathering in-depth information from participants who experienced changes in attitude because of their experience at the livestock show. Using quantitative methods to identify qualitative interviewees who exhibit ideal outcomes is a means to understand and promote improved outcomes for such events (Brinkerhoff, 2002).

Qualitative Study

Context of study. I attended the GYS on July 12 and 13 to collect data. On those days, the GYS showground opened to the public at 8 a.m. and immediately began to fill with people. There was sunny weather both days although it rained the day prior. By the middle of both days, the crowds were so thick that it was hard to walk anywhere quickly. However, for such a large crowd, it was very quiet at the showground. There was no loud music, carnival sounds, shouting, or loud conversation. The most audible sounds were light conversation, cows bellowing, judge's commentary, and the GYS announcer on the loudspeaker.

GYS staff and Yorkshire Agricultural Society (YAS) members were friendly, knowledgeable, and helpful. I observed them providing directions, answering questions, smiling and greeting visitors, and helping to keep the show organized. They volunteered their time to execute the event and could be seen all over the showground. The YAS members wore matching suits, ties and bowler hats and carried shepherd's crooks. There were signs and information booths spaced out around the grounds to guide or inform people. The information booths had two attendants who passed out information booklets,

helped visitors locate attractions on the showground, and provided general information about the Show.

Most Show visitors were dressed very nicely. I did not observe anyone wearing workout clothing or dirty clothes. Most people wore dresses, slacks, sport coats, tweed, collared shirts, dress shoes, or nice jeans and sweaters. Most men had their shirts tucked in with a belt. I observed three distinct groups of people: groups of 3–5 young people ages 17 to mid-20s who were dressed smartly with polo shirts or blazers, older couples, and families with young children.

Visitors would walk and stop often to look around at the exhibits or to talk with friends, relatives, or exhibitors. I observed people leisurely walking around then stopping to watch the livestock show for several minutes to even several hours. People would eat their meal or drink their tea or beer while sitting on benches surrounding the livestock show. I observed people paying close attention to each other and the exhibits around them. I saw many of moms talking to their children about animals and pointing different ones out to them. They took pictures of their children and the animals. There were many strollers on the showground. I did not observe any exhibitor spend very much time on their cell phones other than to make a phone call or perhaps send a quick message. I observed people greeting old friends with “how have you been?” or “nice to see you.” Generally, I observed many people smiling, laughing, and looking entertained and amused.

The showground was extremely tidy and landscaped with bright green lawns, manicured hedges, and many trees and plants. The buildings were all painted nicely with

no cobwebs or chipped paint. From the beginning of the day to the end, the showground was clean with no litter, overflowing trash bins, or manure on walkways. The livestock show rings had low, white fencing and were surrounded by benches. The fencing was easy to see over and sectioned the ring into several sections. People stood and sat around three sides of it. There was a big, grassy hill above the pig show ring where many people sat and ate or rested while watching the show. The robotic milking parlor was located on the way from the dairy and beef show ring to the pig show ring. In addition, agricultural company tents, breed society tents, and the conventional milking parlor surrounded the show rings. In between the show ring and the barns there was straw everywhere. It rained the day before; therefore, the straw was likely covering mud and manure in an effort to minimize slipping and the chance of getting dirty. However, I did not observe anyone pinch their nose or remark about the smell of livestock or tip toe through the straw or muck when they were near livestock or the barns.

The cattle show ring and pig ring, where I collected data, were surrounded by barns, agricultural company tents, a milking parlor, and wash racks. The barns were all connected and painted white. Each barn had livestock breed information posted outside and the breed name posted above each main barn door. For example a sign that said, “Holstein UK Cattle Society” was posted by where the Holstein cattle were housed. In addition, several cattle societies had small cafes located in the barns where visitors could buy breakfast or lunch. Inside the barns, cattle were tied in stalls with straw bedding. They were grouped by breed and by owner. Each farm or family had a business sign by the cattle and each animal had a stall card with its name, age, breed, etc. above it.

Exhibitors had chairs, even armchairs, in middle of the barn aisles next to their wheelbarrow and pitchforks so that they could sit and watch their animals and clean up after them quickly to keep the bedding clean. All animals were clean, clipped, and healthy looking.

Livestock exhibitors wore white, knee-length lab coats, dark jeans or black slacks, collared shirts, and tall boots; some wore neckties. There were more men exhibitors than women. It looked like many families were showing their livestock together and that most exhibitors knew each other. They were very social with each other when they were not in the show ring. However, in the ring, exhibitors were very serious and appeared to take pride in showing their animals. I did not observe any exhibitors joking around in the ring. Instead, they paid close attention to the other exhibitors and animals in the ring and to the judge's directions. When an exhibitor won a class or an award, he or she looked very proud and shook fellow competitors' hands as well as the judge's hand.

The judge in each show ring wore a black suit and tie. There was one judge per class. On the two days I observed, all of the judges were men. There were also several ring attendants, men and women, who helped move the animals around the ring and made sure that the right animals were in each class. Each judge gave commentary over a PA system about the placing of each class. He talked about each animal's conformation and why he placed the class as he did. He also awarded ribbons and invited the audience to show their appreciation for the exhibitors by applauding. He often congratulated the exhibitors for their hard work, dedication, and fine animals.

In addition to the judge's commentary, each ring had a separate announcer who gave information about the show over the PA system, in between classes or while the judge was working on his selection. The announcer informed the audience about the GYS, livestock breeds, animal husbandry, industry facts, longtime exhibitors, cuts of meat, gestation, etc. He also explained what the judge was doing and what exhibitors had to do to prepare for the livestock show. He encouraged audience participation and kept attendees engaged in the show. I also observed show attendees talking with exhibitors while they were milking in the parlor, with representatives at the agricultural company booths, and with robotic milking machine representatives.

Research design. Qualitative research determines “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (Merriam, 2009, p. 5). I conducted the qualitative component of this study to explore how GYS Livestock Show attendees formed attitudes about agriculture before and after the experience of attending the show. I used semi-structured interviews to gain information about show attendees' previous experiences with agriculture and how their experience at the GYS Livestock Show changed their attitudes. A semi-structured interview has interview questions that are “more general in their frame of reference than the questions typically found in a structured interview schedule” (Bryman, 2012, p. 201).

I developed interview questions that were “in the general form of an interview guide” (Bryman, 2012, p. 201). As suggested by Creswell & Zhang (2009), interview questions were open-ended and few in number to evoke participant opinions. This format allowed me to ask further questions in response to what I considered significant

responses to my initial questions (Bryman, 2012). Overall, the semi-structured interviews allowed me to “glean research participant’s perspectives on their social world” (Bryman, 2012, p. 469) and allowed flexibility in the interview process (Bryman, 2012).

Participants. The participants for the qualitative study were attendees of the GYS in North Yorkshire, U.K. The population consisted of adult livestock show attendees who attended the GYS Livestock Show on July 12 or 13, 2017, and completed the survey administered as a part of the larger study.

Participants ($n=10$) reported age. Of the 10, I found that 80 percent ($n = 8$) were between 18 and 45 years of age and 20 percent ($n = 2$) were between 46 and 70. Of the 10 participants, more than half were female, ($f= 7$; $\%= 70$). Participants ($n=10$) reported their education level. I found 20 percent ($n=2$) selected high school, 20 percent ($n=2$) selected some higher education, and 60 percent ($n=6$) selected a post high school degree.

Participants ($n= 10$) reported their residence. Of the 10, I found that 50 percent ($n= 5$) live in a farm or rural residence and 50 percent ($n= 5$) live in a suburban or urban residence. Participants ($n= 10$) reported whether they owned livestock. Of the 10, I found that 60 percent ($n= 6$) owned livestock. Participants ($n= 10$) reported if they had a relative who lives on a farm. Of the 10, I found that 70 percent ($n= 7$) had a relative who lived on a farm. Participants ($n= 10$) reported if they worked in agriculture. Of the 10, I found that 60 percent ($n= 6$) do not work in agriculture (see Table 1).

Table 1

Characteristics of GYS Qualitative Participants including Frequencies and Percentages for Age, Education, Gender, Livestock Ownership, Relative who lives on a Farm, Residence, Work in Agriculture, and Young Farmer Participation

Characteristic	GYS Participant		
	<i>f</i>	%	<i>n</i>
Age (Years)			
18–45	8	80	8
46–70	2	20	2
Education			
High school	2	20	2
Some higher education	2	20	2
Post high school degree	6	60	6
Gender			
Female	7	70	7
Male	3	30	3
Owned Livestock			
Yes	6	60	6
No	4	40	4
Relative on Farm			
Yes	7	70	7
No	3	30	3
Residence			
Farm, Rural	5	50	5
Suburban, Urban	5	50	5
Work in Agriculture			
Yes	4	40	4
No	6	60	6

I selected the sample for the qualitative study with purpose. “Purposeful sampling is based on the assumption that the investigator wants to discover, understand,

and gain insight and, therefore, must select a sample from which the most can be learned” (Merriam, 2009, p. 77). Patton (2002) explained that the “logic and power” (p. 230) of purposeful sampling is derived from the selection of information-rich cases for further study.

I used a theoretical sampling method to qualify quantitative participants into my qualitative study by developing a list of attributes essential to my study (LeCompte & Preissle, 1993). Initially, I looked for the following characteristics within my larger sample: Current suburban or urban resident, no Young Farmer participation, did not work in agriculture, scored six or more of the *then* semantic differential scale items to the left of the midpoint, indicating an initial negative attitude, and scored six or more of the *now* semantic differential scale items to the right of the midpoint, indicating a more positive attitude. These responses would perhaps indicate that the attendee likely had minimal prior exposure to agriculture and that they had a large attitudinal change because of attending the GYS. However, applying the principles of emergent design (Glaser & Strauss, 1967), after collecting 300 surveys on the first day of data collection, I realized that the results were not yielding the ideal qualitative interview candidate that met the requirement of the theoretical sampling method I initially identified. Therefore, on the second day of data collection, I adjusted the theoretical sampling method to allow for higher *then* responses on the survey. This allowed me explore how attendees developed an initial positive attitude about agriculture prior to attending the livestock show as the majority of the participants had indicated.

Therefore, moving forward, I selected participants who were current suburban or urban residents, had no Young Farmer participation, did not work in agriculture, scored six or more of the *then* semantic differential scale items to the right of the midpoint, indicating a positive attitude, and scored six or more of the *now* semantic differential scale items to the right of the midpoint, indicating a positive attitude. In my study, the quantitative data led me to the next person to be interviewed, which was an evolving process that was guided by the emerging theory (Glasser & Strauss, 1967). This qualifies as a theoretical sampling method because I began with “an initial sample chosen for its obvious relevance to the research problem” (Merriam, 2009, p. 79).

Data collection. Due to the nature of the interview site, I used photo elicitation as a means to focus participants and minimize distractions in the interview phase of my research so that I could acquire the rich data for which I purposefully sampled. Photo elicitation is the use of photographs to provoke a response, (Harper, 1984; Heisley & Levy, 1991) allowing social scientists to use photos to extract information from people (Hurworth, 2003). Schwartz (1989) found that interviewees respond to photographs without hesitation. “By providing informants with a task similar to viewing a family album, the strangeness of the interview situation is averted” (Schwartz, 1989, p. 151).

I used three photos to focus the participant’s attention on agriculture. I selected these photos because they depict three of the main livestock animals exhibited at the GYS and they sparked and focused conversation on changes in participants’ attitudes about agriculture because of attending the GYS. One photo depicts a GYS exhibitors showing sheep in a ring (see Figure 1), the second photo depicts the parade of

champions in the main ring at the GYS (see Figure 2), and the third photo depicts show attendees watching a woman show a pig in the ring (see Figure 3). These photos helped attendees connect the term agriculture with the sights and experiences they were exposed to at the GYS.



