

SELECTED STUDENTS' EUROCENTRIC ATTITUDES ABOUT AGRICULTURE

A Thesis

by

LAUREN ASHLEY ROUSE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

August 2009

Major Subject: Agricultural Education

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ABSTRACT

Selected Students' Eurocentric Attitudes about Agriculture. (August 2009)

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Eurocentrism suggests a western model of daily life that should be adopted, because it is seen as the only solution to the world's challenges. Studies identified that students' perceptions of their own global awareness and attitudes toward internationalism reflected ideas of Eurocentrism, and agricultural students exhibited limited international experience and backgrounds. Persaud and others posited that Eurocentric views held by students may be associated with historical socio-cultural conditioning. The purpose of this study was to determine college students' Eurocentric attitudes about agriculture, the factors influencing those views, and how students' attitudes differed between grade levels. A stratified random sample of students ($N = 166$) was asked to complete an online questionnaire. The instrument measured students' Eurocentric attitudes about agriculture using a Likert-type five-point scale. Students responded whether they strongly agreed, agreed, had no opinion, disagreed, or strongly disagreed with 16 Eurocentric statements about agriculture. Descriptive statistics (mean, standard deviation, one-way ANOVA (analysis of variance), radar plots) were used to analyze the data. This study showed that selected students had Eurocentric attitudes about agriculture. While upperclassmen held some less Eurocentric attitudes about

agriculture than those of underclassmen, Eurocentric attitudes were still represented.

Students generally agreed and sometimes strongly agreed with the 16 proposed

Eurocentric statements.

DEDICATION

I would like to dedicate this degree to my family and friends. Thank you for all the support and love during the time it took me to pursue a master's degree. Without you, this experience would have been overwhelming. Thanks for sticking with me through the tears and the laughter.

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I would like to thank all of the people who have impacted my life up until now.

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CHAPTER I

INTRODUCTION

Eurocentric views are still prevalent in today's society. Eurocentrism creates a permanent core and a periphery from which socio-economic, cultural, and political ideas disseminate into the world (Persaud, Parrish, Wang, & Muffo, 2008). To follow, Eurocentric attitudes and beliefs are still widely held by students in colleges of agriculture across the United States.

This study was based on three objectives:

1. Measure college of agriculture students' Eurocentric attitudes about agriculture
2. Compare college of agriculture students' Eurocentric attitudes about agriculture based on grade classification
3. And, measure outside influences on these projected Eurocentric attitudes

This thesis follows the style of the *Journal of International Agricultural and Extension Education*.

Theoretical Framework

Fals-Borda and Mora-Osejo (2003) posited that “Eurocentrism proposes the western mode of life, economy, and culture as a model to be adopted by the rest of the world, as the only solution to the challenges of our times” (p. 32). Although Blaut (1993) rejected Eurocentrism, he argued that Eurocentrism is a label used to group all of the beliefs that Europeans are superior over non-Europeans and minorities. Eurocentrism creates a permanent core and a periphery from which socio-economic, cultural, and political ideas disseminate into the world (Persaud et al., 2008). “To be precise, Eurocentrism includes a set of beliefs that are statements about empirical reality, statements educated and usually unprejudiced Europeans accept as true, as propositions supported by ‘the facts’” (Blaut, p. 9).

This form of Eurocentrism developed from the Enlightenment period when individuals perceived European traits as universal traits applicable to all humanity; once this idea was founded, “the rest of the world” mentality flourished (Peet, 2005). Blaut noted that Eurocentrism is embedded in culture and helps explain why these historical beliefs persist; despite no apparent rationale for the acceptance of such beliefs, believers still retain and propagate similar beliefs.

The beliefs of Eurocentrism developed from several myths that Anglo-Saxons and Americans have believed for hundreds of years. Caldwell (2006) argued that the origins of Anglo-Saxon superiority are unknown, but that it most likely began with the first Angle and Saxon people. Caldwell added that the rise of these superiority myths

heightened in the nineteenth century as conflict erupted between the Germanics and the French. Therefore, Caldwell posited

Today, there are many myths of American superiority, and most Americans devoutly believe their nation to be superior to all others in countless ways. They are convinced of the superiority of America's national culture, ideology, and values. They are certain that American political, social, and economic institutions are superior to all other systems, and that the sum of it all, "the American way of life" will inevitably constitute the final destiny of mankind. (p.139–140)

Caldwell went on to argue that

America's superiority thus becomes a given, an axiom, a fundamental universal principle, indelibly written on the American consciousness in the language of Divine Providence, aloof isolationism, frontier individualism, Manifest Destiny, historically ingrained xenophobia, and unswerving ideological fundamentalism. (p. 140)

From these beliefs ingrained in American ideology grew several myths of why Americans express love for and trust in their country — and why these myths often lead to Eurocentric beliefs.

Hughes (2003) argued that "a myth is a story that speaks of meaning and purpose, and for that reason it speaks truth to those who take it seriously" (p. 2). Hughes (2003) also posited that American national stories, or national myths, are created to explain why Americans express love toward and faith in the United States, as well as "affirm the meaning of the United States" (p. 2). As a result, Hughes outlines five myths

that emerged in the American psyche: The Chosen People; Nature's Nation; the Christian Nation; the Millennial Nation; and the Innocent Nation.

The myths set the foundation for why Americans may possess Eurocentric ideologies.

The myth of the Chosen Nation arose under the Puritans. The Puritans identified themselves as a people chosen by God to leave oppression in Europe and move to the newly discovered Americas. They were so convincing with their tellings of and using of this story that it became part of the American psyche (Hughes, 2003).

The myth of Nature's Nation arose during the American Revolutionary period with new ideas emerging from changing religious ideas and movements. The most influential person contributing to this new religious movement was Edward Lord Herbert of Cherbury, who argued that religion should be reduced to "a set of self-evident essentials upon which all reasonable human beings could agree" (Hughes, 2003, p. 48). This idea of religion was grounded in nature and reason. Believers of this notion were to look to nature and reason to explain religion, God's doings and other things in the human world. Hughes argued that "at its core, this myth encouraged Americans to ignore the power of history and tradition as forces that shaped the nation" (p. 56).

Furthermore, Thomas Jefferson expanded on the idea of the Nature's Nation in the Declaration of Independence when he did not use any references toward any biblical, koranic, judaic, or buddhist texts beliefs or ideas (Hughes, 2003). Instead, Jefferson referenced a god that all Americans could see in nature (Hughes, 2003). From Jefferson's declaration came what Hughes called the American Creed: "The creed

proclaims that among all the truths one might encounter in a lifetime, there are certain truths that are simply ‘self-evident’ and require no formal proof” (p. 63). Hughes added

Because the principles they were bound to find were the very ones with which they began, Americans folded into the myth of Nature’s Nation virtually all the significant contents of their culture. From this perspective, “white” was natural. So was democracy and representative government. (p. 64)

Even though the United States of America was founded on the ideas of no particular religion and no national church, Christian and Jewish ideas and values still influenced political decisions and institutions. Hughes (2003) noted that Novak documented these findings. Furthermore, the idea of the Christian Nation grew stronger under nineteenth century religious revivalism in the United States. Hughes argued that the revivalism of

The Second Great Awakening sought to Protestantize the nation. Second, it sought to transform the republic into the Kingdom of God, whose social order would be thoroughly reformed according to biblical principles. In these ways, the United States would become a distinctly Christian nation. (p. 70)

Additionally, Hughes (2003) posited that the myth of the Christian Nation was a product of the beliefs of Puritans, the Christian, and the Jewish influences on politics and nineteenth century revivalism.

The myth of the Millennial Nation “suggested that the United States would illumine the globe with truth, justice, goodness, and democratic self-government and would thereby usher in a final golden age for all humankind” (Hughes, 2003, p. 91).

Hughes argued that people would bring in a golden age through “human initiative, especially science, rational thought, and education” (p. 94). Hughes also noted that one of the beliefs that arose among the myth of the Millennial Nation was that Americans believed “America was no ordinary nation, corrupted by time and tradition. Instead it was radically new, a nation that would bless all the nations of the world with the glories of the long-anticipated millennial age” (p. 101). Hughes argued the following point,

The millennium, therefore, would be a time when God’s chosen people would liberate and enlighten all the peoples of the earth, when Protestant Christianity would reign supreme, and when all things would be conformed to the standards of “Nature and Nature’s God.” Though Americans imagined it a universal vision, they nonetheless understood it in distinctly Eurocentric terms. (p. 122)

Finally, the myth of the Innocent Nation emerged from Americans believing that when faced with great evil one believes he is righteous and innocent; this was the case during World War II, for example (Hughes, 2003). Furthermore, this myth built upon the four previous myths, especially the myths of Nature’s Nation and the Millennial Nation (Hughes, 2003). Hughes argued that America saw itself as “an innocent child” in the world, because it had not been affected by the scars of human history in other regions of the world (p. 155).

Eurocentrism in Education

Despite the way the myths developed, African Americans, Native Americans, women, poor whites, and other citizens of the United States saw the flaw in the myths

(Hughes, 2003). Hughes noted that the above citizens' concerns and voices were nearly never heard, so much so that the myths mentioned were unchallenged until the 1960s.

Although much research has been done to counteract the effects of Eurocentrism, its beliefs and ideals still prevail. Studies (Clarke, 2004; Persaud et al., 2008; Zhai & Scheer, 2004) found that students' perceptions of their own global awareness and attitudes toward internationalism reflected ideas of Eurocentrism. Furthermore, researchers (Bruening & Frick, 2004; Irani, Place, & Friedel, 2006; Zhai & Scheer, 2002) found that students had low levels of knowledge about other countries, that students' interests in studying abroad influenced how they perceived other countries, and students' ethnocentrism increased as they aged. However, others (Persaud et al.) found that Eurocentric attitudes of students enrolled in agriculture programs diminished with age.

