The Culture of Agriculture: A Q-Methodological Study of the Perspectives of American Agriculture held by Students at Oklahoma State University

Jorge Eduardo Gonzalez, US Peace Corps
Marshall A. Baker, North Carolina State University
Diane Montgomery, Oklahoma State University
**Defining Culture**

“Transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behavior and the artifacts produced through behavior” (Krober & Parsons, 1958, p. 583).
The Relevance of Culture

- Value alignment or dissonance between people affect their perceptions and actions \cite{Gonzalez2002, MuseusQuaye2009}.

- Agriculture is a culture of its own, with values unique to itself \cite{MeischenTrexler2003}.

Background of the Study
The purpose of this study was to identify the subjective opinions held by students at Oklahoma State University on the culture of American agriculture.
1. What are the subjective opinions held by students concerning American agriculture at Oklahoma State University?

2. How do Hofstede’s Six Dimensions of National Culture describe the subjective opinions of American agriculture?
Hofstede’s Six Dimensions of National Culture
• Mental Models separate one group from another
• Measured the intensity and direction of values from 40 different countries.
• Four original dimensions were found (Hofstede, 1980)
• Two more added from research findings since the original publication of Culture’s Consequences (1980).
Theoretical Framework

**Power Distance**
- Concerned with how a culture deals with human inequality in wealth, social hierarchies, and prestige.

**Uncertainty Avoidance**
- How a culture deals with the uncertainty of the future. Ex: Religion, Law, Technology

(Hofstede, 1980, 2001)
Theoretical Framework

Individualism vs. Collectivism
• How people live together, in nuclear families, or large extended families with in and out groups.

Masculinity vs. Femininity
• The level of importance placed on social gender roles, competition, family balance and their division.

(Hofstede, 1980, 2001)
Theoretical Framework

**Long-Term vs. Short-Term Orientation**
- The importance placed on events that will happen in the future, and those in the past or present.

**Indulgence vs. Restraint**
- A culture's propensity to support gratification, or the implementation of strict social norms to control it.

(Bond, 1987; Hofstede, 1980, 2001; Minkov, 2007)
Hofstede’s Dimensions and American Agriculture

• Agriculture is a culture, with a set of values unique to itself.

• Dimensions provide a guide to the mental programming of a group and the values that drive them.

• Provides a way to gauge the intensity and direction of the subjective opinions of the culture of American agriculture.
Methodology

P-Set

• 29 individuals.
• Purposive snowball sample for maximum diversity of subjective opinions (Watts & Stenner, 2012).
• 23 Females and 6 Males.
• 16 White, 6 African American, 4 American Indian, and 3 Hispanic.
• 12 students inside of the College of Agricultural Sciences and Natural Resources (CASNR), 17 students outside of CASNR.
Methodology

The Concourse

- Developed in a hybrid process.
  - Literature in Agricultural Education on perceptions of agriculture.
  - Interviews with students at Oklahoma State University.
- 87 statements.
- 42 statements sampled for the Q set.

(Watts & Stenner, 2012)
Methodology

Condition of Instruction for the Q-Sort: “In my opinion, American agriculture is…”

- Forced choice distribution applied to the sort board.
- Pragmatic
- Convenient

- Styled from 1 (Most Unlike Me) to 11 (Most Like Me) instead of -5 to +5 on the sort board in order to prevent negative connotations on the statements sorted.

- Platykurtic distribution established to get more discriminated selections in the item ranking process.
Findings: Research Question 1

What are the subjective opinions held by students concerning American agriculture at Oklahoma State University?
3 Perceptions of American Agriculture

Three factors arrays.