Figure 1. A Graphic of exhibitors showing sheep in the livestock show ring at the GYS. This photo helped participants to connect what they saw in the livestock show ring to agriculture.



Figure 2. Graphic of cattle showmen and cows in the Main Ring at the GYS. This photo helped participants to connect what they saw in the livestock show ring to agriculture.



Figure 3. A graphic of a GYS Pig showmen in the livestock show ring. This photo helped participants to connect what they saw in the livestock show ring to agriculture.

I consulted with the GYS executive director, who recommended I explore what previous experience participants had with agriculture and what participants considered

as the best part of their experience. Additionally, Anderson-McCoon et al. (2016) recommended a qualitative study be conducted to, “glean a deeper understanding of how participants’ attitudes are formed and altered” (p. 30). Therefore, I developed questions that would help me to better understand what elements of the GYS Livestock Show influenced attendees’ attitudes about agriculture. I also developed questions to help me learn about what influences attendees’ previous experiences with agriculture had on their *then* attitudes (see Table 2).

Table 2

Interview Questions Used in Qualitative Study at the GYS Livestock Show

Interview Questions

Describe the experiences you have had with livestock animals prior to attending the GYS Livestock Show.

Describe the opportunities you have had to learn about animal agriculture or agriculture in general.

How did those experiences influence your attitudes about agriculture?

Do you feel like you have the information you need about agriculture?

What elements of your experience at the GYS Livestock Show influenced your attitudes or understanding of agriculture?

What did the experience of attending the GYS Livestock Show cause you to reflect on regarding animal agriculture?

What elements of your experience at the GYS Livestock Show influenced or changed your understanding or attitudes about agriculture in general?

What was the best part of your experience at the GYS Livestock Show?

In addition to interviewing participants, I spent time observing the livestock show to gain a “firsthand encounter with the phenomenon of interest rather than a secondhand account of the world obtained in an interview” (Merriam, 2009, p. 117). This allowed me to better understand the full experience of attending the GYS Livestock Show, which provided an additional source of data to use in crosschecking interview results. I observed characteristics of livestock show attendees, the show patterns and schedule, the content and information the show announcer delivered to the public, the general flow of traffic around the show ring, the interactions in and around the show ring between livestock exhibitors and show attendees, and the length of time show attendees watched the livestock show to better understand attendees’ experiences at the GYS.

I collected data via interviews on July 12 and 13 from 9 a.m. to 4 p.m. at the GYS Livestock Show, using audio recorders and taking written notes, to create an audit trail. This audit trail served as a description of the data I collected from start to finish (Flick, 2009). I approached potential interviewees and asked them if they were willing to participate in a 10-minute interview to help me learn more about their experience at the GYS Livestock Show. If the person consented, I sat down next to them and began the interview. If the person did not want to participate, I asked the next person if he or she would be interested, and so on. I notified the participant that I would record the interview with a small handheld audio recording device and I would take handwritten notes (Creswell & Zhang, 2009). When the interview was completed, I thanked the participant for his or her time. I saved each audio recording on my laptop and assigned it a number that corresponded with the participant’s survey number so that I could match

the two pieces of data during data analysis. I interviewed 10 participants before I reached data saturation. According to Bryman (2012), data saturation occurs “when sampling continues until no new findings are generated” (p. 412).

Data analysis. After I collected the data in North Yorkshire County, U.K., I transcribed the interviews and hand-coded the transcripts (Creswell & Zhang, 2009). To ensure confidentiality, I assigned each participant a random two-digit number identifier from 01 to 10. I unitized the data, as each unit was assigned a separate, sequential code (For example, the sixth unit of participant two would be coded as 02:06.). I unitized my data by breaking down interview responses into small units of information that stood alone. I read interview transcripts all the way through to determine the concepts and categories, and used words, phrases, sentences, and paragraphs as the units of analysis. I placed units onto cards, which I labeled with a number that corresponded to the interview and a number that corresponded to the specific unit in text. Next, I used the constant comparative method to sort the data into initial themes (Glaser & Strauss, 1967).

Then, I further sorted the unitized data into categories using content analysis, which is “a technique that enables researchers to study human behavior in an indirect way, through an analysis of their communications” (Fraenkel, Wallen, & Hyun, 1993, p. 405) and the social cognitive theory as my theoretical framework. Content analysis is a “qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (Patton, 2002, p. 453). Thus, through qualitative data reduction, sense-making efforts (Patton, 2002), and

theme recognition, I was able to make sense of participants' experiences and understand how they developed meaning. I used the cognitive, behavioral, and environmental constructs of the social cognitive theory (Bandura, 1989) to analyze my data. I reported findings through narratives supported by participant quotations and included a general summary that captured what I learned using thick description (Creswell & Zhang, 2009; Lincoln & Guba, 1985).

Trustworthiness. In a qualitative research, it is important that researchers are cognizant of the biases that might affect their judgment because they are the primary instrument for data collection and analysis. It is essential, therefore, to establish trustworthiness in qualitative studies (Merriam & Tisdell, 2015). The human as an instrument has many strengths because they are able to increase their understanding through verbal and nonverbal communication and can process, respond, and adapt to data quickly (Merriam & Tisdell, 2015). Because this study used a naturalistic approach, I established trustworthiness using credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985).

Credibility answers the question, "Do findings match reality?" (Lincoln & Guba, 1985). I established credibility by giving participants the opportunity to refuse participation to help ensure honesty of informants. I employed frequent debriefing sessions and peer scrutiny of my study with my committee members to "keep the inquirer honest" (Lincoln & Guba, 1985). I also conducted a complete examination of previous research findings to assess the degree to which my study's results were congruent with those of past studies. I am also a former livestock office employee at the

Humboldt County Fair in California and have attended numerous livestock shows in California, Oregon, Nevada, and Texas. In addition, I am an agricultural communications and journalism master's student at Texas A&M University where I took an advanced qualitative research course.

Transferability represents how generalizable the results of this study are to other studies (Merriam, 2009). It is not possible to separate the study from its context, so I provided descriptive examples so readers can draw inferences of transferability. I established transferability by developing thick, descriptive narratives (Lincoln & Guba 1985).

Dependability and confirmability represent how consistent results are with data (Merriam, 2009). They can be achieved simultaneously, according to Lincoln & Guba (1985). To establish both, I employed an external audit by a credible peer (Creswell, 2003) who was in her first year of her Ph.D. program. She was interested and familiar with my study and had taken a qualitative research course. The external audit showed that, if the work were repeated in the same context, with the same methods, and participants, similar results would be obtained. In the dependability audit, the auditor "examines the product—the data, findings, interpretations, and recommendations—and attests that it is supported by data" (Lincoln & Guba, 1985, p. 318). I circulated two peer-debriefing memos to peers in my master's program to establish dependability (Lincoln & Guba, 1985). Confirmation that the product is supported by data also establishes confirmability, which was achieved through "triangulation and the keeping of a reflexive journal" (Lincoln & Guba, 1985, p. 318–319). Therefore, I used participant

observations and interview data to triangulate my conclusions. I also kept an audit trail consisting of initial data analysis, a compilation of units, and a coded writing sample to ensure dependability and confirmability (Lincoln & Guba, 1985).

CHAPTER IV

RESULTS AND FINDINGS

This chapter presents the results and findings from quantitative and qualitative studies as they relate to the research objectives developed for this study. The purpose of this study was to determine if attending a U.K. livestock show changed attendees' attitudes about agriculture. I used quantitative research methods to collect data for RO1 and RO2 and used qualitative research methods to collect data for RO3.

RO 1: Determine if Attending the Great Yorkshire Show Livestock Show Changed Livestock Show Attendees' Attitudes About Agriculture

I used the *then/now* and semantic differential elements to determine if attending the Great Yorkshire Show (GYS) Livestock Show changed livestock show attendees' attitudes about agriculture.

RQ 1.1: What were the GYS Livestock Show attendees' attitudes about agriculture before attending the show? Objective one was designed to describe attendees' attitudes about agriculture prior to attending the GYS Livestock Show on July 12 and 13, 2017. I administered a *then/now* test using semantic differential scales. I asked attendees to respond to both sets of questions after attending the livestock show. I instructed attendees to place an X in one of seven undefined steps between a pair of polar opposite adjectives, which indicated the direction and intensity of their attitude. Although each scale was undefined on the instrument, I assigned each step a numerical value for analysis based on the proximity to each word (see Figure 4).

EXAMPLE: Homework



Figure 4. The semantic differential scale for the then and now instrument. Numerical values are assigned to steps with the more positive (Good) on the left and the more negative (Bad) on the right. Participants marked one box per adjective pair.

I ordered the word pairings differently on the *then* and the *now* side of the instrument. In general, I placed positive words on the left and negative words on the right side of the scale. However, to ensure an accurate portrayal of the attendees' attitude, I reverse coded three of the word pairs ("Boring" and "Interesting," "Dirty" and "Clean," and "Cruel" and "Kind." Thereby, I placed the more negative of the two words on the left side of the scale and the more positive on the right. I also reverse coded the numerical values for each box associated with the three pairs I reverse coded, thereby, keeping the higher values next to the positive word (see Table 3).

Table 3

Number of Valid Responses on the Semantic Differential Scale per Word Pair (N= 556)

Word Pairs	Pretest n	Posttest n
Good/Bad	551	550
Pleasant/Unpleasant	547	549
Happy/Sad	551	551
Clean/Dirty*	546	550
Important/Unimportant	550	548
Beautiful/Ugly	550	550
Successful/Unsuccessful	551	552
Interesting/Boring*	548	551
Honest/Dishonest	547	547
Positive/Negative	549	550
Kind/Cruel*	549	547
Valuable/Worthless	550	550

Note. * Indicates pair was reversed. Word pairs did not appear in the same order on the pre-test as they did on the post-test.

Higher numerical values represented a more positive attendee attitudes and lower values indicated a less positive attitude. The middle box, number four, indicated a neutral feeling between the words. Therefore, the sum of the number of participants who marked a box to the left of the midpoint and to the right of the midpoint does not equal the sum of total participants.

Of the 551 participants who responded to the word pair Good/Bad, 95.8% ($n = 528$) selected a box to the left (good) of the midpoint of the scale and 1.1% ($n = 6$) selected a box to the right (bad) of the midpoint of the scale. Of the 547 participants who responded to the word pair Pleasant/Unpleasant, 93.7% ($n = 513$) selected a box to the left (pleasant) of the midpoint of the scale, and 1.3% ($n = 8$) selected a box to the right (unpleasant) of the midpoint of the scale. Of the 551 participants who responded to the word pair Happy/Sad, 93% ($n = 512$) selected a box to the left (happy) of the midpoint of the scale and 1.1% ($n = 6$) selected a box to the right (sad) of the midpoint of the scale. Of the 546 participants who responded to the word pair Clean/Dirty, 78.9% ($n = 431$) selected a box to the left (clean) of the midpoint of the scale and 6.5% ($n = 36$) selected a box to the right (dirty) of the midpoint of the scale. Of the 550 participants who responded to the word pair Important/Unimportant, 86% ($n = 473$) selected a box to the left (important) of the midpoint of the scale and 2.2% ($n = 12$) of participants selected a box to the right (unimportant) of the midpoint of the scale. Of the 550 participants who responded to the word pair Beautiful/Ugly, 80% ($n = 440$) of participants selected a box to the left (beautiful) of the midpoint of the scale and 2.9% ($n = 16$) selected a box to the right (ugly) of the midpoint of the scale.