Eurocentric views are representative of a student's global competency. Increased diversity in institutions suggests that individuals should exhibit cultural sensitivity and competency (Zhai & Scheer, 2004). Irani et al. (2006) noted that agricultural students exhibited limited international experience and backgrounds. "Therefore, it is crucial that agriculture students become more knowledgeable about other countries, their cultures, economy, and roles in world affairs" (Zhai & Scheer, 2004, p. 40).

Although previous researchers have calculated students' global competency and Eurocentric views in general (Clarke, 2004) and in agriculture (Persaud et al., 2008; Zhai & Scheer, 2004), further research is needed to assess other factors influencing students' Eurocentric views about agriculture.

In a call for education to be more than that of parent to child and based on theology and the classics, a demand for educating the working class grew during the mid- to late-1800s (Herren & Edwards, 2002). Therefore, the passage of the 1862 Morrill Act creating the land-grant colleges of agriculture sought to “bring higher education of a practical nature to citizens of ordinary means” (National Research Council, 1996, p. 13). Herren and Edwards noted that with the foundation of the land-grant universities, “education was now also *of, by, and for the people*” (original author emphasis); people of ordinary means could now move up in society with the benefit of an education (Herren & Edwards, 2002, p. 95).

Although many of today’s land-grant universities are known for their agricultural roots, some have little agricultural connection, and many land-grant colleges of agriculture have fewer students coming from agricultural backgrounds (National Research Council, 1995). The National Research Council (1996) noted that broadening and diversifying programs in colleges of agriculture is an important step, because it has a “potential payoff for the colleges’ traditional agricultural clientele, because expanding input and participation by diverse groups is an important means of broadening the constituency base for food and agricultural science and education” (p. 25). However, one way colleges of agriculture at land-grant universities are addressing change in the colleges’ student populations and course offerings is by offering students a broadened curricula that reflects the diversification and global change of today’s agriculture sector (National Research Council, 1996). “Relevancy and accessibility are at the heart of the land-grant philosophy and mandate” (National Research Council, 1996, p. 21). The

National Research Council (1996) posited that land-grant colleges of agriculture need to seek new and different ways to interest and recruit students with little or no agricultural background, because the students do not see beyond traditional farming agriculture.

Persaud et al. (2008) argued that the nationalistic notion of traditional farming production agricultural education could lead to biases of students attending land-grant universities. Furthermore, Persaud et al. posited that “students’ Eurocentric views on agriculture are probably associated with socio-cultural conditioning embedded historically by precept and example in the (essentially neo-European) North American psyche as proposed by Hughes (2003)” (p. 32).

In a study of 701 college students, Clarke (2004) found that students’ perceptions of their own global awareness and attitudes about internationalism reflected ideas of Eurocentrism. Clarke measured global awareness by foreign language study, frequency of visits abroad, degree of media exposure, study in courses of non-Western civilization, and personal involvement with a person from another country. A majority of students (71%) responded affirmatively to the proposed statement that the United States was superior to other countries in the world. Clarke also found that students had low levels of knowledge about other countries, their interests in studying abroad influenced how they perceived other countries, and ethnocentrism increased with students’ age.

However, Persaud et al. (2008) found that Eurocentric attitudes of students enrolled in agriculture programs diminished with age. College freshmen and seniors responded to 16 Eurocentric propositions about North American agriculture, and Persaud found that freshman displayed higher levels of Eurocentric attitudes than did seniors.

Zhai and Scheer (2004) noted that students enrolled in agriculture programs had moderate global perspectives.

Persaud et al. (2008) defined global competency as a student's ability to analyze nature and society with a truly global world view and context. Zhai and Scheer (2004) suggested that students who exhibited more contact with people from other countries and diverse backgrounds, were more likely to have a more open global perspective and positive attitude toward diversity.

Globalization, cultural competency, and diversity have become increasingly important in higher education institutions (Zhai & Scheer, 2004). Irani et al. (2006) noted that agricultural students exhibited limited international experience and backgrounds. "Therefore, it is crucial that agriculture students become more knowledgeable about other countries, their cultures, economy, and roles in world affairs" (Zhai & Scheer, p. 40). Zhai and Scheer noted that an assessment of maturation of students' global competency and perspectives of cultural diversity was important to the future of educational courses. Study abroad programs broadened university students' global competency (Zhai & Scheer, 2002). Zhai and Scheer's (2002) respondents stated that study abroad had a positive impact on their cultural competency by increasing their international awareness. Bruening and Frick (2004) argued "that students who participated in international experiences could be more effective domestic citizens, because they would be able to bring global ideas to the local agribusiness community" (p. 90).

Although previous studies have calculated students' global competency and Eurocentric views in general (Clarke, 2004) and in agriculture (Persaud et al., 2008; Zhai & Scheer, 2004), further research is needed to assess other factors influencing students' Eurocentric attitudes about agriculture.

Purpose

The purpose of this study was to determine college students' Eurocentric attitudes about agriculture and the factors influencing those views.

Objectives

The objectives of the study were to

1. Describe students' Eurocentric attitudes about agriculture;
2. Identify differences in college students' Eurocentric attitudes when compared by grade classification; and
3. Determine factors influencing students' Eurocentric views about agriculture.

Design

The research design was descriptive, employing quantitative methods with open-ended questions. Quantitative data were collected using a Likert-type 5-point scale to measure students' Eurocentric attitudes about agriculture. Students' Eurocentric attitudes about agriculture were measured at a single point in time.

Population

The population of interest ($N = 166$) for this study included selected underclassmen and upperclassmen college students enrolled in a seminar class in the College of Agriculture and Life Sciences at Texas A&M University. This population

was of interest because it included students from a variety of majors and grade levels not necessarily associated with the department in which the course is taught. The course is administered through a non-degree program in the academic dean's office.

A stratified random sample was taken from one undergraduate course, AGLS 101 in the College of Agriculture and Life Sciences. The AGLS 101 course, *Modern Agricultural Systems and Renewable Resources*, is an introductory course for the College of Agriculture and Life Sciences introducing students to modern agriculture and natural, human, and scientific resources that influence it. Historic enrollment for this course is approximately 300 students from several majors. Two sections with approximately 340 students are offered in spring semester 2009, thus totaling 680 students. The accessible population of the study was $N = 166$.

Sample

The sample size ($N = 166$) was determined using Dillman's (2007) methods for deriving a probability sample. The researcher used an 80/20 split with a 5% sampling error at a 95% confidence level (Dillman). The 80/20 split was chosen due to the variance in the population with respect to the subject of interest. All classifications — freshman, sophomore, junior, and senior — of male and female students, ranging in age from 18 to 25, were the target audience.

Stratified random sampling was employed to ensure the sample was representative of the population. Stratification adds precision and ensures the sample is proportional across the population (Tuckman, 1999). Random sampling allows the researcher to control for selection bias and to precisely estimate the characteristics of a

population (Tuckman). When respondents are chosen using stratification and random selection, the likelihood of a population-representative sample increases (Tuckman). The strata were students in the College of Agriculture and Life Sciences and all other colleges at Texas A&M University. All students were entered into a Microsoft Excel spreadsheet and a representative number of students for each stratum was derived from the population of interest. The study produced a response rate of 37% ($N = 62$).

Instrumentation

The research instrument measured students' self-reported Eurocentric attitudes about agriculture using a Likert-type five-point scale. Students responded whether they *strongly agreed, agreed, had no opinion, disagreed, or strongly disagreed* with 16 Eurocentric statements about agriculture. The instrument is an adaptation of the Persaud et al. (2008) research of land-grant institution students' Eurocentric views about agriculture. Persaud et al. based their research on Landes' (1998) work, who proposed 16 Eurocentric propositions regarding North American and European agriculture. These propositions included statements regarding Eurocentric perceptions of climate, natural disasters, soils, land degradation, overpopulation, culture, and agriculture practices. Example proposition statements included: *The climate of North America/Europe is more favorable for agriculture than are the climates of other continents; The soils in North America/Europe are more fertile than in the other continents; and North American agriculture flourished because European immigrants were particularly capable of scientific thought.*

Students' demographic information (class, gender, and college) was collected with the survey instrument. Information about students' study abroad experiences was collected through open-ended questions in the survey instrument.

Students accessed the online questionnaire to determine Eurocentric attitudes about agriculture. Two survey instruments were created for student completion. The first contained proposition statements worded similar to those in the Persaud et al. (2008) study. The second instrument was created to test for reliability and contained several statements that were negatively worded. Both instruments were found to be valid and reliable with .91 and .85 respective reliabilities. The complete survey instruments are found in Appendix A.

Data Collection

Data were collected with an online questionnaire. Students were contacted through their HOWDY Web portal accounts, and were provided with a link to complete the online questionnaire. Students completed the survey in the privacy of their own residence or on a public computer, like those in the Student Computing Center. The questionnaire took no longer than three minutes to complete. A personalized e-mail was sent to students two days before the survey, notifying them of the questionnaire and its stipulations. A second personalized e-mail was sent, through students' HOWDY Web portal accounts, two days after the pre-notice with a link to the actual study. Follow-up personalized e-mails were sent to non-respondents after the initial distribution, for approximately seven days. Participants' names, unique passwords, and e-mail addresses

remained confidential. After completion of the questionnaire, a thank you e-mail was sent to students through the HOWDY Web portal.

Data Analysis

Descriptive statistics and non-parametric tests were used to analyze the data. Data analysis was modeled after the procedures used by Persaud, et al. (2008) in their study of land-grant students' Eurocentric views on agriculture. The model was used to analyze the association of educational level and response, marginally or conditionally, on college and gender. Radar plots were used to represent statistical data of student responses to the 16 propositions proposed by Persaud et al. (2008).

CHAPTER II
COLLEGE OF AGRICULTURE STUDENTS' EUROCENTRIC ATTITUDES
ABOUT AGRICULTURE

Introduction

Eurocentric views are prevalent in today's society. To follow, Eurocentric attitudes and beliefs are still widely held by students in colleges of agriculture across the United States.

Although previous researchers have calculated students' global competency and Eurocentric views in general (Clarke, 2004) and in agriculture (Persaud et al., 2008; Zhai & Scheer, 2004), further research is needed to assess other factors influencing students' Eurocentric views about agriculture.

