Connecting Land, People and Place through the Local Food System: Evidence from Western North Carolina

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A theory of food system change

- Consumers “vote with their dollars,” other purchase behaviors
- When consumer preferences change, producers respond
- Learning how preferences form, meld, and change over time allows us to better understand our complex, adaptive food system
- ...and nudge it?
Big Questions

- Why are people (you?) willing to pay a premium for local, organic, non-GMO, “authentic,” Fair Trade, regenerative, etc?
- How are these preferences formed?
- How do they change over time?
- What factors influence this change (or lack thereof)?
- How are preferences and values enacted in economic, social, and cultural systems?
Value and Preference Formation

- Culture
- Social Interactions
- Experiences
- Stories
- Product Marketing & Branding
- Elders, Trusted Allies
- Tourism/Visitor Experiences
- Geography and Climate
- Family
- Education

Values and Preferences
My approach: Study Land-People-Place Connections

- The “land-people-place” dynamic describes the relationships and connections between
  - Land = *Natural resources, natural capital*
  - People = *Culture*
  - Place = *Community or society*
Research Objective

● Improve understanding of the economic connections among land, people, and place

● To do this, we must understand:
  ○ How value is created (a conceptual issue)
  ○ How it is embedded in place (an empirical issue)

● Outline for today
  ○ Case study evidence of economics of food systems
  ○ Conceptual Model
  ○ An invitation to engage in conversation
Western North Carolina Agriculture

- Small, diversified, changing
  - 70% of WNC farmland lost 1949-2007
  - Decline of historically important crops, esp. tobacco

- Asheville: local food hotbed
  - 17 markets/week (3 winter)
  - Direct-to-consumer sales increased 69% from 2007-2012
  - Food & beverage tourism
Conceptual Framework: Start with Land

- Farmland provides many benefits
- Relationships with the land enable values, preferences to be formed

Farmland

Values, preferences for food, fiber, forest products
Case Study 1: Farmland Values Project
Case 1: Farmland Values Project

- **Research Objective**
  - To collect, analyze, and communicate the many benefits that people gain from farmland in 4 Western North Carolina (WNC) counties

- **Methods**
  - Focus groups and interviews
  - Survey (n=1243)
  - Participatory geographic information system (PGIS) mapping exercise
Case 1: FVP Key Findings

● Farmland provides significant benefits to community
  ■ Local food
  ■ Scenic beauty
  ■ Jobs for farmers
  ■ Agricultural heritage

● >50% respondents willing to donate to protect farmland

● www3.unca.edu/farmlandvalues
Both tangible & intangible elements

- Scenic Quality
- Farmland
- Jobs and Income
- Ecosystem Services
- Food, Fiber, Forests
...are part of a complex system

- Quality of life
- Scenic Quality
- Tourism
- Food, Fiber, Forests
- Farmland
- Ecosystem Services
- Jobs and Income
- Flood control
Place matters in preference formation

Values and Preferences

- Culture
- Social Interactions
- Food and Farm Experiences
- Stories
- Branding
- Elders
- Tourism/Visitor Experiences
- Education
- Family
- Geography and Climate
Case 2: Year-Round Locavorism
Case 2: Year-Round Locavorism

● Research Question
  ○ Can increased knowledge about and experience with a local food system lead to more healthful food purchase and eating behaviors?

● Methods
  ○ Pre- and post- surveys
  ○ Intervention: participation in food events
  ○ Participants: UNC Asheville faculty, students, staff, members Osher Lifelong Learning Institute
Case 2: Year-Round Locavorism

- Key Findings
  - Significant positive change in overall composite scores (paired t-test; n=55; p<.0001)
  - Significant positive change in purchasing behavior subgroup
    - Greater intention around food selection,
    - More frequent tailgate market attendance & at groceries that offer local food
Experiences change preferences

- Culture
- Social Interactions
- Food and Farm Experiences
- Geography and Climate
- Family
- Education
- Tourism/Visitor Experiences
- Stories
- Branding
- Elders
- Values and Preferences
Case 3: Talk at Tailgate Markets
Case 3: Talk at Tailgate Markets

- **Research Question:**
  - How do interactions at tailgate markets affect purchasing behavior?