Of the 552 participants who responded to the word pair Successful/Unsuccessful, 91.2% ($n = 503$) of participants selected a box to the left (successful) of the midpoint of the scale and 1.3% ($n = 7$) of participants selected a box to the right (unsuccessful) of the midpoint of the scale. Of the 548 participants who responded to the word pair Interesting/Boring, 91.7% ($n = 502$) selected a box the left

(interesting) of the midpoint of the scale and 1.8% ($n = 10$) selected a box the right (boring) of the midpoint of the scale. Of the 547 participants who responded to the word pair Honest/Dishonest, 84.6% ($n = 463$) selected a box to the left (honest) of the midpoint of the scale and 1.8% ($n = 10$) selected a box to the right (dishonest) of the midpoint of the scale. Of the 549 participants who responded to the word pair Positive/Negative, 91.4% ($n = 502$) selected a box to the left (positive) of the midpoint of the scale and 1.3% ($n = 7$) selected a box to the right (negative) of the midpoint of the scale. Of the 549 participants who responded to the word pair Kind/Cruel, 85.4% ($n = 469$) selected a box to the left (kind) of the midpoint of the scale and 1.8% ($n = 10$) selected a box to the right (cruel) of the midpoint of the scale. Of the 550 participants who responded to the word pair Valuable/Worthless, 87.7 percent ($n = 482$) marked a box the left (valuable) of the midpoint of the scale and 1.7% ($n = 9$) selected a box to the right (worthless) of the midpoint of the scale (see Table 4)

Table 4

Participant Responses to the Bipolar Adjective Pairs on the Then Semantic Differential Scale

Positive Item	7		6		5		4		3		2		1		Negative Item
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	
Good	347	63.0	124	22.5	57	10.3	17	3.1	5	0.9	1	0.2	0	0.0	Bad
Pleasant	307	56.1	139	25.4	67	12.2	26	4.8	7	1.1	1	0.2	0	0.0	Unpleasant
Happy	316	57.1	131	23.8	65	11.8	33	6.0	5	0.9	1	0.2	0	0.0	Sad
Clean	192	35.2	134	24.5	105	19.2	79	14.5	15	2.7	9	1.6	12	2.2	Dirty
Important	299	54.4	102	18.5	72	13.1	65	11.8	10	1.8	1	0.2	1	0.2	Unimportant
Beautiful	209	38.0	112	20.4	119	21.6	94	17.1	12	2.2	3	0.5	1	0.2	Ugly
Successful	274	49.7	150	27.2	79	14.3	41	7.4	6	1.1	1	0.2	0	0.0	Unsuccessful
Interesting	298	54.4	139	25.4	65	11.9	36	6.6	3	0.5	1	0.2	6	1.1	Boring
Honest	239	43.7	127	23.3	97	17.7	74	13.3	5	0.9	3	0.5	2	0.4	Dishonest
Positive	296	53.9	146	26.6	60	10.9	40	7.3	4	0.7	2	0.4	1	0.2	Negative
Kind	269	49.0	122	22.2	78	14.2	70	12.8	5	0.9	2	0.4	3	0.5	Cruel
Valuable	316	57.5	112	20.4	54	9.8	59	10.7	7	1.3	0	0.0	2	0.4	Worthless

Note. Mode responses to adjective pairs are bolded

RQ 1.2: What were the GYS Livestock Show attendees' attitudes about agriculture after attending the show? The *now* semantic differential scales participants completed contained the same word pairs as the *then* test but in a different order. I describe the findings for the *now* semantic differential scales below.

Of the 550 participants who responded to the word pair Good/Bad, 96.3% ($n = 530$) selected a box to the left (good) of the midpoint of the scale and 1.0% ($n = 6$) selected a box to the right (bad) of the midpoint of the scale. Of the 549 participants who responded to the word pair Pleasant/Unpleasant, 98% ($n = 538$) selected a box to the left (pleasant) of the midpoint of the scale, and 0.7% ($n = 4$) selected a box to the right (unpleasant) of the midpoint of the scale. Of the 551 participants who responded to the word pair Happy/Sad, 85.7% ($n = 527$) selected a box to the left (happy) of the midpoint of the scale and 1.5% ($n = 8$) selected a box to the right (sad) of the midpoint of the scale. Of the 550 participants who responded to the word pair Clean/Dirty, 83.5% ($n = 459$) selected a box to the left (clean) of the midpoint of the scale and 6.4% ($n = 35$) selected a box to the right (dirty) of the midpoint of the scale. Of the 548 participants who responded to the word pair Important/Unimportant, 91.8% ($n = 503$) selected a box to the left (important) of the midpoint of the scale and 1.8% ($n = 10$) of participants selected a box to the right (unimportant) of the midpoint of the scale. Of the 550 participants who responded to the word pair Beautiful/Ugly, 86.9% ($n = 478$) of participants selected a box to the left (beautiful) of the midpoint of the scale and 2.5% ($n = 14$) selected a box to the right (ugly) of the midpoint of the scale.

Of the 552 participants who responded to the word pair Successful/Unsuccessful, 94.6% ($n = 522$) of participants selected a box to the left (successful) of the midpoint of the scale and 1.4% ($n = 8$) of participants selected a box to the right (unsuccessful) of the midpoint of the scale. Of the 551 participants who responded to the word pair Interesting/Boring, 94.2% ($n = 519$) selected a box the left (interesting) of the midpoint of the scale and 2.8% ($n = 16$) selected a box the right (boring) of the midpoint of the scale. Of the 547 participants who responded to the word pair Honest/Dishonest, 90.1% ($n = 493$) selected a box to the left (honest) of the midpoint of the scale and 2.2% ($n = 12$) selected a box to the right (dishonest) of the midpoint of the scale. Of the 549 participants who responded to the word pair Positive/Negative, 95.8% ($n = 527$) selected a box to the left (positive) of the midpoint of the scale and 0.6% ($n = 3$) selected a box to the right (negative) of the midpoint of the scale. Of the 549 participants who responded to the word pair Kind/Cruel, 89% ($n = 487$) selected a box to the left (kind) of the midpoint of the scale and 3.2% ($n = 18$) selected a box to the right (cruel) of the midpoint of the scale. Of the 550 participants who responded to the word pair Valuable/Worthless, 93.3 percent ($n = 513$) marked a box the left (valuable) of the midpoint of the scale and 3 percent ($n = 11$) selected a box to the right (worthless) of the midpoint of the scale (see Table 5).

Table 5

Participant Responses to the Bipolar Adjective Pairs on the Now Semantic Differential Scale

Positive Item	7		6		5		4		3		2		1		Negative Item
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	
Good	379	68.9	115	20.9	36	6.5	14	2.5	3	0.5	3	0.5	0	0.0	Bad
Pleasant	384	69.9	124	22.6	30	5.5	7	1.3	3	0.5	1	0.2	0	0.0	Unpleasant
Happy	368	66.8	115	20.9	44	8.0	16	2.9	5	0.9	1	0.2	2	0.4	Sad
Clean	227	41.3	143	26.0	89	16.2	56	10.2	17	3.1	12	2.2	6	1.1	Dirty
Important	344	62.8	108	19.7	51	9.3	35	6.4	5	0.9	3	0.5	2	0.4	Unimportant
Beautiful	269	48.9	127	23.1	82	14.9	58	10.5	6	1.1	3	0.5	5	0.9	Ugly
Successful	341	61.8	137	24.8	44	8.0	22	4.0	5	0.9	3	0.5	0	0.0	Unsuccessful
Interesting	358	65.0	112	20.3	49	8.9	16	2.9	4	0.7	6	1.1	6	1.1	Boring
Honest	299	54.7	131	23.9	63	11.5	42	7.7	5	0.9	5	0.9	2	0.4	Dishonest
Positive	362	65.8	124	22.5	41	7.5	20	3.6	1	0.2	1	0.2	1	0.2	Negative
Kind	298	54.5	132	24.1	57	10.4	42	7.7	4	0.7	11	2.0	3	0.5	Cruel
Valuable	341	62.0	118	21.5	54	9.8	26	4.7	6	1.1	3	0.5	2	0.4	Worthless

Note. Mode responses to adjective pairs are bolded

RQ: 1.3: What were the differences among GYS Livestock Show attendees' demographics (location of residence, livestock ownership, Young Farmer participation, work in agriculture, relative who lives on farm, and time spent at show), and their attitudes about agriculture after attending the show? After collecting demographic information from attendees I compared them to attendees' changes in attitude about agriculture. I wanted to learn more about how the attitudes of attendees' who had previous experiences with agriculture were similar or different than those who did not. Therefore, I compared attendees' location of residence, livestock ownership, Young Farmer participation, whether they worked in agriculture, whether they had a relative who lives on a farm, and how long spent at the show, to their changes in attitude. Then, I compared the amount of change that occurred within each group.

I found no statistically significant difference between the attendees' change in attitude about agriculture based on residence. Of the 547 attendees who reported residence, participants who lived in a suburban residence had the lowest *then* ($M=70.5$) and *now* ($M=73.5$) mean scores and attendees who lived on a farm had the highest *then* ($M=76.7$) and *now* ($M=78.6$) mean scores (see Table 6).

Table 6

Means and Standard Deviations for Four Places of Residence by the Then and Now Scores of the Attitude about Agriculture

Residence	Then			Now		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Farm	76.7	9.5	140	78.6	8.9	140
Rural	73.7	9.4	180	76.6	8.9	180
Suburban	70.5	9.4	125	73.5	8.9	125
Urban	71.4	9.4	102	73.8	8.9	102
Overall	73.1	19.1	547	75.3	18.10	547

Farm residents reported the lowest (1.9) increase in attitude and suburban residents' reported the highest (3) increase in attitude. This mixed model with a between-subjects factor of residence and a repeated measure of attitude yielded a statistically significant F-value for the effect of residence on attitude about agriculture ($F_{3, 542} = 11.83$; $p < .001$) and attitudes changed from *then* to *now* ($F_{1, 542} = 74.18$, $p < .001$). This latter analysis (of change in attitude) will recur on each of the six comparisons for this research question. Therefore, I will report but not discuss it in the subsequent sections. The third ANOVA tested whether the change in attitude from *then* to *now* was different by place of residence; this F-value was not statistically significant ($F_{542 \text{ XX}} = .87$, $p = .46$; see Table 7), indicating that there was not evidence of a different level of change in attitude based on residence.

Table 7

Analysis of Variance Results for Residence and Then/Now Mean Scores from the Semantic Differential Scale

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Residence	3	5145.52	1715.18	11.83	< .001
Error 1	542	78431.84	144.71		
Within subjects					
<i>Then /Now</i>	1	1669.19	1669.19	74.18	< .001
Residence x <i>Then /Now</i>	3	58.38	19.46	0.87	0.46
Error 2	542	12196.00	22.50		

I found a statistically significant difference between attendees' attitudes about agriculture based on livestock ownership. Of the 552 participants who reported their livestock ownership status, those owned livestock had higher *then* ($M= 76.4$) and *now* ($M= 78.3$) scores than participants who did not own livestock (*then* $M= 70.2$; *now* $M=73.4$; see Table 8).

Table 8

Means and Standard Deviations for Livestock Ownership by the Then/Now Scores of the Attitude about Agriculture

Livestock Ownership	Then			Now		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Yes	76.4	9.2	275	78.3	8.8	275
No	70.3	9.2	277	73.4	8.8	277
Overall	73.4	13.0	552	75.9	12.5	552

This mixed model with a between-subjects factor of livestock ownership and a repeated measure of attitude showed a statistical difference in attitude based on livestock ownership ($F_{1, 5xx} = 60.17$; $p < .001$). The third ANOVA tested whether the difference in change in attitude from *then* to *now* was different based on livestock ownership. The difference was statistically significant ($F_{550 \text{ xx}} = 5.32$, $p = .021$); the attitudes of those who did not own livestock increased more than those who owned livestock (see Table 9). Participants who owned livestock reported a smaller (1.9) increase in attitude than those who did not own livestock (3.2).