This study attempted to measure college of agriculture students' Eurocentric attitudes about agriculture, and attempted to measure outside influences to these Eurocentric attitudes.

Theoretical Framework

In a call for education to be more than that of parent to child based on theology and the classics, education for the working class grew during the mid- to late-1800s (Herren & Edwards, 2002). Therefore, the passage of the 1862 Morrill Act created the land-grant colleges of agriculture to "bring higher education of a practical nature to citizens of ordinary means" (National Research Council, 1996, p. 13). People of ordinary means could now move up in society with the benefit of an education (Herren & Edwards, 2002, p. 95).

Although many of today's land-grant universities are known for their agricultural roots, some have little agricultural connection with fewer students identifying agricultural backgrounds (National Research Council, 1995). However, one way colleges of agriculture at land-grant universities are addressing change in the colleges' student populations and course offerings is by offering students a broadened curricula that reflects the diversification and global change of today's agriculture sector (National Research Council, 1996). The National Research Council posited that land-grant colleges of agriculture need to seek new and different ways to attract and recruit students with little or no agricultural background, because students do not see beyond traditional farming agriculture.

Persaud et al. (2008) argued that the nationalistic notion of traditional farming production-based agricultural education and socio-cultural conditioning of Eurocentric attitudes could lead to biases of students attending land-grant universities and development of these attitudes.

Blaut (1993) argued that Eurocentrism is a label used to group all of the beliefs that Europeans are superior over non-Europeans and minorities. "To be precise, Eurocentrism includes a set of beliefs that are statements about empirical reality, statements educated and usually unprejudiced Europeans accept as true, as propositions supported by 'the facts'" (Blaut, p. 9). Blaut (1993) noted that Eurocentrism is embedded in culture and helps explain why historical beliefs persist; despite no apparent rationale for the acceptance of such beliefs, believers still retain and propagate similar beliefs.

Caldwell (2006) argued that the origins of Anglo-Saxon superiority are unknown, but that it most likely began with the first Angle and Saxon people. Therefore, Caldwell argued

Today there are many myths of American superiority, and most Americans devoutly believe their nation to be superior to all others in countless ways. They are convinced of the superiority of America's national culture, ideology, and values. They are certain that American political, social, and economic institutions are superior to all other systems, and that the sum of it all, "the American way of life" will inevitably constitute the final destiny of mankind. (p.139–140)

Hughes (2003) argued that "a myth is a story that speaks of meaning and purpose, and for that reason it speaks truth to those who take it seriously" (p. 2). As a result, Hughes outlined five myths that emerged in the American psyche: the Chosen People; Nature's Nation; the Christian Nation; the Millennial Nation; and the Innocent Nation.

From the beliefs passed down in American culture, grew the myths used to support these beliefs — and the surfacing of Eurocentric attitudes to support them.

The myth of the Chosen Nation arose under the Puritans. The Puritans identified themselves as a people chosen by God to leave oppression in Europe and move to the Americas. These ideas were passed down through stories that it convincingly became part of the American ideology (Hughes, 2003).

The myth of Nature's Nation arose during the American Revolutionary period when new ideas emerged from changing religious ideas and movements. Hughes (2003)

argued that “at its core, this myth encouraged Americans to ignore the power of history and tradition as forces that shaped the nation” (p. 56).

Hughes (2003) added

Because the principles they were bound to find were the very ones with which they began, Americans folded into the myth of Nature’s Nation virtually all the significant contents of their culture. From this perspective, “white” was natural. So was democracy and representative government. (p. 64)

Furthermore, Hughes (2003) posited that the myth of the Christian Nation was a product of the beliefs of Puritans, the Christian and Jewish influences on politics and nineteenth century revivalism. The beliefs under the Christian Nation myth grew stronger under 19th century revivalism, specifically during the Second Great Awakening, that sought to transform the United States into a nation living by biblical principles.

The myth of the Millennial Nation “suggested that the United States would illumine the globe with truth, justice, goodness, and democratic self-government and would thereby usher in a final golden age for all humankind” (Hughes, 2003, p. 91). Hughes noted that one of the beliefs arising from the myth of the Millennial Nation was that Americans believed “America was no ordinary nation, corrupted by time and tradition. Instead it was radically new, a nation that would bless all the nations of the world with the glories of the long-anticipated millennial age” (p. 101).

Hughes (2003) argued that America saw itself as “an innocent child” in the world, because it had not been affected by the scars of human history in other regions of the world; through this ideology emerged the myth of the Innocent Nation (p. 155).

Despite the way the myths developed, African Americans, Native Americans, women, poor whites and other historically minority citizens of the United States saw the flaw in the myths (Hughes, 2003). Hughes wrote that the citizens' concerns and voices were nearly never heard, so much so that the myths mentioned were unchallenged until the 1960s.

Resultingly, the myths of American ideology and Eurocentric attitudes are still being passed down through the generations. Today, Eurocentric attitudes are apparent in academia.

In a study of 701 college students, Clarke (2004) found that students' perceptions of their own global awareness and attitudes about internationalism reflected ideas of Eurocentrism. A majority of students (71%) responded affirmatively to the statement that the United States was superior to other countries in the world. Clarke also found that students had low levels of knowledge about other countries, their interests in studying abroad influenced how they perceived other countries, and ethnocentrism increased with students' age.

However, Persaud et al. (2008) identified that Eurocentric viewpoints of agriculture students diminished with age. Zhai and Scheer (2004) noted that students enrolled in agriculture programs had moderate global perspectives.

Purpose of Study

The purpose of this study was to determine college students' Eurocentric attitudes about agriculture and the factors influencing those views.

Objectives

Two objectives guided the research:

1. Describe students' Eurocentric attitudes about agriculture; and
2. Determine factors influencing students' Eurocentric views about agriculture.

Methods

The population of interest ($N = 359$) included selected underclassmen and upperclassmen college students enrolled in AGLS 101, *Modern Agricultural Systems and Renewable Resources*, in the College of Agriculture and Life Sciences at Texas A&M University. AGLS 101 is an introductory course for the College of Agriculture and Life Sciences that introduces students to modern agriculture and the influences of natural, human, and scientific resources. Historic enrollment for this course was approximately 300 students from different majors. Two sections with approximately 340 students were offered in spring semester 2009, thus totaling 680 students. The population ($N = 359$) was of interest because it included students from several majors and classifications. The accessibility to student HOWDY portal e-mail addresses produced an accessible population ($N = 166$) from which a stratified random sample was derived.

A stratified random sample was taken from the undergraduate course, AGLS 101. The sample size ($N = 166$) was determined using Dillman's (2007) methods for deriving a probability sample. The researcher used an 80/20 split with a 5% sampling error at a 95% confidence level (Dillman). The 80/20 split was chosen due to the variance in the population with respect to the subject of interest. All classifications —

freshman, sophomore, junior, and senior — of male and female students, ranging in age from 18 to 25, was the target audience.

Stratified random sampling was employed to ensure the sample was representative of the population, and added precision to ensure the sample was proportional across the population (Tuckman, 1999). Random sampling allowed the researcher to control for selection bias and to estimate the characteristics of a population (Tuckman). When respondents are chosen using stratification and random selection, the likelihood of a population-representative sample increases (Tuckman). The strata were students in the College of Agriculture and Life Sciences and all other colleges at Texas A&M University. All students were entered into a Microsoft Excel spreadsheet and a representative number of students was derived from the population of interest ($N = 680$). From an accessible population of $N = 166$, the study produced a response rate of 37% ($N = 62$).

Data were collected with an online questionnaire. The research instrument measured students' self-reported Eurocentric attitudes about agriculture using a Likert-type five-point scale. Students responded whether they *1 = Strongly Agreed*, *2 = Agreed*, *0 = Neither Agreed or Disagreed*, *3 = Disagreed*, and *4 = Strongly Disagreed* with 16 Eurocentric statements about agriculture. The instrument was an adaptation of the Persaud et al. (2008) research of land-grant institution students' Eurocentric views on agriculture. Example proposition statements included: *The climate of North America/Europe is more favorable for agriculture than are the climates of other continents*; *The soils in North America/Europe are more fertile than in the other*

continents; and North American agriculture flourished because European immigrants were particularly capable of scientific thought. Table 2.1 represents the 16 propositions and the keywords used to easily identify the propositions used in tables in this paper.

Two survey instruments were created for student completion. The first contained proposition statements worded similar to those in the Persaud et al. (2008) study. The second instrument contained several statements that were negatively worded. Both instruments were administered once and selected statements in the second instrument were reverse coded before data analysis. Both instruments were found to be valid and reliable with .91 and .85 respective reliabilities.

Students were contacted through their HOWDY Web portal accounts with a series of personalized e-mails notifying them of the questionnaire and its stipulations for over the course of seven days. Participants' names, unique passwords, and e-mail addresses remained confidential.

Descriptive statistics (mean, standard deviation, independent sample *t*-tests) were used to analyze the data. Data analyses were modeled after the procedures used by Persaud, et al. (2008) in the study of land-grant students' Eurocentric views on agriculture.

Table 2.1

Sixteen Eurocentric Propositions Regarding North American/European Agriculture as Proposed by Landes (1998) and Reproduced by Persaud et al. (2008)

Explanation	Keywords
The climate of North America/Europe is more favorable for agriculture than are the climates of other continents.	Climate favorable
The climate of North America/Europe is better for human comfort than are the climates of other continents.	Climate comfortable
The soils in North America/Europe are more fertile than in the other continents.	Fertile soils
North America/Europe suffers less from natural disasters than do other continents.	Less natural disaster
North America/Europe was historically less ridden by human diseases than other continents.	Less disease-ridden
The stability of North American/European agricultural productivity can largely be explained by the differentiation of these continents into distinct ecological zones.	Ecological zone stability
Historically, North America/Europe avoided land degradation caused by overpopulation.	Land degradation/overpopulation
Culturally, North America/Europe avoided overpopulation because their capitalistic/free enterprise ethic counteracted such tendencies.	Overpopulation/capitalistic ethic
North American agriculture flourished because European immigrants were particularly inventive.	Inventive immigrants
North American agriculture flourished because European immigrants were particularly venturesome.	Venturesome immigrants
North American agriculture flourished because European immigrants were particularly capable of scientific thought.	Scientific immigrants
North American agriculture flourished because European immigrants held strongly democratic values.	Democratic values
North American agriculture flourished because European immigrants' family structure was particularly well suited to agricultural development.	Family structure
North American agriculture flourished partly because European immigrants brought with them free market institutions.	Free market
North American agriculture flourished partly because European immigrants brought with them the institution of private property rights.	Private property
The dominance of Christianity among European immigrants contributed significantly to North American agricultural development.	Christianity

Note. Keywords adapted from those created by Persaud et al. (2008).