1. Progressive Agriculture (14 Defining Sorters)
2. Conservative Industrial Agriculture (6 Defining Sorters)
3. Traditional Agriculture (4 Defining Sorters)

Consensus Statement

- “A profession that requires hard work.” (F1, +5; F2, +5; F3, +5)
<table>
<thead>
<tr>
<th>CASNR</th>
<th>Ethnicity</th>
<th>Gender</th>
<th>Yrs. In Ag</th>
<th>AGED/FFA</th>
<th>Loading 1</th>
<th>Loading 2</th>
<th>Loading 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Female</td>
<td>3 Years</td>
<td>Yes</td>
<td>0.7448</td>
<td>0.2071</td>
<td>0.1715</td>
</tr>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Male</td>
<td>8 Years</td>
<td>Yes</td>
<td>0.7192</td>
<td>0.2071</td>
<td>0.1727</td>
</tr>
<tr>
<td>In CASNR</td>
<td>Hispanic</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.6655</td>
<td>0.4393</td>
<td>-0.0494</td>
</tr>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Female</td>
<td>4 Years</td>
<td>Yes</td>
<td>0.7689</td>
<td>-0.0708</td>
<td>0.3819</td>
</tr>
<tr>
<td>In CASNR</td>
<td>Af. American</td>
<td>Female</td>
<td>None</td>
<td>Yes</td>
<td>0.6514</td>
<td>0.1791</td>
<td>0.1115</td>
</tr>
<tr>
<td>In CASNR</td>
<td>Hispanic</td>
<td>Male</td>
<td>2.5 Years</td>
<td>No</td>
<td>0.6790</td>
<td>0.4362</td>
<td>-0.1856</td>
</tr>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Female</td>
<td>6 Years</td>
<td>Yes</td>
<td>0.8384</td>
<td>0.0772</td>
<td>0.2481</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Male</td>
<td>None</td>
<td>No</td>
<td>0.4836</td>
<td>-0.3877</td>
<td>-0.3480</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Female</td>
<td>None</td>
<td>Yes</td>
<td>0.4811</td>
<td>0.2725</td>
<td>0.3693</td>
</tr>
<tr>
<td>In CASNR</td>
<td>Am. Indian</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.5105</td>
<td>0.2222</td>
<td>-0.1052</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.6427</td>
<td>0.3398</td>
<td>0.2869</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>Af. American</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.7989</td>
<td>-0.0253</td>
<td>0.0636</td>
</tr>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Female</td>
<td>None</td>
<td>Yes</td>
<td>0.7468</td>
<td>-0.0464</td>
<td>0.3706</td>
</tr>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Female</td>
<td>16</td>
<td>Yes</td>
<td>0.8277</td>
<td>0.1313</td>
<td>0.1691</td>
</tr>
</tbody>
</table>
Progressive Agriculture: Theme One

Innovation

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>Innovative and creative.</td>
<td>+5</td>
</tr>
<tr>
<td>13</td>
<td>At the cutting edge of harvesting technology.</td>
<td>+4</td>
</tr>
<tr>
<td>10</td>
<td>Accepting of Genetically Modified Organisms.</td>
<td>+3</td>
</tr>
<tr>
<td>8</td>
<td>Based on more tradition than science.</td>
<td>-3</td>
</tr>
<tr>
<td>21</td>
<td>Not a career path for intellectuals.</td>
<td>-5</td>
</tr>
</tbody>
</table>

“The most highly educated people I know are rural farmers. It’s a business. You have to know what you’re doing. Not everyone can do it.” –Post Sort Interview
Progressive Agriculture: Theme Two

Progressive Gender Roles

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>A male dominated field.</td>
<td>-1</td>
</tr>
<tr>
<td>24</td>
<td>Old school about gender roles.</td>
<td>-2</td>
</tr>
<tr>
<td>26</td>
<td>Hard to be respected in as a woman.</td>
<td>-2</td>
</tr>
</tbody>
</table>

“20 years ago (statements 22 and 26) would be over there (+5), but now there are role models and movies.” –Field Notes
## Progressive Agriculture: Theme Three

### Family

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A way to connect to my family.</td>
<td>+2</td>
</tr>
<tr>
<td>18</td>
<td>Full of really close knit families looking out for each other.</td>
<td>+2</td>
</tr>
<tr>
<td>25</td>
<td>A terrible career path if you want to balance your work and your family life.</td>
<td>-5</td>
</tr>
</tbody>
</table>

“Most ag is a family run business.” – Post Sort interview

“I can see why people say that (it is hard to balance work and family life in agriculture), but it’s a family run business.” – Post Sort Interview
## Conservative Industrial Agriculture