Table 9

Analysis of Variance Results for Livestock Ownership and Then/Now Mean Scores from the Attitude about Agriculture

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Livestock Ownership	1	8391.20	8391.20	60.17	< .001
Error 1	550	76698.94	139.45		
Within subjects					
<i>Then /Now</i>	1	1760.23	1760.23	79.15	< .001
Livestock Ownership x <i>Then /Now</i>	1	118.36	118.36	5.32	.021
Error 2	550	12232.29	22.24		

I found a statistically significant difference between attendees' attitudes about agriculture based on Young Farmer Participation. Of the 552 participants who reported Young Farmer participation, the *then* ($M=75.2$) mean score and the *now* ($M=77.1$) mean score for attendees who participated in Young Farmers was higher than the mean score of attendees who did not participate in Young Farmers (see Table 10). Attendees who did not participate in Young Farmers had larger increase (3.6) in attitude than those who did participate (1.9).

Table 10

Means and Standard Deviations for Young Farmer Participation by the Then and Now Scores of the Attitude about Agriculture

Young Farmer Participation	Then			Now		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Yes	75.2	9.6	161	77.1	9.1	161
No	72.0	9.6	391	75.6	9.1	391
Overall	73.6	14.6	552	76.4	13.9	552

This mixed model with a between-subjects factor of Young Farmer participation and a repeated measure of attitude showed a statistically significant difference in attitude based on Young Farmer participation ($F_{1, 5xx} = 7.47$; $p = .006$). The third ANOVA failed to detect a statistically significant change in attitude based on Young Farmer Participation. ($F_{550 \text{ xx}} = 1.78$, $p = .182$; see Table 11).

Table 11

Analysis of Variance Results for Young Farmer Participation and Then/Now Mean Scores from the Semantic Differential Scale

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Young Farmer Participation	1	1139.38	1139.38	7.47	.006
Error 1	550	83950.77	152.67		
Within subjects					
<i>Then /Now</i>	1	1263.30	1263.30	56.44	< .001
Young Farmer Participation x <i>Then /Now</i>	1	39.93	39.93	1.78	.182
Error 2	550	12310.72	22.38		

Of the 550 participants who reported whether they worked in agriculture, participants who worked in agriculture had a more positive *then* ($M=76.4$) and *now* ($M=78.0$) attitude than participants who did not, ($Ms=71.7$ and 74.8 ; see Table 12). Participants who did not work in agriculture had a greater increase (3.1) in attitude about agriculture after attending the GYS than those who worked in agriculture (1.9).

Table 12

Means and Standard Deviations for Work in Agriculture by the Then and Now Scores of the Attitude about Agriculture

Work in Agriculture	Then			Now		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Yes	76.4	9.4	182	78.0	9.0	182
No	71.7	9.4	368	74.8	9.0	368
Overall	74.1	13.9	550	76.4	13.3	550

This mixed model with a between-subjects factor of Work in Agriculture and a repeated measure of attitude showed a statistically significant difference in attitude from based on whether a GYS attendee worked in agriculture ($F_{1, 5xx} = 25.76$; $p < .001$). The third ANOVA showed that there was a statistically significant change in attitude from *then* to *now* based on whether the GYS attendee worked in agriculture ($F_{550 xx} = 5.82$, $p = .016$). Attitudes of those who did not work in agriculture increased more dramatically as a result of attending the GYS (see Table 13).

Table 13

Analysis of Variance Results for Work in Agriculture and Then/Now Mean Scores from the Attitude about Agriculture

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Work in Agriculture	1	3807.13	3807.13	25.76	<.001
Error 1	550	147.79	147.79		
Within subjects					
<i>Then /Now</i>	1	1268.25	1268.25	57.08	<.001
Work in Agriculture x <i>Then /Now</i>	1	129.23	129.23	5.82	.016
Error 2	550	12221.42	22.22		

Of the 552 participants who reported whether they had relatives who lived on a farm, those who did have a relative who lived on a farm had higher *then* ($M= 75.2$) and *now* ($M= 77.2$) mean scores than participants who did not ($M_s=71.0$ and 74.3 ; see Table 14). GYS attendees who did not have relatives who lived on a farm had a greater increase (3.3) in attitude about agriculture after attending the GYS than those who did not (2.0).

Table 14

Means and Standard Deviations for Relative on a Farm by the Then and Now Scores of the Attitude about Agriculture

Relative on a Farm	Then			Now		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Yes	75.2	9.4	291	77.2	9.0	291
No	71.0	9.4	261	74.3	9.0	261
Overall	73.1	20.2	552	75.8	12.7	552

This mixed model with a between-subjects factor of Relative on a Farm and a repeated measure of attitude showed a statistically significant difference in attitude based on whether a GYS attendee had a relative who lived on a farm ($F_{1, 5xx} = 24.52$; $p < .001$). The third ANOVA showed that there was a statistically significant change in attitude from *then* to *now* based on whether the GYS attendee had a relative who lived on a farm ($F_{550 \text{ xx}} = 5.57$, $p = .019$). Attitudes of those who did not have a relative who lived on a farm increased more dramatically as a result of attending the GYS (see Table 15).

Table 15

Analysis of Variance Results for Relative on a Farm and Then/Now Mean Scores from the Attitude about Agriculture

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Relative on a Farm	1	3631.48	3631.48	24.52	<. 000
Error 1	550	81458.67	148.12		
Within subjects					
<i>Then/Now</i>	1	1809.44	1809.44	81.40	< .001
Relative on a Farm x <i>Then/Now</i>	1	123.82	123.82	5.57	.019
Error 2	550	12226.84	22.23		

Finally, I analyzed how the length of time attendees spent at the show influenced their change in attitude about agriculture. Attendees who were at the show for one hour or less had a *then* score of 69.1 and a *now* score of 72. Attendees who were at the GYS for over an hour had a *then* score of 73.7 and a *now* score of 76.1 (see Table 16).

Table 16

Means and Standard Deviations for Time Spent at the Show by the Then and Now Scores of the Semantic Differential Scale

Time Spent at the Show	Then			Now		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
One Hour or Less	69.1	9.6	51	77.2	9.1	51
Over One Hour	73.7	9.6	453	76.1	9.1	453
Overall	71.4	20.2	504	76.7	19.1	504

This mixed model with a between-subjects factor of time spent at the Show and a repeated measure of attitude showed a statistically significant difference in attitude based on how long a GYS attendee spent at the Show ($F_{1, 5xx} = 11.38; p < .000$). The third ANOVA showed that there was not a statistically significant difference in change in attitude from *then* to *now* based on how long a GYS attendee spent at the show ($F_{550 \text{ xx}} = 0.21, p = .647$). Attendees who spent an hour or less at the Show had a greater increase in attitude (2.9) than those who spent over an hour (2.4; see Table 17), though the changes were not statistically significantly different.

Table 17

Analysis of Variance Results for Time Spent at the Show and Then/Now Mean Scores from the Semantic Differential Scale

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Time Spent at Show	1	1748.07	1748.07	11.38	<. 000
Error 1	502	77107.75	153.60		
Within subjects					
<i>Then/Now</i>	1	635.89	635.89	28.21	< .001
Time Spent at Show x <i>Then/Now</i>	1	4.74	4.74	0.21	.647
Error 2	502	11316.40	22.54		

RO2: Compare GYS Livestock Show Attendees' Changes in Attitude About Agriculture to Fairgoer's Changes in Attitude About Youth Livestock Exhibits at the California State Fair

I took several steps to evaluate the influence that attending the GYS Livestock Show had on attendees' attitudes about agriculture compared to the influence that attending the CSF had on fairgoer's attitudes in the Anderson-McCoon et al. (2016) study. First, I conducted a post-hoc evaluation of reliability separately for the *then* and *now* items on the instrument. Second, I compared the characteristics of the livestock show attendees at the CSF and the GYS. Third, I conducted a paired-samples *t* test to determine if attending the GYS Livestock Show influenced attendees' attitudes about agriculture and compared the results to those in the Anderson-McCoon et al. (2016) study.

RQ 2.1: How were characteristics of the GYS Livestock Show attendees different from those of the California State Fair Livestock Show fairgoers?

Characteristic questions were age, sex, education, current residence, livestock ownership, Younger Farmer participation, relatives living on a farm, working in agriculture, and time spent at the livestock show. I did not compare all characteristics because not all were comparable to those in the Anderson-McCoon et al. (2016) study.

Participants ($n=377$) reported they were between the age of 18 and 87. Of the 377, I found that 23.6 percent ($n = 128$) were between 18 and 25 years of age and 8.6 percent ($n = 46$) were between 36 and 45. Compared to CSF participants, GYS participants tended to be either younger (23.6% GYS, 13.5% CSF 18-25 years old) or older (30.9% GYS, 18.8% CSF, 56 or older). Thus, 45.5% of GYS participants were 26-55 years of age while 67.7% of CSF participants were 26-55 years of age. Of the 550 participants, more than half were female, ($f= 309$; $\%= 56.2$). Participants ($n=545$) reported their education level. Of the 545, I found 34.3 percent ($n=187$) selected high school and 34.3 percent ($n=187$) selected some college as their highest level of education. Additionally, I found that 7.7 percent ($n = 42$) had an advanced degree.

Participants ($n = 547$) reported their residence. Of the 547, I found that 32.9 percent ($n = 180$) live in a rural area and 18.6 percent ($n = 102$) live in an urban area. Participants ($n= 552$) reported whether they owned livestock. Of the 552, I found that 49.8 percent ($n = 275$) owned livestock and 50.2 percent ($n = 277$) did not. Participants ($n=552$) reported their Young Farmer participation. Of the 552, I found that 29.2 percent ($n = 161$) had participated in Young Farmers and 70.8 percent ($n = 391$) had not.

Participants (n=552) reported if they had a relative who lives on a farm. Of the 552, I found that 52.7 percent (n = 291) of participants had a relative who lived on a farm and 47.3 percent (n = 261) did not. Participants (n= 550) reported if they worked in agriculture. Of the 550, I found that 33.1 percent (n = 182) worked in agriculture and 66.9 percent (n = 368) did not work in agriculture (see Table 18).

Table 18

Characteristics of GYS and CSF Participants Including Frequencies and Percentages for Age (GYS: n=556; CSF: n=377); Education (GYS: n=545; CSF: n=395); Gender (GYS: n=550; CSF: n=377); Livestock Ownership (GYS: n=552; CSF: n=384); Relative who lives on a Farm (GYS: n=552; CSF: n=395); Residence (GYS: n=547; CSF: n=391); Work in Agriculture (GYS: n=550; CSF: n=392); Young Farmer, 4-H, or FFA Participation (GYS: n=552; CSF 4-H Participation: n=389; CSF FFA Participation: n=387)

Characteristic	GYS			CSF		
	f	%	n	f	%	n
Age (Years)						
18–25	128	23.6	128	51	13.5	51
26–35	83	14.9	88	95	25.2	95
36–45	46	8.6	46	67	17.8	67
46–55	120	22.0	122	93	24.7	93
56–65	95	17.6	99	46	12.2	46
Over 65	72	13.3	74	25	6.6	25
Education						
High school	187	34.3	187	72	18.2	72
Some higher education	187	34.3	187	140	35.2	139

Table 18. Continued.

Characteristic	GYS			CSF		
	<i>f</i>	%	<i>n</i>	<i>f</i>	%	<i>n</i>
Bachelor's degree	129	23.7	129	118	29.9	118
Advanced degree	42	7.7	42	65	16.5	66
Gender						
Female	309	56.2	309	219	58.2	219
Male	241	43.8	241	158	41.8	158
Owned Livestock						
Yes	275	49.8	275	135	35.2	135
No	277	50.2	277	249	64.8	249
Relative on Farm						
Yes	291	52.7	291	168	42.5	168
No	261	47.3	261	227	57.5	227
Residence						
Farm	140	25.6	140	14	3.6	14
Rural	180	32.9	180	51	12.9	51
Suburban	125	22.9	125	240	60.8	240
Urban	102	18.6	102	86	21.8	86
Work in Agriculture						
Yes	182	33.1	182	20	5.1	20
No	368	66.9	368	372	94.9	372

Table 18. Continued.