Results

Based upon classification at the time of survey, the participants included 21 freshmen, 23 sophomores, 14 juniors, and four seniors. One participant was Black/African American, 13 were Hispanic, 47 were White/Anglo-American, and one participant identified as Other. Thirty-five participants were female and 26 participants were male. Thirty-eight responded that they had never lived on a farm or ranch, while 22 participants responded that they had lived on a farm or ranch. Forty participants were in the College of Agriculture and Life Sciences, two students were in the College of Liberal Arts, and 19 students were from other colleges in the university. Response rates for the questionnaires were 36% for form A and 39% for form B, with an overall response rate of 37%. Of the sample of 166 participants identified to complete the questionnaire, one participant opted out, thus resulting in the final number of responses ($n = 62$). The small size of this sample is recognized as a limitation of the study, and caution is advised in generalizing these results to other populations beyond the sample.

Objective 1

Objective 1 attempted to measure students' Eurocentric attitudes about agriculture. Table 2.2 displays means and standard deviations for the 16 statements related to students' self-reported Eurocentric attitudes about agriculture and are arranged by the Eurocentric statements. The results indicate that students generally agreed with the proposed 16 Eurocentric statements administered in the questionnaire.

Overall, the students generally agreed or strongly agreed with the proposed 16 Eurocentric statements. However, the results also show that students slightly disagreed

with the statement *the climate of North America/Europe is better for human comfort than are the climates of other continents* ($M = 2.60$). These findings are congruent with Clarke (2004), who found that students' attitudes and perception of their own global awareness reflected ideas of Eurocentrism. This research also supported Persaud et al. (2008) who posited that students' Eurocentric perceptions probably resulted from societal precepts and examples that are learned.

Table 2.2
Selected Students' Eurocentric Attitudes About Agriculture (n = 62)

Propositions	M^a	SD
Climate comfortable ^b	2.60	1.37
Climate favorable ^b	2.39	1.32
Less disease-ridden ^b	2.16	1.43
Less natural disaster ^b	2.13	1.57
Fertile soils ^b	1.98	1.51
Christianity ^b	1.71	1.57
Inventive immigrants	1.59	.96
Venturesome immigrants	1.59	1.26
Ecological zone stability	1.45	1.28
Land degradation/overpopulation	1.45	1.18
Overpopulation/capitalistic ethic	1.40	1.19
Family structure	1.40	1.23
Scientific immigrants	1.39	1.26
Democratic values	1.39	1.35
Private property	1.38	1.24
Free market	1.37	1.13

Note. ^aAll items measured on a 5-point Likert-type scale: 1 = *Strongly Agree*, 2 = *Agree*, 0 = *Neither Agree or Disagree*, 3 = *Disagree*, and 4 = *Strongly Disagree*

^bStatements in instrument B were reverse coded.

Objective 2

Objective 2 attempted to determine factors influencing students' Eurocentric views about agriculture. These data are represented in Tables 2.3, 2.4, and 2.5. The results indicate that students' race may have influenced their responses to two questions

posed in the questionnaire. White/Anglo-American students ($M = 2.04$) were more likely to agree with the *Less disease-ridden* statement than were students who identified themselves as Other ($M = 2.53$). Students who identified as Other were more likely to disagree with the proposed statement.

Furthermore, the results indicated that respondents who were White/Anglo-American ($M = 1.66$) were more likely to agree with the *Christianity* statement than those students who identified themselves as Other ($M = 1.87$).

Table 2.3

Significant Differences in Students' Attitudes toward 16 Eurocentric Propositions about Agriculture by Race (N = 62)

Propositions	White/Anglo-American		Other		Sig.
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Climate favorable	2.60	1.25	1.73	1.39	.17
Climate comfortable	2.74	1.29	2.14	1.56	.08
Fertile soils	2.00	1.57	1.93	1.34	.34
Less natural disaster	2.13	1.60	2.13	1.51	.60
Less disease-ridden	2.04	1.53	2.53	.99	.03
Ecological zone stability	1.34	1.29	1.80	1.21	.16
Land degradation/Overpopulation	1.47	1.18	1.40	1.24	.67
Overpopulation/Capitalistic ethic	1.36	1.19	1.53	1.25	.95
Inventive immigrants	1.65	.95	1.40	.99	.51
Venturesome immigrants	1.54	1.24	1.73	1.34	.83
Scientific immigrants	1.40	1.25	1.33	1.35	.47
Democratic values	1.23	1.36	1.87	1.25	.16
Family structure	1.49	1.23	1.13	1.25	.86
Free market	1.15	1.08	2.07	1.03	.07
Private property	1.22	1.21	1.87	1.25	.35
Christianity	1.66	1.65	1.87	1.36	.03

Note. Values have been listed by order in which proposed 16 Eurocentric statements were asked.

Additionally, students who identified themselves as students in the College of Agriculture and Life Sciences ($M = 2.79$) were more likely to disagree with the *Climate comfortable* statement than those students who were in other colleges in the university

($M = 2.15$) in the university. Students who identified themselves as students in the College of Agriculture and Life Sciences ($M = 1.33$) were more likely to strongly agree with the *Land degradation/overpopulation* statement than students who were in other colleges in the university ($M = 1.62$). The difference in results for these questions may be a result of more agriculturally-focused courses that College of Agriculture students are likely to be enrolled in.

Table 2.4
Significant Differences in Students' Attitudes toward 16 Eurocentric Propositions about Agriculture by College (N = 62)

Propositions	College of Agriculture		Other		Sig.
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Climate favorable	2.35	1.29	2.43	1.43	.50
Climate comfortable	2.79	1.08	2.15	1.76	.00
Fertile soils	1.88	1.42	2.14	1.71	.07
Less natural disaster	2.15	1.55	2.19	1.60	.82
Less disease-ridden	2.20	1.40	2.19	1.47	.71
Ecological zone stability	1.20	1.27	1.86	1.20	.19
Land degradation/Overpopulation	1.33	1.23	1.62	1.07	.05
Overpopulation/Capitalistic ethic	1.43	1.13	1.29	1.31	.08
Inventive immigrants	1.63	.95	1.50	1.00	.53
Venturesome immigrants	1.50	1.22	1.70	1.34	.53
Scientific immigrants	1.38	1.21	1.33	1.35	.18
Democratic values	1.30	1.29	1.62	1.47	.19
Family structure	1.35	1.17	1.43	1.36	.09
Free market	1.48	1.13	1.14	1.15	.92
Private property	1.28	1.18	1.50	1.36	.18
Christianity	1.65	1.56	1.76	1.64	.99

Note. Values have been listed by order in which proposed 16 Eurocentric statements were asked.

Finally, students who were underclassmen (freshmen and sophomores) ($M = 1.32$) were more likely to strongly agree with the *Overpopulation/capitalistic ethic* statement than upperclassmen (juniors and seniors) ($M = 1.61$).

Table 2.5
Significant Differences in Students' Attitudes toward 16 Eurocentric Propositions about Agriculture by Grade Classification (N = 62)

Propositions	Underclass		Upperclass		Sig.
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Climate favorable	2.55	1.19	2.00	1.57	.05
Climate comfortable	2.55	1.38	2.72	1.36	.65
Fertile soils	1.95	1.52	2.06	1.51	.33
Less natural disaster	2.00	1.60	2.44	1.46	.20
Less disease-ridden	2.16	1.43	2.17	1.47	.96
Ecological zone stability	1.48	1.27	1.39	1.34	.50
Land degradation/Overpopulation	1.59	1.19	1.11	1.13	.86
Overpopulation/Capitalistic ethic	1.32	1.27	1.61	.98	.00
Inventive immigrants	1.65	.98	1.44	.92	.88
Venturesome immigrants	1.67	1.27	1.39	1.24	.99
Scientific immigrants	1.48	1.25	1.17	1.30	.74
Democratic values	1.27	1.37	1.67	1.28	.36
Family structure	1.45	1.27	1.28	1.18	.40
Free market	1.23	1.12	1.72	1.13	.40
Private property	1.35	1.25	1.44	1.25	.76
Christianity	1.75	1.59	1.61	1.58	.81

Note. Values have been listed by order in which proposed 16 Eurocentric statements were asked.

Other influencers measured (gender, living on a farm or ranch, and studying abroad) did not produce significant results. The influence of study abroad on students' Eurocentric views about agriculture was immeasurable. The question only received one affirmative response.

Conclusions and Recommendations

This study showed that selected students had Eurocentric attitudes about agriculture. Students generally agreed and sometimes strongly agreed with the 16 proposed Eurocentric statements.

This may be due to the nature of the course in which the selected sample of students was enrolled. The course is an introductory course in the College of Agriculture and Life Sciences, and students' may not have been enrolled in courses subjecting them to more international perspectives of agriculture. The National Research Council (1996) advised offering a broadened internationally focused agriculture curricula. Irani et al. (2006) identified that it was imperative that agriculture students with limited international experience become more versed in international economics, affairs, and cultures. Further research should be conducted to see if students' Eurocentric attitudes about agriculture change as they progress through university coursework. Core curriculum courses at each classification will be essential for measuring change.