<table>
<thead>
<tr>
<th>CASNR</th>
<th>Ethnicity</th>
<th>Gender</th>
<th>Yrs. In Ag</th>
<th>AGED/FFA</th>
<th>Loading 1</th>
<th>Loading 2</th>
<th>Loading 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non CASNR</td>
<td>Af. American</td>
<td>Male</td>
<td>None</td>
<td>No</td>
<td>0.2024</td>
<td>0.5728</td>
<td>-0.0589</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>Am. Indian</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.2150</td>
<td>0.4518</td>
<td>0.3721</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>Af. American</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.1425</td>
<td>0.7125</td>
<td>0.2022</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>Af. American</td>
<td>Male</td>
<td>None</td>
<td>No</td>
<td>0.3336</td>
<td>0.6076</td>
<td>0.3036</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Female</td>
<td>None</td>
<td>No</td>
<td>0.2390</td>
<td>0.6042</td>
<td>0.4329</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>Af. American</td>
<td>Male</td>
<td>None</td>
<td>No</td>
<td>-0.3690</td>
<td>0.4799</td>
<td>-0.1754</td>
</tr>
</tbody>
</table>
Conservative Industrial Agriculture: Theme One

Social Conservative

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Full of political conservatives.</td>
<td>+5</td>
</tr>
<tr>
<td>41</td>
<td>Against Pro-LGBTQ Legislation.</td>
<td>+2</td>
</tr>
<tr>
<td>37</td>
<td>Supportive of modern rights movements like Black Lives Matter.</td>
<td>-5</td>
</tr>
</tbody>
</table>

“People in ag are definitely not for Black Lives Matter. They’re more conservative. Agriculture is predominantly in the south, which tends to be more racist.” – Post Sort interview

“You think of ag, and you think of the south. It doesn’t make you think of a radical political liberal movement.” – Post Sort Interview
Conservative Industrial Agriculture: Theme Two

Masculine

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>A male dominated field.</td>
<td>+4</td>
</tr>
<tr>
<td>7</td>
<td>Full of good ol' boys.</td>
<td>+4</td>
</tr>
</tbody>
</table>
Conservative Industrial Agriculture: Theme Three

Intellectual

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Not a career path for intellectuals.</td>
<td>-4</td>
</tr>
<tr>
<td>8</td>
<td>Based on more tradition than science.</td>
<td>-4</td>
</tr>
<tr>
<td>35</td>
<td>Innovative and creative.</td>
<td>+2</td>
</tr>
<tr>
<td>13</td>
<td>At the cutting edge of harvesting technology.</td>
<td>+2</td>
</tr>
<tr>
<td>CASNR</td>
<td>Ethnicity</td>
<td>Gender</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td>In CASNR</td>
<td>White</td>
<td>Female</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Female</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Female</td>
</tr>
<tr>
<td>Non CASNR</td>
<td>White</td>
<td>Female</td>
</tr>
</tbody>
</table>
Traditional Agriculture: Theme One

Family-Owned

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Full of really close-knit families looking out for each other.</td>
<td>+3</td>
</tr>
<tr>
<td>15</td>
<td>Stronger when farmers and ranchers stick together.</td>
<td>+3</td>
</tr>
<tr>
<td>1</td>
<td>A way to connect with my family.</td>
<td>+3</td>
</tr>
<tr>
<td>4</td>
<td>Controlled by giant corporations.</td>
<td>-4</td>
</tr>
</tbody>
</table>

“Giant corporations don’t necessarily control everything because family is important in agriculture.”-Post Sort Interview
# Traditional Agriculture: Theme Two

## Patriarchal

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>A male dominated field.</td>
<td>+4</td>
</tr>
<tr>
<td>24</td>
<td>Old school about gender roles.</td>
<td>+4</td>
</tr>
<tr>
<td>26</td>
<td>Hard to be respected in as a woman.</td>
<td>+1</td>
</tr>
</tbody>
</table>
Traditional Agriculture: Theme Three

Set in its Ways

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement</th>
<th>Array Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Better for people wanting to work with their hands.</td>
<td>+3</td>
</tr>
<tr>
<td>8</td>
<td>Based more on tradition than science.</td>
<td>+2</td>
</tr>
<tr>
<td>35</td>
<td>Innovative and creative.</td>
<td>-2</td>
</tr>
<tr>
<td>10</td>
<td>Accepting of Genetically Modified Organisms.</td>
<td>-3</td>
</tr>
</tbody>
</table>