Characteristic	GYS			CSF		
	<i>f</i>	%	<i>n</i>	<i>f</i>	%	<i>n</i>
4-H						
Yes				58	14.9	58
No				331	85.1	331
FFA						
Yes				28	7.1	28
No				359	90.9	359
Young Farmers						
Yes	161	29.2	161			
No	391	70.8	191			

CSF fairgoers (n=380) reported how long they spent at the livestock show. Of the 380, I found that 98.1 percent ($n = 373$) spent one hour or less viewing the livestock exhibits and 1.8 percent ($n = 7$) spent more than one hour. GYS attendees (n= 496) reported how long they spent at the livestock show. Of the 496, I found that 9.6 percent (n=53) attended the livestock show for an hour or less and 90.4 percent (n=443) more than one hour.

RQ 2.2: How were GYS Livestock Show attendees' changes in attitudes about agriculture different from CSF fairgoers' attitudes about youth livestock exhibits? I conducted a paired-samples *t* test to determine if attending the livestock show influenced attendees' attitudes. I summed each GYS attendees' responses for the

12 word pairs for the *then* scale ($M = 73.28$; $SD = 9.66$) and the *now* scale ($M = 75.81$; $SD = 9.13$), which I compared to CSF fairgoers' responses to each of the 12 word pairs. Using a paired-samples t test, the difference in *then* attitudes (73.28 GYS vs. 67.35 GYS) was statistically significant at the .05 level, $t(552) = -8.87$, $p < .001$ (see Table 19). Similarly, the differences in *now* attitudes was statistically significant.

Table 19

Then/Now Independent-Samples t Test for Mean Attitudes about Agriculture from the GYS and CSF

Summed <i>Then/Now</i>	<i>GYS</i>		<i>CSF</i>		<i>df</i>	<i>t</i>	<i>p</i>	<i>Cohen's d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Summed <i>Then</i>	73.28	9.66	67.35	12.36	550	-8.87	.0001	.05
Summed <i>Now</i>	75.81	9.13	73.04	10.3	374	-13.20	.0001	.05

RO 3: Explore how GYS Livestock Show Attendees Formed Attitudes About Agriculture Before and After the Experience Using Social Cognitive Theory

I used key constructs of the social cognitive theory (cognition, behavior, and environment) to organize my qualitative findings. Participants in the qualitative portion of this study were attendees of the GYS on July 12 or 13, 2017. Of the 10 participants, I found that 8 participants were between 18 and 45 years of age and 2 participants were between 46 and 70 years of age. More than half were female, ($f = 7$). Of the 10 participants who reported their education level I found 2 participants selected high school, 2 participants selected some higher education, and 6 participants selected a post

high school degree. Of the 10 participants who reported residence, I found that 5 participants live in a farm or rural residence and 5 participants live in a suburban or urban residence. I found that 6 participants owned livestock 7 participants had a relative who lived on a farm. In addition, I found that 6 participants did not work in agriculture.

Interview participants indicated that they were aware that an overall disconnect exists between the general public and agriculture. There are many causes for this disconnect; however, interviewees mainly attributed it to lack of exposure or experience with agriculture. Some participants lived in the suburbs and, therefore, did not come into regular contact with agriculture. One participant thought that the disconnect between people and agriculture was due to people's overall lifestyle. "We live quicker so we need everything quicker, faster, bigger. We need more production" (P01). Another participant said, "I think sometimes you have to actively seek information about agriculture, don't you? It's not something that's in the mainstream all of the time" (P10). However, lack of general exposure and education hinders people's ability to seek information about agriculture. "I think if you don't know what you're looking for, then you probably feel there's nothing that supports agriculture or promotes it" (P10).

Therefore, education in a classroom setting might be one of the only opportunities for people not regularly exposed to agriculture to learn about it. Education about agriculture in school is a potential way for individuals to gain exposure or experience, though interviewees said that they did not learn much about agriculture in school. P07 said that she never learned about agriculture in school. Another participant said that he vaguely remembered going on a school trip to a farm but didn't remember

what he learned. Lack of education has created a lack of general understanding of agriculture.

A common theme was that because agriculture has changed so much, people do not understand it or its overall importance. P02 said, “I don’t fully understand the importance of these sorts [agricultural] shows.” Changes in technology make understanding modern agriculture even more challenging for the general public. P01 said:

I think it sometimes feels like agriculture is losing a little bit of its roots, like it’s losing that contact. I think 50 years ago, when everything was done by tractors and horses, agriculture was easier to understand. Now everything comes, and it is big and fast.

Today, there are many new technologies associated with satellites, precision farming, and breeding style (P04) that are always changing. The robotic milking parlor, located on the GYS showground, was a good example of change in technology that several participants referenced. Despite changes in agriculture, participants expressed a desire to learn more about it and where their food comes from. P01 said that there should be more access to agricultural education and that students should receive more information about agriculture than they currently do. “I think, especially recently, that people are more interested in where food comes from and they want to know” (P01). One of the most interesting things I learned in my interviews was that, although participants did not know much about agriculture and generally lacked exposure, they still valued it highly and had a positive attitude about it. P02 said, “I know how

important agriculture is.” One of the reasons participants said they valued agriculture was for the existence of the overall, idyllic farm life (P02).

Whether they lacked exposure to agriculture or had a rural upbringing, several participants said that they valued the countryside. “I love to live in the countryside, I love it here” (P10). Another participant said that although she grew up in the town that “I just dreamed to live on a farm in the countryside” (P01). Participant 10 expressed the desire to safeguard the countryside:

I don't want people from towns to buy our country property and turn them into holiday lets. I want them to be working farms and I want people to grow up with a respect for animals and farming so that we are sustainable, especially now that we are coming out of the EU.

Several participants (P02, P08, P10) indicated, in addition to their appreciation for the countryside, they are committed to buying British agricultural products and value local agriculture. “Well, I think we like to support local producers. We like homegrown produce and are keen to keep things British” (P10). Overall, participants expressed that they valued agriculture although they did not have much direct connection to it aside from supporting local producers in the supermarket. Therefore, the overall positive attitude about agriculture GYS attendees expressed was surprising.

GYS attendees whom I interviewed did not indicate that they experienced a significant change in attitude about agriculture. In general, participants came to the show with a positive attitude and left with a positive or, perhaps, a slightly more positive attitude. Surprisingly, although participants lacked education and general exposure to

agriculture, they still valued it and had positive attitudes about it. Therefore, it is important to further understand how participants developed their positive attitudes prior to attending the GYS Livestock Show and how the GYS experience further influenced their attitudes about agriculture.

RQ 3.1: What cognitive, social, and environmental elements influenced livestock show attendees' attitudes about agriculture before attending the GYS Livestock Show? Participants explained that they developed positive attitudes about agriculture prior to attending the GYS from experiences in their upbringing or childhood, general exposure to agriculture, experiential education, formal education, and/or agricultural careers. In addition, participants developed attitudes by actively seeking agricultural information and attending the GYS.

Cognition. Participants' upbringing and childhoods greatly influenced their positive attitudes about agriculture. Participant four, who currently works in arable agriculture, said that he had been involved in agriculture all his life and that, because of his family, he was born into it. "My family is originally pig farmers but they moved to arable and equestrian now." In addition, participant four's aunts and uncles are all dairy farmers and another relative has beef cattle. One participant (P03) was raised on a poultry farm and another's (P08) father is a butcher. Participant 10 said her stepdad owned a farm that has cattle, sheep, Christmas trees, and reindeer. "Quite a mixed bag, so I grew up with it" (P10). In addition participant 10 currently has horses. Participant five said that he was raised on a farm. "I've worked with certain animals since a young age." Participant three, who currently works in the fresh produce industry, added that the

experience of growing up around livestock influenced her attitude about agriculture in a positive way and that, “if you live in a town, you don’t really get to experience agriculture.”

Those participants who did not grow up on a farm or in a rural setting spoke about times when they had general exposure to agriculture. Some grew up near farms, others had friends in farming, and a few learned about agriculture on television. Participant nine said he lived around several farms. “I live around quite a lot of farms and I’ve never seen much factory farming. They are all more like free range kinds of things so that’s sort of been most of my experience” (P09). Another participant said, “I live in the countryside but not where there are farms but there are fields with animals and stuff” (P06). Participant nine said that he had not had a massive amount of prior experience with livestock but that “we sort of live near farms” (P09). One participant’s boyfriend has sheep and another one’s friend shows at the GYS. Participant 10 said, “I don’t know how I learned about agriculture. I guess spending time with family and going round the farm and the local auctions and farmers markets. You just pick things up really, don’t you?”

In addition to observing agriculture in person, participants said they learned about it on television. “I think the mainstream things like Country File that you watch, you know the television programs keep you fairly up to date” (P10). Participant nine added that there are several shows on London programming that are occasionally on television. “I’ll watch country and farm stuff if it’s on sometimes, but I think there should be more stuff like that” (P09). Although several participants did not grow up

directly involved in agriculture, they said that the few experiences they did have with it contributed to their positive attitude.

Participants said that they learned about agriculture in a few other ways, in addition to growing up in or around it. Participant one, who teaches riding lessons, said that to learn more about horses and teaching riding lessons she “liked to read books and find things on the Internet if possible” (P01). In addition, she said she liked to speak to people for advice.

Overall, participant’s education about agriculture can be divided into two categories: experiential education and formal education. Experiential education consists of personal experiences learning about agriculture, school trips, and teachers incorporating agricultural education in science class. Participant seven said that he has pigs and, therefore, has to look after them everyday. Another participant (P09) said that he only learned about agriculture in primary school. “I guess mostly in primary school and there is a little farm near that I’ve gone to” (P09). One participant also said that she learned a small amount about agriculture in school classes. “In science we learned a bit about animals and agriculture” (P06), and she visited zoos and farms as a child and went on school trips to farms. Participant two’s young son exclaimed that he had attended Countryside Days with his class. Some participants only experiences learning about agriculture were through school trips to farms or brief inclusions of agriculture in classes, others pursued formal agricultural education.

Half of the interviewees pursued formal agricultural education and took college courses in agriculture. Participant eight said she did a veterinary nurse course at Harper

Adams University, an agricultural university, and is currently working as a veterinary nurse. “They had a farm on it so I did quite a few units on the farm” (P08). In addition, participant eight completed a farm animal health module after university. Participant three attended Harper Adams University to study agri-business and participant five attended Hartpury Agricultural College in Suffolk, U.K., where he studied general agriculture. Participant five said that he studied everything from machinery to livestock and crops and is currently completing a college course on equine. Some participants used their education to pursue a career in agriculture, thus, providing them with further exposure and experience with agriculture.

Behavior. By actively choosing to be involved in agriculture or by pursuing a career in the industry, participants indicated that they are actively seeking connection and information about agriculture. Participant seven, for example only recently became involved in agriculture when she got sheep. Now, she makes her own meat and said she is happy to know where her meat comes from. Participant four raises oil seed, rape, barley, oats, and wheat, while participant three has a poultry farm at home. In addition, participant three currently works in the fresh produce industry. Not all of these participants had a rural or agricultural-based up bringing; however, they are informed about agriculture through their career choices. Several participants said that to be informed about agriculture, they “had to actively seek out information” (P06).