This may be due to students' knowledge learned in the sampled course or from general knowledge. Further research should ask students to describe the types of classes they have been enrolled in to see if coursework has an influence on students' Eurocentric attitudes about agriculture.

Although other influencers measured (gender, living on a farm or ranch, and studying abroad) did not produce significant results, several statements warranted statistically significant results. Students' race influenced two proposed Eurocentric statements about agriculture, and students' college influenced two Eurocentric

statements about agriculture. The National Research Council (1996) noted that students coming into degrees in agriculture do not see beyond traditional farming and ranching agriculture. Students' Eurocentric attitudes toward agriculture with the selected propositions may be influenced by pre-held sociological notions and the myths of American superiority. Furthermore, Persaud et al. (2008) identified that the same traditional notion of agriculture results from socio-cultural conditioning that possibly leads to biases against colleges of agriculture. Further research should be conducted to explore how students' sociological and American myth beliefs influence their attitudes about agriculture.

Although the influence of study abroad on students' Eurocentric views about agriculture only received one response and was immeasurable, further research should explore its influence. A larger population should be selected in order to ensure inclusion of a representative sample of students who have studied abroad. Additionally, researchers should collaborate with college and university international and study abroad program offices to obtain information about students who have been abroad or plan to go abroad. Selecting a sample of students from those who have been abroad, and selecting a larger sample of students, who may not have traveled internationally, may help researchers to determine if international experiences have any influence upon students' Eurocentric attitudes about agriculture. In order to increase the response rate of individuals who have studied abroad, researchers should also reword instrument questions. Researchers should ask students if they have had any international

experiences, what the students did during their international experiences, and how the experiences impacted them.

Future research should include a broader sample of the population (middle grades, high school, college, young adults in the agriculture sector, and older adult policy makers). Further research exploring the effects of media on Eurocentric perceptions could benefit researchers.

Instruments should be adjusted to ask students about 4-H and FFA experiences and how they were impacted by these organizations and if they were introduced to international perspectives and ideas about agriculture and agriculture production as a result of membership or involvement.

In order to begin influencing changes in Eurocentric attitudes about agriculture, this information should be dispersed among colleges of agriculture to encourage professors to add more globally-minded information to their courses. This could therefore lead to the creation of courses and degree programs specifically dedicated to international methods of agricultural production and international agricultural development practice.

This research should be expanded and continued in order to measure students' Eurocentric attitudes about agriculture. Gathering a larger sample of respondents will benefit further research by allowing researchers to gather more sociological information about respondents.

CHAPTER III
COMPARISON OF COLLEGE OF AGRICULTURE STUDENTS' EUROCENTRIC
ATTITUDES ABOUT AGRICULTURE

Introduction

Eurocentrism creates a permanent core and a periphery from which socio-economic, cultural, and political ideas disseminate into the world (Persaud, Parrish, Wang, & Muffo, 2008). The dissemination of Eurocentric attitudes and beliefs are represented by university college of agriculture students across the United States.

Previous researchers have measured students' Eurocentric views in general (Clarke, 2004) and in agriculture (Persaud et al., 2008; Zhai & Scheer, 2004), but further research is needed to assess students' differences in Eurocentric attitudes about agriculture.

This study attempted to measure college of agriculture students' Eurocentric attitudes about agriculture and attempted to compare college of agriculture students' Eurocentric attitudes about agriculture as a reflection of grade classification.

Although many of today's land-grant universities are known for their agricultural roots, some have little agricultural connection and many land-grant colleges of agriculture have less students coming from agricultural backgrounds (National Research Council, 1995). The National Research Council (1996) noted that broadening and diversifying programs in colleges of agriculture is an important step, because it has a "potential payoff for the colleges' traditional agricultural clientele because expanding input and participation by diverse groups is an important means of broadening the

constituency base for food and agricultural science and education” (p. 25). However, one way colleges of agriculture at land-grant universities are addressing change in the colleges’ student populations and course offerings is by offering students a broadened curricula that reflects the diversification and global change of today’s agriculture sector (National Research Council, 1996). “Relevancy and accessibility are at the heart of the land grant philosophy and mandate” (National Research Council, 1996, p. 21). The National Research Council (1996) posited that land-grant colleges of agriculture need to seek new and different ways to interest and recruit students with little or no agricultural background, because the students do not see beyond traditional farming agriculture.

Theoretical Framework

Herren and Edwards (2002) noted that with the foundation of the land-grant universities by the passage of the 1862 Morrill Act, “education was now also *of, by, and for the people*” (original author emphasis) (p. 95).

Some of today’s land-grant universities have little agricultural connection, and many land-grant colleges of agriculture have fewer students coming from agricultural backgrounds (National Research Council, 1995). In order to recruit students with limited or no agricultural backgrounds, the National Research Council (1996) argued that land-grant colleges of agriculture should seek new ways to recruit these students who do not see beyond traditional farming agriculture.

Persaud et al. (2008) argued that the nationalistic notion of traditional farming production agricultural education could lead to biases of students attending land-grant universities. Furthermore, Persaud et al. posited that “students’ Eurocentric views on

agriculture are probably associated with socio-cultural conditioning embedded historically by precept and example in the (essentially neo-European) North American psyche as proposed by Hughes (2003)” (p. 32).

Fals-Borda and Mora-Osejo (2003) posited that “Eurocentrism proposes the western mode of life, economy and culture as a model to be adopted by the rest of the world, as the only solution to the challenges of our times” (p. 32). Although Blaut (1993) rejected Eurocentrism, he argued that Eurocentrism is a label used to group all of the beliefs that Europeans are superior over non-Europeans and minorities. Eurocentrism creates a permanent core and a periphery from which socio-economic, cultural, and political ideas disseminate into the world (Persaud et al., 2008). This form of Eurocentrism developed from the Enlightenment period where individuals perceived European traits as universal traits applicable to all humanity; once this idea was founded “the rest of the world” mentality flourished (Peet, 2005). Blaut argued that Eurocentrism is embedded culturally, and noted that believers still retain and propagate Eurocentric beliefs despite little rationale for why the beliefs are accepted.

The beliefs of Eurocentrism developed from several myths that Anglo-Saxons and Americans have believed for hundreds of years (Caldwell, 2006). Caldwell posited

Today there are many myths of American superiority, and most Americans devoutly believe their nation to be superior to all others in countless ways. They are convinced of the superiority of America’s national culture, ideology, and values. They are certain that American political, social, and economic institutions

are superior to all other systems, and that the sum of it all, “the American way of life” will inevitably constitute the final destiny of mankind. (p.139–140)

Hughes (2003) posited that national stories, or national myths, are created to explain why Americans express love toward and faith in the United States, as well as “affirm the meaning of the United States” (p. 2).

Resultingly, American myths and Eurocentric attitudes still continue to be transferred to new generations. Thus, these attitudes are found in academia at many levels.

Many land-grant universities are known for their agricultural-based roots, but few today have little agricultural connection and have fewer students coming from agricultural backgrounds (National Research Council, 1995). The National Research Council (1996) noted that broadening and diversifying programs in colleges of agriculture is an important step, because it has a “potential payoff for the colleges’ traditional agricultural clientele, because expanding input and participation by diverse groups is an important means of broadening the constituency base for food and agricultural science and education” (p. 25). However, one way colleges of agriculture at land-grant universities are addressing change in the colleges’ student populations and course offerings is by offering students a broadened curriculum reflecting diversification and global change in the modern agriculture sector (National Research Council, 1996). “Relevancy and accessibility are at the heart of the land-grant philosophy and mandate” (National Research Council, , p. 21). The National Research Council argued that land-grant colleges of agriculture need to help students look beyond traditional methods of

farming agriculture. Through new methods of recruitment, students from inside and outside the agriculture sector could become interested in attending a land-grant university college of agriculture (National Research Council).

In a study of 701 college students, Clarke (2004) found that students' perceptions of their own global awareness and attitudes about internationalism reflected ideas of Eurocentrism. A majority of students (71%) responded affirmatively to the proposed statement that the United States was superior to other countries in the world, and Clarke also found that ethnocentrism increased with students' age.

However, Persaud et al. (2008) found that Eurocentric attitudes of students enrolled in agriculture programs diminished with age. College freshmen and seniors responded to 16 Eurocentric propositions about North American agriculture. Persaud et al. found that freshman displayed higher levels of Eurocentric views than did seniors.

Irani et al. (2006) noted that agricultural students exhibited limited international experience and backgrounds. "Therefore, it is crucial that agriculture students become more knowledgeable about other countries, their cultures, economy, and roles in world affairs" (Zhai & Scheer, p. 40).

Although previous studies have calculated students' global competency and Eurocentric views in general (Clarke, 2004) and in agriculture (Persaud et al., 2008; Zhai & Scheer, 2004), further research is needed to assess other factors influencing students' Eurocentric views about agriculture and how students' Eurocentric views change as they progress through college.

Purpose of Study

The purpose of this study is to determine college students' Eurocentric attitudes about agriculture.

Objectives

The objective of the research was to identify differences in college students' Eurocentric attitudes when compared by grade classification.

Methods

The population of interest ($N = 359$) for this study included selected underclassmen and upperclassmen college students enrolled in a seminar class in the College of Agriculture and Life Sciences at Texas A&M University. The AGLS 101 course, *Modern Agricultural Systems and Renewable Resources*, is an introductory course for the College of Agriculture and Life Sciences to introduce students to modern agriculture and natural, human, and scientific resources that influence it. Historic enrollment for this course is approximately 300 students from several majors. Two sections with approximately 340 students are offered in spring semester 2009, thus totaling 680 students. The population ($N = 359$) was of interest for the study, because it included students from a variety of majors and classifications. The accessibility to student HOWDY portal e-mail addresses produced an accessible population ($N = 166$) from which the stratified random sample was derived.

A stratified random sample was taken from one undergraduate course, AGLS 101 in the College of Agriculture and Life Sciences. The sample size, 62, was determined using Dillman's (2007) methods for deriving a probability sample. The

researcher used an 80/20 split with a 5% sampling error at a 95% confidence level (Dillman). The 80/20 split was chosen due to the variance in the population with respect to the subject of interest. All classifications — freshman, sophomore, junior, and senior — of male and female students, ranging in age from 18 to 25, was the target audience.