“Stereotypical of the old hick cowboy, but those stereotypes exist for a reason.” –Post Sort Interview
Findings: Research Question 2

How do Hofstede’s Six Dimensions of National Culture describe each subjective opinion of American agriculture?
Progressive Agriculture and Hofstede

Individualist and Collectivist

(+4) Stronger when farmers and ranchers stick together

(-4) Awful at accepting people that don’t fit the mold

(-5) Not a career path for intellectuals
Progressive Agriculture and Hofstede

Low Power Distance
(-2) Exploiting farm laborers.
(-4) Definitely more about money than “feeding the world”.
Progressive Agriculture and Hofstede

Low Uncertainty Avoidance
(+4) At the cutting edge of harvesting technology.

(-3) Based on more tradition than science.
(−5) A terrible career path if you want to balance your work and your family life.
Progressive Agriculture and Hofstede

Short-Term Orientation
(+5) A profession that requires hard work.

(+4) A major reason why the U.S. is such a huge world power.

(+2) Patriotic, like apple pie and the flag.
Indulgent
(+3) Very satisfying to be involved in.

(-3) Against Pro-LGBTQ Legislation.
Conservative Industrial Agriculture and Hofstede

Masculine and Feminine

(+4) A male dominated field.

(-3) A terrible career path if you want to balance your work and your family life.
Conservative Industrial Agriculture and Hofstede

**High Power Distance**

(+5) Full of political conservatives.

(-5) A way to connect to my family.
Conservative Industrial Agriculture and Hofstede

Low Uncertainty Avoidance

(+3) Extremely stressful for farmers and ranchers.

(-4) Based more on tradition than science.
Conservative Industrial Agriculture and Hofstede

Collectivist

(+3) Stronger when farmers and ranchers stick together

(-3) Focused on getting the job done at all costs – no excuses.
Conservative Industrial Agriculture and Hofstede

Short-Term Orientation
(+5) A profession that requires hard work.

(+4) Patriotic, like apple pie and the flag.

(+3) A major reason why the U.S. is such a huge world power.
Conservative Industrial Agriculture and Hofstede

Restrictive
(+3) Tough if you aren’t self disciplined.
(+2) Against Pro-LGBTQ Legislation
(-5) Supportive of modern rights movements like Black Lives Matter.
Traditional Agriculture and Hofstede

Masculine

(+4) Old school about gender roles.

(+4) A male dominated field.

(-3) A terrible career path if you want to balance your work and your family life.
Traditional Agriculture and Hofstede

**Individualist and Collectivist**

(+4) Focused on getting the job done at all costs – no excuses.

(+3) Full of close-knit families looking out for each other

(+3) Better for people wanting to work with their hands

(-3) Awful at accepting people that don’t fit the mold.
Traditional Agriculture and Hofstede

Short and Long-Term Orientation

(+5) Patriotic, like apple pie and the flag.

(+5) A profession that requires hard work.

(-5) Will not be affected by politics in the long run.
Traditional Agriculture and Hofstede

Low Power Distance
(+3) A way to connect to my family
(-5) Definitely more about money than “feeding the world”.
Traditional Agriculture and Hofstede

**High Uncertainty Avoidance**

(+2) Based on more tradition than science.

(+2) Extremely stressful for farmers and ranchers.

(-3) Accepting of Genetically Modified Organisms.
Restrictive

(-3) Supportive of modern rights movements like Black Lives Matter.

(-4) Full of overweight people.
Recommendations for Practice

- Agricultural literacy should be priority to promote the broad range of available opportunities for all in American agriculture.

- Specific topics that should be addressed by the profession:
  - Versatile career opportunities
  - Representation through Role Models, and Peer Groups.
    - Ethnic
    - Female
    - LGBTQ
Recommendations for Research

- What are the cultural values of the students themselves?
- What are the sources of cultural dissonance between ethnic minorities and American agriculture?
- What are the subjective opinions held by students at Oklahoma State University about the College of Agricultural Sciences and Natural Resources (CASNR) itself?
- How would multiple conditions of instruction affect the factor arrays concerning the subjective opinions of American agriculture?
Questions/Discussion