Participant four said that they are learning about agriculture all the time. “There’s always something new and different to learn about agriculture” (P04). Another participant (P03) said that she uses many different resources to seek out information

about agriculture and farming. “If I needed to know something I would just go ‘round and ask a friend who has a pig farm, go on the Internet, or go and ask my friend who is a vet” (P09). A common theme participants expressed is that family, friendships, and personal connection largely drive their knowledge, connection, and attitudes about agriculture. Participants said they maintain their connection to agriculture by attending the GYS.

Attending the GYS, participants have the opportunity to connect with friends, family, and community members who are involved in agriculture. Participant 02 said that this contributed to her knowledge and attitude about agriculture. Whether it was a participant’s first time attending or he or she have attended multiple times, participants said that the experience contributed to their positive attitude about agriculture. Participant 10 said her whole family comes to the show and that, although her family was not involved in agriculture growing up, the GYS helped to educate her about agriculture. Ultimately, the choice to attend the GYS gave attendees the opportunity to interact with farming and non-farming publics and to increase their positive attitudes about agriculture.

RQ 3.2: What cognitive, behavioral, and environmental elements of GYS Livestock Show attendees’ experience influenced their changes in attitude about agriculture?

Environment. The experience of attending the GYS only further enhanced attendees’ positive attitudes about agriculture. Most participants said that they enjoyed everything at the Show and that it was a fun experience. The environment the GYS

creates allowed attendees to see a wide variety of agricultural products, practices, and industries. Although there were shopping tents in addition to the livestock show, participant five said that he enjoyed the agricultural side the best. Participant 10 said that she loved the variety at the Show and that, “you could choose to see and experience whatever you want to see and experience” (P10). Participant eight enjoyed the cattle rings and the dog shows the most, and Participant seven enjoyed the pigs and the pig show. At the livestock show, there were many different breeds of livestock. Participant six came with a group of 60 people from their company. She said that her favorite part was the sheep show. Participant three said that she enjoyed looking at the different breeds because “you don’t always get to see that.” The GYS Livestock Show provided participants the opportunity to see the diversity that exists with livestock and farming that otherwise they would not have been able to see or experience.

Many participants said that they enjoyed seeing many different aspects of farming at the GYS and also seeing farmers exhibit the product of their hard work. Participant nine said that the GYS is “all about farming. You can see all sorts of animals and what goes on at a farm.” Participants said they enjoyed watching the exhibitors show their animals and seeing the pride they took in them. “There is a lot of care and attention that goes into the animals in the ring. So you know exhibitors have great pride in what they do (P05).” Participant 10 added that she enjoyed seeing farmers showing their livestock. “It’s quite nice to see the farmers actually being able to show their animals because you only see them working day-to-day. So it’s quite nice to actually see them with their animals and the pride they take in them” (P10). Though Show attendees may

not have many opportunities to see farmers or interact with them in their daily lives, the GYS provided them the opportunity to do so.

In addition to being an interesting and educational experience for adult attendees, children benefit from the experience as well. Participant two said that, although she did not fully understand the importance of shows like the GYS, they were a good place to bring her children so they could see the exhibits and learn about animals. Her child added that he enjoyed seeing the hounds and “watching the little chickies hatch.” Participants’ responses indicated that, even if they felt very removed from agriculture, attending the GYS was a good opportunity to learn about agriculture. In addition to the judge, each show ring had an announcer whose job it was to give the public information about the animals, industry, and exhibitors. Participant seven said she thought it was very beneficial because “many people don’t understand what they are doing (in the show ring) or what the breeds are.” The GYS allowed participants to feel connected to agriculture and to learn about farming and where food comes from. “From feeling completely removed from things you can feel involved in it and learn about healthy food and healthy ways to live” (P10). Therefore, just by attending the Show, attendees have the opportunity to learn about agriculture and feel more connected to the industry.

Attendees of the GYS Livestock Show have a unique opportunity to see many breeds of livestock up-close and in person. Participants said that they were able to learn about how many different types of breeds there are and about how to show them. One participant (P06) said that she did not know that there was more than one type of sheep prior to coming to the GYS. Another (P10) said that she did not realize that there was

such a variety of sheep breeds before coming to the Show. Watching the pig show and learning about it made participant seven want to show them. Participant one said that “it was interesting to see some cooking and preserving demonstrations and nice to speak with people who produce honey because it is something I might probably like to know more about.” Additionally, participant 10 said that attending the GYS increased her awareness of farming and agriculture, and if she had not attended, she probably would not think about it. “I suppose it [attending the GYS] increases your awareness” (P10). The knowledge and awareness about agriculture that attending the GYS generates had effects on participant’s attitudes about agriculture as well as their behavior.

Overall, attending the GYS was a positive experience for participants. Therefore, people keep coming back and having positive experiences with agriculture. One of the main reasons people said they choose to return year after year to the GYS is to see friends, family, and community members. “It is always good to come and see people, to get in touch, and see what new information they have about sheep” (P01). Participant four comes to the GYS every year to see people he has not seen in a while and also people he only gets to see once a year. Another participant (P01) said that because she has always been keen on horses, the GYS is a great place to connect with others who have a similar passion. “I used to come here and show horses and work with people so I love to come back” (P01). Connecting with people and maintaining relationships were common reasons participants attended the GYS. Although, connecting with agriculture was important to all participants. Participant 4 concluded, “Agriculture is the reason we are all here, aren’t we? There wouldn’t be a Show without it, would there?”

CHAPTER V

CONCLUSIONS

In the United States and in the United Kingdom, a majority of the population is so distanced from agriculture that people lack opportunities to have firsthand experiences with farming and farmers and, as a result, are unfamiliar with how food and fiber are grown and produced. This distance makes having firsthand experiences with agriculture rare, even though they are important to attitude development. Fairs provide a solution to this disconnect because they provide attendees with opportunities to experience agriculture in-person and to develop and shape their attitudes about it. I found that attending the Great Yorkshire Show (GYS) in the U.K. had a positive influence on attendees' attitudes about agriculture and that it had more of an influence on attitude than attending the California State Fair (CSF) in the United States. Thus, after researching the opportunities that exist for consumers to experience agriculture firsthand, I propose that fairs provide a unique and important opportunity for consumers to experience agriculture and that fairs in the United States could benefit by adopting tactics used at the GYS.

RO 1: Determine if Attending the Great Yorkshire Show Livestock Show Changed Livestock Show Attendees' Attitudes About Agriculture

I found that attending the GYS Livestock Show changed attendees' attitudes about agriculture and that attendees' attitudes were more positive because of the experience. The Anderson-McCoon et al. (2016) study also found that attending the youth livestock show at the CSF changed fairgoers' attitudes toward livestock in a positive way. Just as Bandura (1989) described firsthand experiences are important to

attitude development, attendees' experience at the GYS shaped their attitudes about agriculture. I learned that for many attendees, the GYS provided a rare opportunity for them to see agriculture in-person and up close. This was not surprising due to society' proximity to agriculture. Thus, the GYS provided a unique experience where consumers saw, smelled, touched, tasted, and learned about many diverse elements of the agricultural industry, including producers. This allowed attendees to create new knowledge from both the physical and social environment at the GYS (Bandura, 1989). I think, because opportunities for consumers to experience agriculture firsthand are so rare, the GYS experienced influenced attendees' attitudes.

Similar to findings in the Wachenheim and Rathge (2002) and the Boogaard et al. (2011) studies, I found that people who had a firsthand connection to agriculture, such as owning livestock or working in agriculture, had more positive attitudes about the industry before and after attending the Show than those who did not. This was not surprising as firsthand experiences are important to attitude development. Interestingly, though, I found that the experience of attending the GYS could, perhaps, replicate or equal the influence participation in the Young Farmers organization had on consumers' attitudes about agriculture. After attending the GYS, the attitudes of those who did not participate in Young Farmers were similar to the Young Farmers participant's *then* attitudes. This suggests that, although previous, firsthand experiences with agriculture are important, the experience of attending the GYS perhaps had an equal or similar influence on attendees. Although participation in Young Farmers is likely a large time commitment over a long period of time, the GYS lasts only for three days, once a year.

So, this shows that positive attitudes about agriculture can not only develop over long periods of time but also develop through high-impact experiences like the GYS.

Although the GYS provides a platform for a convergence of consumers and producers that produces positive attitudes, it is only an annual event. Attendees expressed that they would like to know more about agriculture but that, aside from attending the Show, they had to actively seek out information about food because it was not readily available to them. They also stated that they did not feel they knew enough about agriculture or how to find accurate information about it. This is concerning because consumers make buying and voting decisions that influence the agricultural industry. Attendees said that, although they learned about agriculture in class or on a school field trip as a child, they had few opportunities as an adult to experience agriculture, which supported findings from the Rumble and Irani (2014) study. Because consumers would like to know more about agriculture but lack opportunities to do so in person, agricultural communicators, educators, producers, and Extension agents should provide more easily accessible opportunities, like those at the GYS, for consumers to become literate in agriculture. These could be in the form of adult field days, interactive experiences at farmers markets, local farm tour events, or agricultural-based elements at local and state fairs.

Show attendees expressed an interest in knowing about their food— where it is produced and who produces it. How much information, though, did attendees really care or want to know about agriculture? As Marsden (2010) found, fairs, like the GYS, provide attendees many opportunities to learn about and experience the diverse aspects

of agriculture. However, did attending the GYS satisfy consumers' demand for information? Or, was just seeing cows and eating local ice cream enough to instill a connection and a positive attitude about agriculture, farmers, food, and farming? If not, events like the GYS or the CSF should add more in-depth and educational content. The addition of seminars, demonstrations, or workshops at fairs could increase the amount of information disseminated. However, I wonder if consumers' outward demand for information matches their true, inward demand? I recommend that further research be conducted to see if what consumers express outwardly about their desire to know about agriculture is congruent with their actual desire. Knowing this information could help show organizers, Extension agents, or agricultural educators and communicators to better prepare and tailor agricultural-based curriculum and programming to consumers' needs and wants at events, including those like the GYS or CSF.

To more effectively provide consumers with agricultural information they seek to know, agricultural communicators and educators must have firmer understanding of what the word "agriculture" means to individuals. In my study, I asked attendees to record their *then* and *now* attitudes about agriculture. As society is so distanced from agriculture, I think that, perhaps, attendees had varying definitions of the word. What does agriculture mean to each person? If a person has a simplified notion of agriculture that includes tractors, overalls, and a red barn, do they have more positive attitudes about agriculture than a person with a more complex notion and thinks of GMOs, precision agriculture, and large-scale production? Understanding what consumers associate with the word "agriculture" could help agricultural communicators and educators to clear up

misconceptions, provide desired information to consumers, and expand the definition of agriculture to include 21st century production and practices. In addition, knowing how members of society define the word “agriculture” could help show organizers better plan educational elements of shows and more accurately target their messaging strategies about agriculture, as attending fairs should help consumers to have a clearer and more accurate definition of agriculture. Therefore, I recommend that further research be conducted to understand how consumers define agriculture and what factors influence their definition.

As fairs are shown to positively influence attitudes about agriculture, I recommend that fair organizers, agricultural communicators and educators, and Extension agents evaluate how they can further enhance the experience of attending a fair by including more agricultural-based education and entertainment elements. This could be done by placing the livestock show in a more prominent location on the showground, selecting entertainment that involves agriculture (e.g. herding dogs or equestrian sports), or adding interactive experiences with producers (e.g. Q&A’s or demonstrations). As Holloway (2004) found, fairs provide the physical place necessary for the convergence of producers and consumers. As few opportunities exist for consumers to have firsthand experiences with agriculture, fairs should seek to maximize attendees’ experience to increase positive attitudes about agriculture, which benefit the agricultural industry overall.