Stratified random sampling was employed to ensure the sample was representative of the population. Stratification adds precision and ensures the sample is proportional across the population, and random sampling allows the researcher to control for selection bias and to estimate the characteristics of a population (Tuckman, 1999). When respondents are chosen using stratification and random selection, the likelihood of a population-representative sample increases (Tuckman). The strata were students in the College of Agriculture and Life Sciences and all other colleges at Texas A&M University. All students were entered into a Microsoft Excel spreadsheet and a representative number of students for each stratum was derived from the population of interest. The study produced a response rate of 37% ($N = 62$).

Data were collected with an online questionnaire. The research instrument measured students' Eurocentric attitudes about agriculture using a Likert-type five-point scale. Students responded whether they *strongly agreed*, *agreed*, *had no opinion*, *disagreed*, or *strongly disagreed* with 16 Eurocentric statements about agriculture. The instrument is an adaptation of the Persaud et al. (2008) research of land-grant institution students' Eurocentric views on agriculture. Example proposition statements included: *The climate of North America/Europe is more favorable for agriculture than are the climates of other continents; The soils in North America/Europe are more fertile than in*

the other continents; and North American agriculture flourished because European immigrants were particularly capable of scientific thought. Response choices for the Likert-type scales were *1 = Strongly Agree, 2 = Agree, 0 = Neither Agree or Disagree, 3 = Disagree, and 4 = Strongly Disagree.* Table 3.1 represents the 16 propositions and the keywords used to easily identify the propositions in this paper.

Participants were given access to the online questionnaire to determine Eurocentric attitudes about agriculture. Two survey instruments were created for student completion. The first contained proposition statements worded similar to those in the Persaud et al. (2008) study. The second instrument contained several statements that were negatively worded. Both instruments were administered once and the selected statements in the second instrument were reverse coded before data analysis. Both instruments were found to be valid and reliable, with .91 and .85 respective reliabilities.

Students were contacted through their HOWDY Web portal accounts with a series of personalized e-mails notifying them of the questionnaire and its stipulations for approximately seven days. Participants' names, unique passwords, and e-mail addresses remained confidential.

Descriptive statistics (mean, standard deviation, one-way ANOVA, radar plots) were used to analyze the data. Data analyses were modeled after the procedures used by Persaud, et al. (2008) in their study of land-grant students' Eurocentric views on agriculture.

Table 3.1

Sixteen Eurocentric propositions regarding North American/European Agriculture as proposed by Landes (1998) and reproduced by Persaud et al. (2008)

Explanation	Keywords
The climate of North America/Europe is more favorable for agriculture than are the climates of other continents.	Climate favorable
The climate of North America/Europe is better for human comfort than are the climates of other continents.	Climate comfortable
The soils in North America/Europe are more fertile than in the other continents.	Fertile soils
North America/Europe suffers less from natural disasters than do other continents.	Less natural disaster
North America/Europe was historically less ridden by human diseases than other continents.	Less disease-ridden
The stability of North American/European agricultural productivity can largely be explained by the differentiation of these continents into distinct ecological zones.	Ecological zone stability
Historically, North America/Europe avoided land degradation caused by overpopulation.	Land degradation/overpopulation
Culturally, North America/Europe avoided overpopulation because their capitalistic/free enterprise ethic counteracted such tendencies.	Overpopulation/capitalistic ethic
North American agriculture flourished because European immigrants were particularly inventive.	Inventive immigrants
North American agriculture flourished because European immigrants were particularly venturesome.	Venturesome immigrants
North American agriculture flourished because European immigrants were particularly capable of scientific thought.	Scientific immigrants
North American agriculture flourished because European immigrants held strongly democratic values.	Democratic values
North American agriculture flourished because European immigrants' family structure was particularly well suited to agricultural development.	Family structure
North American agriculture flourished partly because European immigrants brought with them free market institutions.	Free market
North American agriculture flourished partly because European immigrants brought with them the institution of private property rights.	Private property
The dominance of Christianity among European immigrants contributed significantly to North American agricultural development.	Christianity

Note. Keywords adapted from those created by Persaud et al. (2008).

Results

Participants' classification at time of survey included 21 freshmen, 23 sophomores, 14 juniors, and four seniors. One participant was Black/African American, 13 were Hispanic, 47 were White/Anglo-American, and one participant identified himself/herself as Other. Thirty-five participants identified female and 26 participants identified male. Thirty-eight identified that they had never lived on a farm or ranch, while 22 participants identified that they had lived on a farm or ranch. When asked to identify which college they were in, 40 participants identified that they were in the College of Agriculture and Life Sciences, two students were in the College of Liberal Arts, and 19 students were from other colleges in the university. Response rates for the questionnaires were 36% for form A and 39% for form B, with an overall response rate of 37%. Of the sample of 166 participants identified to complete the questionnaire, one participant opted out, thus resulting in the final response rate of $n = 62$. The small size of this sample is recognized as a limitation of the study. Caution is advised in generalizing these results to other populations beyond the sample in this study.

Objective

To compare the students' Eurocentric attitudes for the proposed 16 statements, radar plots were used. The radar plots in Figures 3.1 and 3.2 were used to compare the aggregated percentage of students' who strongly agreed, agreed, and were neutral to the aggregated percentage of those who strongly disagreed, disagreed, and were neutral. The comparison was made between underclassmen (freshmen and sophomores) and upperclassmen (juniors and seniors). The visual representation of the data can be

described as two overlapping circles comparing the differences between the two samples represented in the figure.

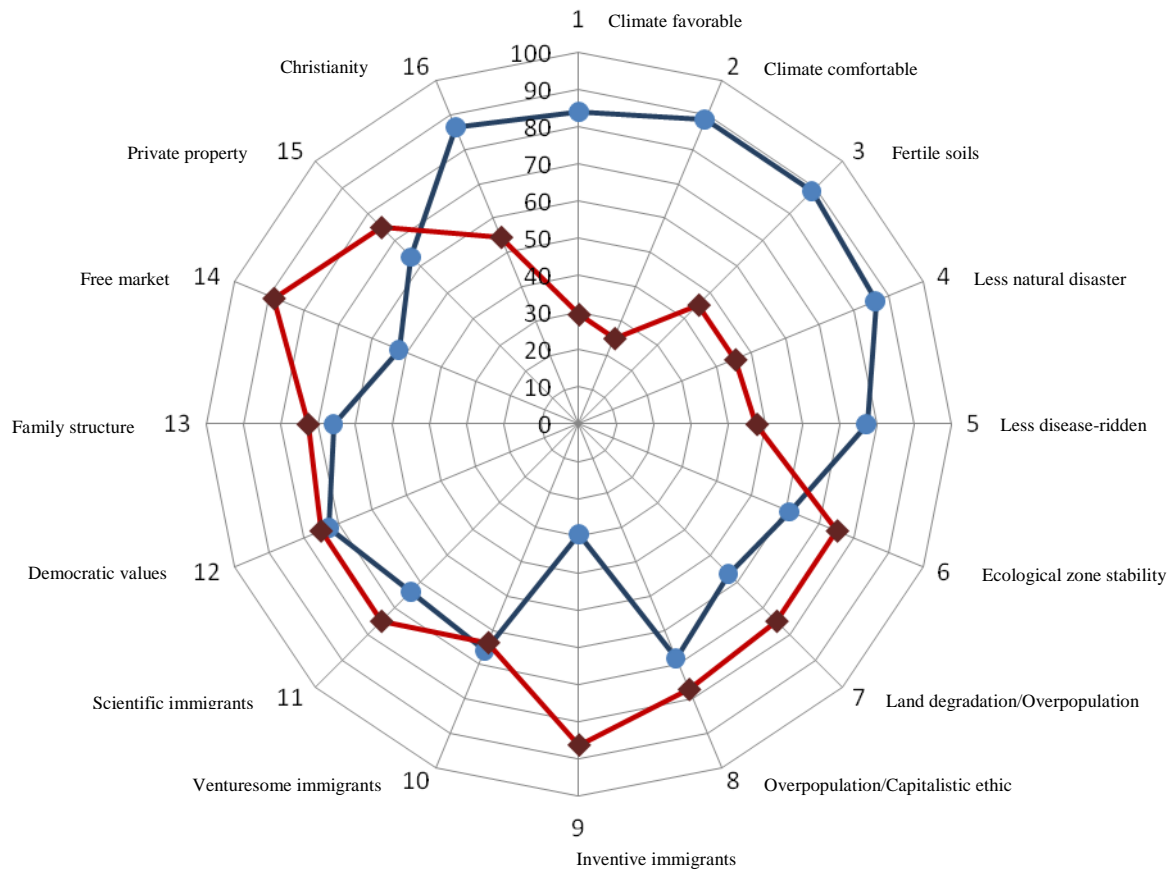


Figure 3.1. Radar plot comparing aggregated percent of underclassmen who agreed (circles) or disagreed (diamonds) with 16 Eurocentric propositions (Table 3.1) about North American and European agriculture. Students who neither agreed nor disagreed with the statements were aggregated into both categories.

Figure 3.1 shows the comparison of aggregated differences for underclassmen students. Each proposition is represented as a number circling the radar plot and is labeled by the researcher-assigned keyword. It was found that underclassmen students agreed more with propositions 1, 2, 3, 4, 5, and 16 than disagreed with the propositions.

Underclassmen slightly agreed more than disagreed with proposition 10. For all other propositions (6, 7, 8, 9, 11, 12, 13, 14, and 15) students disagreed more than agreed. Propositions 9 and 14 displayed a higher level of disagreement than propositions 6, 7, 8, 11, 12, 13, and 15, which only displayed a slight level in differences of disagreement and agreement with the propositions. This research supports Persaud et al. (2008) who noted that freshmen in their study exhibited higher levels of Eurocentrism.

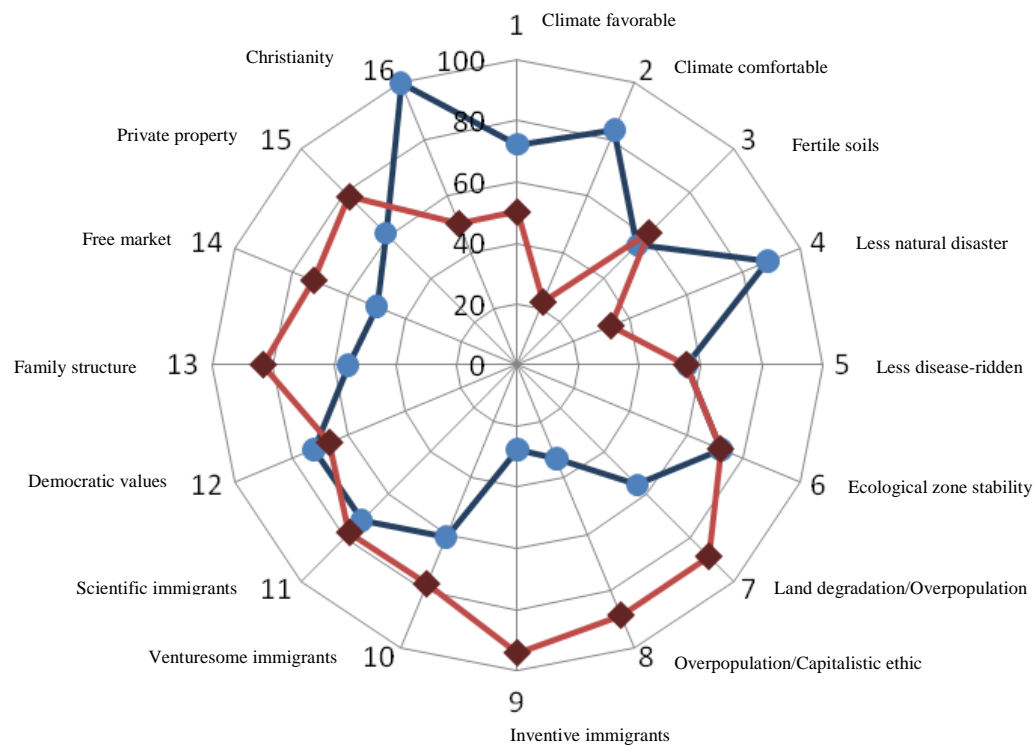


Figure 3.2. Radar plot comparing aggregated percent of upperclassmen who agreed (circles) or disagreed (diamonds) with 16 Eurocentric propositions (Table 3.1) about North American and European agriculture. Students who neither agreed nor disagreed with the statements were aggregated into both categories.

Figure 3.2 showed the comparison of aggregated differences for upperclassmen students. Each proposition is represented as a number circling the radar plot and is labeled by the researcher-assigned keyword. The difference between the number of upperclassmen students who agreed versus disagreed with the proposed statements diminished as compared to the radar plot of underclassmen. Overall, more upperclassmen tended to disagree more with the proposed Eurocentric statements than underclassmen.

It was found that upperclassmen students agreed more with propositions 1, 2, 4, and 16 than disagreed with the propositions. Upperclassmen slightly agreed more with than disagreed with proposition 10. For other propositions (7, 8, 9, 10, 13, 14, and 15) students disagreed more than agreed. Propositions 3, 11, and 12, only displayed a slight difference of disagreement and agreement with the propositions, while propositions 5 and 6 showed no difference in the percent of students who agreed versus disagreed.

The upperclassmen findings in this study supported the research of Persaud et al. (2008) who found in the radar plots a more narrowed representation of Eurocentric attitudes for their group of seniors.

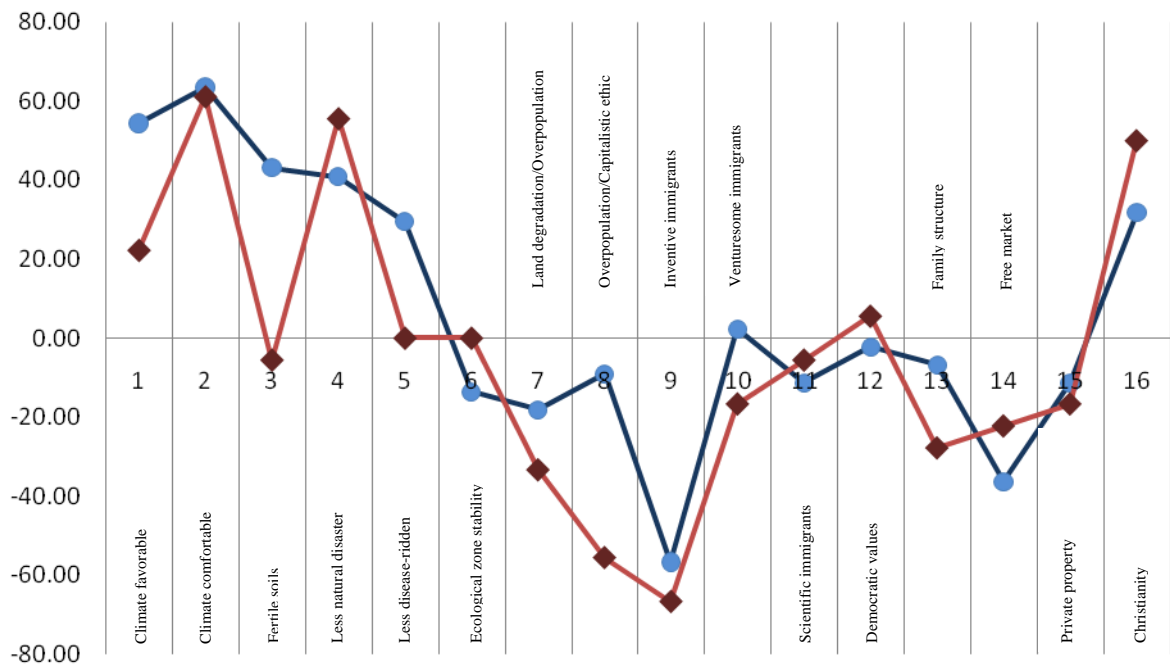


Figure 3.3. Percent agreeing minus percent disagreeing with 16 propositions for underclassmen (circles) and upperclassmen (diamonds). Students who neither agreed nor disagreed were aggregated into both categories.

The difference in percentage between the agree and disagree categories for underclassmen and upperclassmen, respectively, were calculated and are represented in Figure 3.3. More disagreement than agreement with a proposition was plotted below the zero line, while more agreement than disagreement with a proposition was plotted above the zero line. The distances above or below the zero line represented the magnitude of the difference. Figure 3.3 shows that underclassmen and upperclassmen generally followed the same trend of differences between agreement and disagreement. However, the intensity of differences were more significant between underclassmen and

upperclassmen for propositions 1, 3, 5, and 8. This minimal change in differences of Eurocentric attitudes between percent agree and percent disagree of underclassmen and upperclassmen is supported by several research by several authors (Persaud et al., 2008; Zhai & Scheer, 2004). The research conducted by Persaud et al. (2008) found that freshmen differences in percents followed the same trend as those of the seniors, with the seniors tending to fall below the zero line. While, Zhai and Scheer (2002) posited that students in agriculture had moderate global perspectives.

Overall, this research supported several researchers (Bruening & Frick, 2004; Irani, Place, & Friedel, 2006; Zhai & Scheer, 2002) who noted that ethnocentrism increased as students aged.

Conclusions and Recommendations

This study found that selected students had generally Eurocentric attitudes about agriculture. While upperclassmen held some less Eurocentric attitudes about agriculture than those of underclassmen, Eurocentric attitudes were still represented.

Overall, it was found that students generally agreed or strongly agreed with the 16 Eurocentric statements. This may be due to the nature of the course in which the selected samples of students were enrolled. The course was an introductory course in the College of Agriculture and Life Sciences, and students' may not have been enrolled in courses subjecting them to more international perspectives of agriculture. Further research should be conducted to see if students' Eurocentric attitudes about agriculture change as they progress through university coursework. The National Research Council (1996) advises that colleges of agriculture offer students broadened curricula in global

change in the agriculture sector in order to help students see beyond perceived traditional methods of agricultural production.

Figures 3.1 through 3.3 showed that selected students' Eurocentric attitudes about agriculture only differed slightly between underclassmen and upperclassmen. Two propositions (3, 8) showed more intense differences in agreement and disagreement between classifications. Perhaps this change was due to the ideas proposed by Caldwell (2006) who argued that many Americans are certain that American political, social, and economic institutions are superior to others. This research did not attempt to determine what influenced students Eurocentric perceptions about agriculture. Perhaps course curriculum, maturity, and socio-economic background are influencers. However, more research should be conducted to determine if curriculum, maturity, and socio-economic background, as well as other factors, are agents of change in Eurocentric attitudes. This further research would be supported by Persaud et al. (2008) who argued that "students' Eurocentric views on agriculture are probably associated with socio-cultural conditioning embedded historically by precept and example in the (essentially neo-European) North American psyche as proposed by Hughes (2003)" (p. 32).

Irani et al. (2006) identified that agriculture students had limited international exposure, and argued that these students become more knowledgeable and versed in agricultural economics, affairs, cultures, etc. Thus, future research should include a longitudinal study of changes in Eurocentric attitude formation about agriculture as students progress through secondary education and post-secondary education. Better

international agricultural education needs to occur earlier in the education system in science and secondary agricultural education classes.

Students need to be introduced to international agriculture earlier in the education system. For example, in science or agricultural education classes in middle school or high school, teachers could invite international graduate students from colleges of agriculture to speak to their classes. For instance, crop science graduate students who are from China can present a short seminar to secondary students about how crops are grown and harvested differently than those in the United States. These community outreach efforts could impact secondary students to enroll in colleges of agriculture and could help these young students to become more aware of international agriculture. The National Research Council (1996) noted that program diversification begins with incorporating participation from diverse groups, because it can broaden the scope of constituents of agricultural science and education.