RO 2: Compare GYS Livestock Show Attendees’ Changes in Attitude About Agriculture to Fairgoer’s Changes in Attitude About Youth Livestock Exhibits at the California State Fair

Unlike the GYS, the CSF does not focus its entertainment and educational elements on agriculture. Thus, as I suspected, attendees of the GYS had more positive attitudes after attending the Show than CSF fairgoers did. In addition, CSF fairgoers' attitudes after attending the livestock show were not as high as GYS attendees' attitudes prior to attending the Show. This shows that the experience of attending the GYS had more of an influence on attitude change than attending the CSF did. This, I believe, is largely because of the GYS atmosphere and environment. Because the GYS remains committed to its original mission of promoting agriculture and rural life; all entertainment is related to agriculture, livestock shows are major events; and there are countless displays, booths, and activities that educate attendees about agriculture. No matter where attendees went on the GYS showground, they encountered images, examples, or information about agriculture. Unlike the CSF, at the GYS there was no carnival or concert to compete with the cows for attendees' time and attention.

I found that most people at the CSF spent an hour or less viewing the livestock show and exhibits; whereas, at the GYS, most people spent more than an hour at the livestock show. I think that this is because the GYS provides more agricultural-based attractions and events than the CSF does, and therefore, attendees stay longer to experience them. The CSF has a livestock show and youth exhibits to view but, it also has carnival rides, concerts, and a midway bustling with vendors, games, and fair food to draw attendees away from the livestock. The CSF livestock show ring's location is not prominent, like at the GYS and, therefore, might prevent attendees from visiting it in the first place. As our society is so distance from agriculture, it is not surprising that people

would choose to take part in elements of the CSF that have nothing to do with agriculture. Providing opportunities for attendees to experience the diversity of agriculture by not only pushing their baby stroller through the cow barns but also spending time viewing many agricultural exhibits could help consumers to have a clearer definition of agriculture and to have more positive attitudes about the industry.

If the CSF provided agricultural-based entertainment or hands-on experiences involving agriculture located in prominent locations on the showground, fairgoers may be more likely to participate in them. This participation may result in more positive attitudes about agriculture. Thus, I recommend that further research be conducted to better understand what elements of the GYS livestock show made attendees want to stay and experience it for more than one hour. This information would help other fairs, like the CSF, to enhance the experience they provide for fairgoers and to maximize the influence of attending the show. I think that fairs, like the CSF, would be able to increase attendees' time in agricultural exhibits by incorporating several key elements of the GYS, such as having a livestock commentator in the show ring or a Parade of Champions displaying the best in each breed. Such key elements may help to create a more positive and engaging experience for fairgoers.

Interestingly, both GYS and CSF attendees who spent an hour or less at the livestock show still had a positive change in attitude. This shows the positive influence that firsthand experiences with agriculture can have for consumers. A relatively short amount of time, one hour or less, generated a positive influence on attendees' attitudes. Had attendees experienced the Show for more than one hour, however, would their

positive attitudes about agriculture have increased by more? This information would be valuable to fair organizers and those designing agricultural-based experiences. Thus, I think further research should be conducted to learn more about how much time spent experiencing agriculture firsthand is needed to generate a positive change in attitude. Fair organizers, agricultural communicators and educators, and Extension agents could use this information to design more effective and time-sensitive experiences for consumers. Why host a three-day event when three hours of a high-impact experience might generate the same positive outcome for consumers and producers alike?

Overall, I think fair organizers in the US need to increase the presence and prominence of agriculture at fairs to improve attendees' attitudes about agriculture and to decrease the disconnect that exists between producers and consumers. I am concerned that, even though the results of this study show that fairs focused on agriculture have a positive impact on attendees, U.S. fairs would not embrace the need to change their programming to focus on agriculture. Would substitution of agricultural displays, events, and entertainment for carnival attractions and commercial vendors generate as much revenue for fairs? Likely, fairs would have to be willing to sacrifice revenue to increase the presence of agriculture on the showground. I think that it would be interesting to study fairs in the United States more fully to see how many of them honor their mission statements in regards to agriculture and, if they do not, their willingness to sacrifice money-making entertainment events for the inclusion of agriculture as a part of the event. Where fairs in the U.K. remain committed to the promotion of agriculture, it

seems fairs in the United States do not place an emphasis on agriculture. Therefore, they have less of an influence on attendees' attitudes about agriculture.

RO 3: Explore how GYS Livestock Show Attendees Formed Attitudes About Agriculture Before and After the Experience Using Social Cognitive Theory

Before. GYS attendees had positive attitudes about agriculture before they came to the show, despite their disconnect from agriculture and their expressed lack of knowledge about it. Fair attendees in the U.K. had more positive attitudes than fair attendees in the United States. Interestingly, both GYS attendees and CSF fairgoers lacked prior experiences with agriculture. Therefore, it was surprising that GYS attendees had more positive attitudes than CSF fairgoers because firsthand experiences, which they lacked, are important to attitude development (Bandura, 1989). Perhaps the U.K. society has more positive attitudes in general compared to the U.S. society. If so, why? How does U.K. society portray agriculture on television, social media, advertising, in school classrooms, etc.? I recommend that a study be conducted that compares the type and frequency of agriculture messaging in North Yorkshire County, U.K., and Sacramento County, U.S. to see how it influences attitude development about agriculture. This information would help to isolate the influence that participating in a firsthand experience with agriculture, like attending a fair, has on attendees' attitudes about agriculture.

In addition to attending the GYS or being exposed to agriculture through media, attendees had other previous experiences with agriculture, though limited. Attendees said that they took school field trips, visited friends' or relatives' farms, or watched a television program about agriculture. Therefore, I propose that further research be

conducted to better understand the opportunities consumers have to learn about agriculture in their daily lives. What information and delivery mechanism (e.g. television, social media, tour) is most impactful to consumers and how does it shape attitudes about agriculture? As society is so distanced from agriculture, perhaps portrayals of agriculture are now more inaccurate or negative and could have an influence on consumers' overall attitudes about agriculture. A comparison could be made between the United States and the United Kingdom that would help to understand how and why the GYS attendees came to the Show with higher attitudes than CSF fairgoers did.

In addition to having impactful, previous experiences with agriculture, perhaps GYS attendees had positive attitudes about agriculture because they attend the Show annually. Although an attendee might not experience agriculture often or ever in their daily lives, I think attending the GYS provides enough connection to and information about agriculture to satisfy consumers' demand for connection to agriculture, which would create positive attitudes about agriculture. Many attendees said that attending the GYS was a very social experience for them and that they appreciated the opportunity to interact with farmers. Is the experience of attending the GYS more or less impactful on attendees' attitudes than perhaps watching a television program about it or seeing a social media post that is about agriculture? I think that experiencing the sights and smells and communicating with exhibitors at a fair like the GYS would influence attitudes about agriculture more than a social media post or YouTube video would. But, this should be investigated more.

After. When I applied Bandura's social cognitive theory (1989) to the experience of attending the GYS, I evaluated the cognitive, behavioral, and environmental factors that influenced how attendees shaped their attitudes about agriculture. However, a limitation emerged. Although I believe that the experience of attending the GYS and the overall environment attendees' were exposed to at the Show had the largest influence on attendees' positive attitudes about agriculture, it is unclear the extent to which the interplay between the cognitive, behavioral, and environmental factors influenced actual behavior and if one factor was more influential than another. Did the sights and smells of the Show have more of an influence on attendees' attitude formation than talking with an exhibitor did? Did simply choosing to attend the Show signify a preexisting positive attitude and, therefore, outweigh the impact the Show's environment had on attendees' cognitive and behavioral opportunities? I recommend further research be conducted to better understand and clarify how attending a fair influences attendees' cognitive, behavioral, and environmental factors and which has a more dominant influence on individuals' ability to develop attitudes. This information would have been important for me to know in this study because I could have more fully understood how and to what extent people's past experiences with agriculture, their behaviors and the GYS environment influenced their attitudes about agriculture.

The experience of attending the GYS allowed consumers and producers to interact with each other. Attendees stated that these interactions helped them to improve their attitudes and increase their knowledge and understanding of agriculture. This supports the Holloway (2004) study that suggested the importance of convergence

between experts (producers) and non-experts (consumers) in developing positive associations with agriculture. As opportunities for producers and consumers to interact with each other are rare, I believe a large reason the GYS had such a positive impact of attendees' attitudes was because it provided many opportunities for attendees to talk with, observe, and learn about agricultural producers. At the CSF, fairgoers interacted with youth livestock exhibitors, but, at the GYS, there were adult and youth exhibitor. I think that GYS attendees would acquire greater knowledge about and confidence in agriculture after interacting or watching an adult exhibitor than they would from a youth exhibitor. This could explain, perhaps, a reason why the CSF did not have as large of an impact on fairgoer's attitudes as attending the GYS had on attendees' attitudes about agriculture.

There is limited interaction between producers and consumers. Therefore, people are disassociated with their food and with how it is produced and who produces it. In addition to providing an opportunity to develop positive attitudes about agriculture, I believe the combination of hands-on, educational experiences, and learning opportunities at the GYS helped attendees to associate food as agriculture. For example, at the GYS, there was a display that showed potatoes growing in the ground. As attendees walked along the display they saw the production stages the potato went through on the way to becoming a bag of crisps (potato chips), which attendees received at the end so that they could see firsthand the connection between potatoes growing in the ground and crisps (potato chips). In addition, there was a robotic milking machine and a traditional milking parlor where attendees could see cows being milked.

At the Show, judges and ring announcers gave commentary about the different livestock breeds, meat cuts, farming practices, the families who raised the animals, etc., that gave attendees an insight into the production of their food. These entertainment elements and displays helped attendees see the direct connection between agriculture and their food. However, I recommend that further research be conducted to better understand if and how consumers connect their food with agriculture and whether fairs succeed at creating connections for consumers. Do consumers think of milk and cheese when they see a dairy cow? Do they associate the farmers they see working in the field with the food they purchase in the grocery store? What opportunities, aside from shows like the GYS, exist that help people connect food to farming? How do people's abilities to connect the two influence their attitudes about agriculture? All of these questions are worthy of future research.

Because the experience of attending the Show proved to have a positive influence on attendees' attitudes about agriculture, I recommend further research that explores what elements of the GYS experience were most impactful to attendees. For example, how did attendees' attitudes change after they observed a farmer exhibiting their lamb in the show ring, listened to the judge's reasons, saw the great diversity of cattle breeds, watched a family working together to prepare for the show, or learned about robotic milking machines? Which experience changed their attitude most? Knowing what elements of their experience at the GYS most resonated or influenced attendees' attitudes could help fair organizers, agricultural educators and communicators, and Extension agents better understand how to provide consumers with

quality experiences related to agriculture. It could also help them select which elements to replicate at fairs or similar events in United States.

Knowing what elements of the GYS most positively influenced attendees' attitudes about agriculture could help the GYS or other fairs to emphasize them or to improve those elements that do not have a positive influence on attendees' attitudes about agriculture. Fairs in the United States especially, should consider improving the agricultural-based elements offered to maximize their influence. For example, at the GYS, the livestock show rings were located in a large, open and visible area that was right off of a major walkway. In addition to a judge who gave reasons at the end of each class, a commentator gave industry facts and breed information and generally educated the audience about livestock animals. Fairs in the United States, however, are often not organized in such a way. Therefore, fairs in the United States could, perhaps, adopt similar tactics to encourage livestock show attendance. To improve attendees' overall experience, I think that fairs could allow show attendees to question and talk with the judges and exhibitors at the end of the class or the show. In addition, fairs should encourage livestock judges to give information to the audience about how and why they placed the class a certain way and not just use industry specific terms that the audience likely will not understand. Instead, they should try to disseminate basic information about the animals, their care, and their connection to food and fiber in a way the public can understand.