Additionally, students' perspectives of cultural diversity and international competency needs assessments of maturation to determine how to influence the future of educational courses. Beginning assessments of maturation of international agricultural awareness, could aid in students' global awareness of international agriculture production methods. Therefore, having a larger sample in the study would allow researchers to more effectively test the maturation of students' global attitudes about agriculture.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The results of this study showed that selected students had Eurocentric attitudes about agriculture; while upperclassmen held some less Eurocentric attitudes about agriculture than those of underclassmen, Eurocentric attitudes were still represented. Students generally agreed and sometimes strongly agreed with the 16 proposed Eurocentric statements.

Research Implications and Recommendations

Overall, it was found that, students generally agreed or strongly agreed with the 16 Eurocentric statements. This may be due to the nature of the course in which the selected samples of students were enrolled. The course is an introductory course in the College of Agriculture and Life Sciences, and students' may not have been enrolled in courses subjecting them to more international perspectives of agriculture. Further research should be conducted to see if students' Eurocentric attitudes about agriculture change as they progress through university coursework. Further research should ask students to describe the types of classes they have been enrolled in, in order to see if coursework has an influence on students' Eurocentric attitudes about agriculture. Core curriculum courses at each classification will be essential for testing the change.

Although other influencers (gender, living on a farm or ranch, grade classification, and studying abroad) did not produce significant results, several statements warranted statistically significant results. Students' identified race influenced two proposed Eurocentric statements about agriculture, and students' identified college

of enrollment influenced one Eurocentric statement about agriculture. Students' Eurocentric attitudes about agriculture with the selected statements may have been influenced by pre-held sociological notions about Eurocentric myths and about agriculture. This is supported by Caldwell (2006) who argued that many Americans are certain that American political, social, and economic institutions are superior to others. It is also supported by Persaud et al. (2008) who argued that "students' Eurocentric views on agriculture are probably associated with socio-cultural conditioning embedded historically by precept and example in the (essentially neo-European) North American psyche as proposed by Hughes (2003)" (p. 32). Further research should be conducted to explore how students' personal beliefs and sociological preconceptions influence their attitudes about agriculture.

Figures 3.1 through 3.3 showed that selected students' Eurocentric attitudes about agriculture only differed slightly between underclassmen and upperclassmen. Two propositions showed more intense differences in agreement and disagreement between the classifications. It is interesting to note that many selected students in this study held Eurocentric attitudes about agriculture from underclassmen to upperclassmen years. Perhaps course curriculum, maturity, and socio-economic background are influencers; however, more research should be conducted to determine if curriculum, maturity, and socio-economic background, as well as other factors, are agents of change in Eurocentric attitudes.

Although the influence of study abroad on students' Eurocentric views about agriculture only received one response and was immeasurable, further research should

explore its influence. A larger population should be selected in order to ensure that a representative sample of students have studied abroad. Research conducted by Clarke (2004) can serve as a good resource for determining what factors may influence Eurocentric attitudes. Clarke (2004) measured global awareness by foreign language study, frequency of visits abroad, degree of media exposure, study in courses of non-Western civilization, and personal involvement with a person from another country.

Practical Implications and Recommendations

Bringing outside speakers and information to 4-H, FFA, middle school, and high school students could influence them to build an interest in international agriculture education and production, as they are continually exposed to it over the years.

Information pertaining to natural resources, food science, soil science, crop science, plant biology, etc. can be incorporated into the education system as early as middle school. Teachers and administrators need to work together to bring in and incorporate the resources that can help disseminate information about international agriculture education and varying methods of agricultural production.

For those school districts located near college or universities, graduate students from different countries should be invited to speak (or should take the initiative to visit) middle school and high school classrooms to speak to students about agriculture production in their native country and how it differs from methods known to students in the United States.

For school districts that do not have the opportunity to have professionals or graduate students speak to a class, online and electronic methods should be used.

Information could be sent to teachers in these districts. The information could consist of videos of graduate students describing agriculture production in their native countries, articles from other countries describing different methods of production, pictures, etc. It is imperative that the information be disseminated in whatever means possible that works for the school district.

Short workshops could be conducted at state 4-H and FFA conventions to introduce advisors and youth Extension agents to information about international agriculture production and more. In return, these advisors and agents would be able to incorporate new information and ideas into their programs to reach students at an earlier age.

Overall, more research is needed to determine why students hold Eurocentric attitudes about agriculture and what colleges and universities can do to encourage students in colleges of agriculture to become more globally competent.

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APPENDIX A



Students' Eurocentric Views about Agriculture

The purpose of this study is to determine college students' Eurocentric views about agriculture.

Background: Comparatively, North American/European agriculture is often considered to be vastly more productive than other regions of the world. Many reasons have been advanced to explain this perceived advantage. The explanations below are suggested in *"The Wealth and Poverty of Nations: Why Some are so Rich and Some so Poor,"* by David S. Landes. We would like to have your frank and honest reactions to Landes' explanations.

Instructions: Please click the appropriate button to answer each explanation. All items refer to the following scale:

SD = Strongly Disagree, D = Disagree, N = No Opinion, A = Agree, SA = Strongly Agree

Explanations	SD	D	N	A	SA
The climate of North America/Europe is more favorable for agriculture than are the climates of other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The climate of North America/Europe is better for human comfort than are the climates of other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The soils in North America/Europe are more fertile than in the other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North America/Europe suffers less from natural disasters than do other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North America/Europe was historically less ridden by human diseases than other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The stability of North American/European agricultural productivity can largely be explained by the differentiation of these continents into distinct ecological zones.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Historically, North America/Europe avoided land degradation caused by overpopulation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Culturally, North America/Europe avoided overpopulation because their capitalistic/free enterprise ethic counteracted such tendencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants were particularly inventive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants were particularly venturesome.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants were particularly capable of scientific thought.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants held strongly democratic values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- North American agriculture flourished because European immigrants' family structure was particularly well suited to agricultural development.
- North American agriculture flourished partly because European immigrants brought with them free market institutions.
- North American agriculture flourished partly because European immigrants brought with them the institution of private property rights.
- The dominance of Christianity among European immigrants contributed significantly to North American agricultural development.
-

Instructions: Please click the appropriate button or fill in the text boxes to answer each question.

What is your gender?

- Male
 Female

What is your college?

- Agriculture and Life Sciences
 Liberal Arts
 Other

Have you ever lived on a farm/ranch?

- Yes
 No

Have you ever participated in a study abroad?

- Yes
 No

If you participated in a study abroad:

Where did you go?

What was the name and purpose of that program?

How long did you participate in the study abroad program?

What did you like and dislike about the program?

What is your current class?

- Freshman
 Sophomore
 Junior
 Senior

What is your race?

- American Indian
 Asian American
 Black/African American
 Hispanic American
 White/Anglo-American
 Other, please indicate:

Thank you for your interest in this survey. All data collection has ceased.

If you would like a similar survey posted to this portal, please [contact us](#).

APPENDIX B



Students' Eurocentric Views about Agriculture

The purpose of this study is to determine college students' Eurocentric views about agriculture.

Background: Comparatively, North American/European agriculture is often considered to be vastly more productive than other regions of the world. Many reasons have been advanced to explain this perceived advantage. The explanations below are suggested in "*The Wealth and Poverty of Nations: Why Some are so Rich and Some so Poor*," by David S. Landes. We would like to have your frank and honest reactions to Landes' explanations.

Instructions: Please click the appropriate button to answer each explanation. All items refer to the following scale:

SD = Strongly Disagree, D = Disagree, N = No Opinion, A = Agree, SA = Strongly Agree

Explanations	SD	D	N	A	SA
The climate of North America/Europe is less favorable for agriculture than are the climates of other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The climate of North America/Europe is worse for human comfort than are the climates of other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The soils in North America/Europe are less fertile than in the other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North America/Europe suffers more from natural disasters than do other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North America/Europe was historically more ridden by human diseases than other continents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The stability of North American/European agricultural productivity can largely be explained by the differentiation of these continents into distinct ecological zones.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Historically, North America/Europe avoided land degradation caused by overpopulation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Culturally, North America/Europe avoided overpopulation because their capitalistic/free enterprise ethic counteracted such tendencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture failed because European immigrants were not particularly inventive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants were particularly venturesome.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants were particularly capable of scientific thought.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
North American agriculture flourished because European immigrants held strongly democratic values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- North American agriculture flourished because European immigrants' family structure was particularly well suited to agricultural development.
- North American agriculture failed partly because European immigrants brought with them free market institutions.
- North American agriculture flourished partly because European immigrants brought with them the institution of private property rights.
- The dominance of Christianity among European immigrants contributed negatively to North American agricultural development.
-

Instructions: Please click the appropriate button or fill in the text boxes to answer each question.

What is your gender?

- Male
 Female

What is your college?

- Agriculture and Life Sciences
 Liberal Arts
 Other

Have you ever lived on a farm/ranch?

- Yes
 No

Have you ever participated in a study abroad?

- Yes
 No

If you participated in a study abroad:

Where did you go?

What was the name and purpose of that program?

How long did you participate in the study abroad program?

What did you like and dislike about the program?

What is your current class?

- Freshman
 Sophomore
 Junior
 Senior

What is your race?

- American Indian
 Asian American
 Black/African American
 Hispanic American
 White/Anglo-American
 Other, please indicate:

Thank you for your interest in this survey. All data collection has ceased.

If you would like a similar survey posted to this portal, please [contact us](#).

VITA

Lauren Ashley Rouse was born in 1984 in Houston, Texas, and is the daughter of Theo and Teresa Rouse.

Lauren received a Bachelor of Arts degree in international studies and French from Texas A&M University at College Station in August 2006. She was active in the Texas A&M Chapter of Public Relations Student Society of America, GUIDE (a freshman student mentoring organization), and the Society for International Studies. She completed a study abroad program at the American University of Paris in Paris, France, in the summer of 2005.

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