The experience of attending a fair gives attendees an opportunity to learn about agriculture and to shape their attitudes about it. However, from this study, I was not able

to determine how much of attendees' attitude change was related to the new information gained from the experience compared to simply having in-person experiences with agriculture. Undoubtedly, a society distanced from agriculture benefits from opportunities to learn about food; however, I wonder if possessing information about agriculture is necessary for an individual to have a positive attitude about it. Therefore, future research could be conducted to investigate what changes attitudes about agriculture. Do consumers need to receive educational information or participate in firsthand experiences?

At fairs, attendees encounter information about agriculture that they would not normally encounter in their daily lives. Although they have the option to receive information, I wonder if attendees actually retain it and use it in their lives. Researchers should investigate if fairs provide information individuals use to inform their buying and voting decisions attending or if the information provided is a factor in attendees' positive attitudes about agriculture. Further research should analyze what information attendees retain from the experience of attending a fair and also how they use that information in their daily lives. This would help to quantify the impact that fairs have and perhaps encourage fair organizers to increase the prominence and presence of agriculture at their events.

Finally, although fairs provide an opportunity for attendees to have firsthand experiences with agriculture, do they present an accurate portrayal of agriculture to the public, or do they feed the perception that farmers know the name of every one of their hogs and that all cows are clean 24/7? I believe, because society is so distanced from

agriculture and people lack basic information about it, fair organizers, agricultural communicators and educators, and Extension agents have a responsibility to maximize the few opportunities, like fairs, consumers have to experience agriculture. It is likely far easier to provide a depiction of agriculture that includes red barns, cute lambs, and green tractors than it is to educate the public about GMOs, precision agriculture, or sustainability. Therefore, fairs should be careful to provide agricultural displays and activities that do not oversimplify the dynamic reality of 21st century agriculture and, therefore, mislead consumers about the complexity of the agricultural industry. I believe Extension agents, especially, should assist show organizers with providing content that appropriately educates the public about agriculture without adding confusion or ambiguity.

Implications

As 100% of our society relies on agriculture every day but only two percent of society is involved in agricultural production, it is important for consumers to have firsthand experiences that allow them to become educated about agriculture. Unfortunately, few opportunities exist aside from attending fairs. In the United States, perhaps, fairs do not fully capitalize on the opportunity to provide agricultural experiences and education for attendees because, unlike fairs in the U.K., they have moved away from their original purpose. Because fair organizers, agricultural communicators and educators, and Extension agents can be the catalysts for attitude development, they should fully maximize attendees' experiences at fairs to positively influence attitudes about agriculture.

Opportunities to see livestock animals, producers, and agricultural technologies, to hear about production practices, and to see the pride that agriculturists have for the industry will help consumers to feel more connected to their food and those who produce it. Such opportunities will help to improve the public's attitude about agriculture, which could have positive effects on consumer's buying and voting decisions.

Because society does not have a basic connection to agriculture, communicating information about the industry's many different and dynamic components is challenging, and each consumer is likely to have a different definition of the word "agriculture." Thus, the word "agriculture" could mean 100 different things to 100 different people. So, if we do not provide firsthand experiences that provide basic information about agriculture and help consumers to have a general understanding of food, fiber, and production processes, we cannot expect them to have positive attitudes. Ultimately, those tasked with connecting consumers and producers should consider using fairs and other high-impact, firsthand experiences with agriculture to improve the public's attitude about agriculture and satisfy their demand for knowledge about the agricultural industry.

Limitations

Overall, this study yielded valuable data that will help us to better understand how attitudes about agriculture are formed and how fairs provide opportunities for attendees to develop positive attitudes about agriculture. However, there were several limitations to this study including the fact that I attended only one major fair in the U.K. If I would have had more time and financial resources, I would have been able to survey

several of the largest and most prominent fairs in the U.K. Those data could have provided me with more breadth of understanding about how fairs in the U.K. influence attitudes. Another limitation was that, because I had food poisoning on the first day of the Show, I missed one out of the three potential days for data collection. I was able to make up for the lost day by working hard to collect surveys and to conduct interviews the other two days, which were sufficient for this study. I interviewed 10 participants before reaching data saturation. However, I interviewed only attendees who had positive attitudes about agriculture before attending the GYS. This could have limited my findings as data from attendees who did not have positive attitudes before attending the Show would have also been valuable. Had I been able to attend the CSF, in addition to the GYS, and conducted a qualitative study, I perhaps would have been able to make additional comparisons based on my observations. These comparisons would have helped me to better understand the differences that exist between the CSF and GYS and how they, perhaps, influenced attendees' changes in attitude.

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APPENDICES

APPENDIX A

IRB LETTER

DIVISION OF RESEARCH



**APPROVAL
MODIFICATION OF PROTOCOL**
Using Exempt Procedures

June 21, 2017

Type of Review:	IRB Amendment
Title:	Livestock Show Attendees' Attitudes About Animal Agriculture at the Great Yorkshire Show
Investigator:	Holli Archer
IRB ID:	IRB2017-0320M
Reference Number:	055799
Funding:	
Documents Approved:	Busick Survey2
Special Determinations:	
Risk Level of Study:	Not Greater than Minimal Risk under 45 CFR 46 / 21 CFR 56
Review Category:	

Dear Holli Archer:

On 06/21/2017 the IRB approved the modification(s) described below:

Revised Survey has been approved.

If you have any questions, please contact the IRB Administrative Office at 1-979-458-4067, toll free at 1-855-795-8636.

Sincerely,
IRB Administration

APPENDIX B
RECRUITMENT SCRIPT

Script

To approach participants:

Hi, my name is Brytann. I'm a master's student studying agricultural from the United States.

Would you be willing to take a short, five-minute survey about your experience at the livestock show to help me with my thesis research?

If they say no:

Sorry to bother you. Thank you for your time.

If they say yes:

Great, thank you! To determine your eligibility I need to ask you two basic questions. One, are you 18 years or older? Two, have you been to the livestock show today?

If they are 18 years or older but have not been to the livestock show I will say:

Please go enjoy the exhibits and return when you have been to the livestock show.

If they are 18 years or older and have been to the livestock show I will hand them a survey and direct them to the data collection table

Here is your survey, please complete it at the data collection table (pointing). Thank you for your help

Data Collection Table

At the data collection table the research volunteers, led by my Research Assistant, will explain how to fill out the survey, demonstrating where to start

This portion (pointing) is a consent/waiver indicating there is no harm to you and that you agree to take the survey, this side (pointing to the right side) is demographic information. –Flip- This left hand column is how you felt before attending the livestock show, and the right (pointing) is how you felt after. Once you are finished, bring your completed form to me.

Survey Collection

The research volunteers, led by my Research Assistant, will check to see the survey is

complete; each question on the back needs to be answered.

If a section on the back of the survey was missed, the volunteers will say:

It appears you missed a section, would you mind filling it out?

If they do not wish to fill it out completely, it will be placed in a separate file.

If it is complete:

Thank you for your time and participation, we greatly appreciate your help.

Then, volunteers will place the survey in the box provided.

APPENDIX C

INFORMATION SHEET

Project Title: Livestock Show Attendees' Attitudes About Animal Agriculture at the Great Yorkshire Show

You are invited to take part in a research study being conducted by Brytann Busick, a researcher from Texas A&M University. The information in this form is provided to help you decide whether or not to take part. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have. You may choose to withdraw from the study at any time without penalty. NOTE: If you are employed then it is your responsibility to work with your employer about work leave for participation in this study if during work hours.

Why Is This Study Being Done?

The purpose of this study is to determine if attending a U.K livestock show changes attendee's attitudes about animal agriculture.

Why Am I Being Asked To Be In This Study?

You are being asked to be in this study because you are 18 or older and attended the livestock show.

How Many People Will Be Asked To Be In This Study?

One thousand five hundred people will be invited to participate in this study locally.

What Are the Alternatives to being in this study?

The alternative to being in the study is not to participate.

What Will I Be Asked To Do In This Study?

You will be asked to fill out a questionnaire. Your participation in this study will last up to five minutes. You may also be asked to participate in a 15-minute interview.

Will Photos, Video or Audio Recordings Be Made Of Me during the Study?

With your permission, the researcher will make an audio recording during the interview to capture information accurately and completely. If you don't want to be recorded, the researcher will take written notes.

Are There Any Risks To Me?

The things that you will be doing are no more than risks than you would come across in everyday life.

Will There Be Any Costs To Me?

Other than your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?

You will not be paid for being in this study.

Will Information From This Study Be Kept Private?

The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. The transcribed notes and consent forms will be saved/filed in an official area. The Principal Investigator and research study personnel will have access to your information. Representatives of regulatory agencies such as the Office of Human Research Protections (OHRP) and entities such as the Texas A&M University Human Subjects Protection Program may access your records to make sure the study is being run correctly and that information is collected properly. Information about you and related to this study will be kept confidential to the extent permitted or required by law.

Who may I Contact for More Information?

You may contact the Principal Investigator, Dr. Holli Leggette, Ph.D., to tell her about a concern or complaint about this research at 979-458-3039 or hollileggette@tamu.edu. You may also contact the primary researcher, Brytann Busick at 707-599-5523 or brytannbusick@tamu.edu.

For questions about your rights as a research participant, to provide input about research, or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Research Protection Program (HRPP) by phone at 1-979-458-4067, toll free at 1-855-795-8636, or by email at irb@tamu.edu. The informed consent form and all study materials should include the IRB number, approval date, and expiration date. Please contact the HRPP if they do not.

What if I Change My Mind About Participating?

Your participation in this research is voluntary. You have the choice whether or not to be in this study. You may decide to not begin or to stop participating at any time.

APPENDIX D

INSTRUMENT USED AT GYS

Please provide the information that best describes you by placing an "X" in the appropriate boxes and filling in the blanks below.	
Age	_____
Gender	Male <input type="checkbox"/> Female <input type="checkbox"/>
Education	High school <input type="checkbox"/> some higher education <input type="checkbox"/> Bachelor's degree <input type="checkbox"/> Advanced degree <input type="checkbox"/>
Current Residence	Farm <input type="checkbox"/> Rural <input type="checkbox"/> Suburban <input type="checkbox"/> Urban <input type="checkbox"/>
Have you ever owned livestock?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Did you participate in Young Farmers?	Yes <input type="checkbox"/> Years <input type="checkbox"/> No <input type="checkbox"/>
Do you have relatives who live on a farm?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Do you work in agriculture?	Yes <input type="checkbox"/> No <input type="checkbox"/>
About what time did you attend the livestock show? _____	About how many hours did you spend at the livestock show? _____ hours
Do you know an exhibitor in the livestock show? Yes <input type="checkbox"/> No <input type="checkbox"/>	If so, how well do you know them?
Did you interact with an exhibitor? Yes <input type="checkbox"/> No <input type="checkbox"/>	If so, how many exhibitors? _____ For how much time? _____ hours _____ minutes
Why did you come to the GYS?	

EXAMPLE: Please rate the concept “Livestock shows are” according to how you **FELT BEFORE** attending the Great Yorkshire Show livestock show by placing an “X” along the scale.

Please rate the concept “Livestock shows at the Great Yorkshire Show are” according to how you FELT BEFORE attending the livestock show by placing an X along the scale.								
Livestock Shows at the Great Yorkshire Show are...								
Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bad
Pleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unpleasant
Happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sad
Dirty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clean
Important	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unimportant
Beautiful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ugly
Successful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unsuccessful
Boring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Interesting
Honest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dishonest
Positive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Negative
Cruel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Kind
Valuable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Worthless

Please rate the concept “Livestock shows at the Great Yorkshire Show are” according to how you FELT AFTER attending the livestock show by placing an X along the scale.								
Livestock Shows at the Great Yorkshire Show are...								
Pleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unpleasant
Boring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Interesting
Happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sad
Valuable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Worthless
Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bad
Successful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unsuccessful
Dirty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clean
Important	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unimportant
Positive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Negative
Cruel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Kind
Beautiful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ugly
Honest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dishonest