- **Methods**
  - 6 farmers markets
  - Surveys (349 respondents)
  - Interviews
  - Observations
    - 23 vendor stands
    - 537 market interactions
Case 3: Talk at Tailgate Markets

- Key Findings: Three main factors promote change in consumer purchasing behavior
  
  - Symmetrical motivations (personal, economic, informational)
  
  - Shared values
  
  - Mutual dependence on interactions
    - Building social capital
  
  - Short-term behavior changes can lead to changes in preferences, which can lead to long-term behavior changes
  
  - Differences in urban and rural markets
Farmers Markets Connect Land, People, Place

- Consumption patterns change
- Food, Fiber, and other products for consumers
- Community or social capital
- Jobs and $ for vendors
Intangible Value Created by Farmers Markets

Quality of Life

Consumption patterns change

Purchase more produce

Local products for consumers

Social capital

Jobs and $ for Vendors

Resiliency
Social Interactions Change Preferences

- Culture
- Social Interactions
- Food and Farm Experiences
- Geography and Climate
- Family
- Education
- Tourism/Visitor Experiences
- Elders
- Stories
- Branding

Values and Preferences
Case 4: Appalachian Grown™

• The Appalachian Grown™ Marketing Program: Measuring the Impact of Branding on Farms

• Research Questions
  ○ Do consumers recognize, use AG label?
  ○ How do farmers perceive the program?
    ■ What value do they receive from it?
    ■ Are they willing to pay for it?

• Methods
  ○ Producer, consumer pre-intervention surveys
  ○ Implementation of marketing efforts in three stores (one “control”)
  ○ Post-intervention surveys
Case 4: Appalachian Grown™

● Key Results
  ○ Consumers
    ■ use the label as it was intended
    ■ don’t need pictures of farmers, just farm location
    ■ average WTP for local: 48% premium
  ○ Farmers
    ■ Baseline: Majority attributed only 0-10% of sales to the program
      ● 2/3 said it helped increase sales
    ■ Post: farmers attributed 25% of sales to the program
Effective Branding Changes Preferences

Values and Preferences

- Culture
- Social Interactions
- Food and Farm Experiences
- Stories
- Branding
- Geography and Climate
- Family
- Education
- Tourism/Visitor Experiences
- Elders
Values and Preferences are Complex

- Culture
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- Product Marketing & Branding
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- Family
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Summary of Key Take Aways

- The value of the food system is not just jobs and income
- Interactions at farmers markets can (do) change preferences
- Experiences with food systems can lead to demonstrated changes in food purchasing behaviors
- Brands help people make decisions (and help producers, too)
  - trust is essential
- Preference formation is complex
Complexities

- Land, people, place dynamics are unique across places, spaces
- Land (climate), market pressures, and people all change
- Value can be embedded in place even if you’re not physically there
Food for Thought

● What are the social and cultural mechanisms that influence preferences in your region?

● How might economics connect land, people and place in your contexts?

● How is value embodied, embedded, and enacted in land, people, place?

● How might these be explicitly incorporated into the model?

● What suggestions, questions, or comments do you have?
Next Steps

- Dialogue with you and others to better understand the dynamics of preference formation
- Collect additional case studies from other regions
- Refine model
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Jargon

- **Land**: a catch-all term used to describe natural resources, environmental amenities, ecological systems, natural capital

- **Space ≠ place**
  - Space: geography, physical location
  - Place: space with meaning (value)

- **Price ≠ value**
  - It’s not just monetary value!
  - In addition to economic elements, value includes social and cultural components
  - Often intangible (which is why price ≠ value)
  - Not all economic activities will provide all of these values all of the time
• Intangible elements such as preferences, values influence both consumer and producer behavior
• Yet, we don’t have a good idea of how these preferences and values are formed or how they are enacted in economic, social, and cultural systems
Why Space and Place Matter

- Natural resource endowments, environmental conditions, climate, and ecosystem services vary across space
  - Mineral deposits
  - Water resources
  - Surface v. groundwater resources
  - Whether a groundwater aquifer is “recharged” (renewable) or not
- Resource composition and function may vary across space
  - Wetlands
  - Forests
- **Place** matters because if people *connect* with a particular place, they may be willing to protect it
Why Space & Place Matter in Economics

- Economic inputs and endowments (and access to them) also vary across space.
- Economics literature describes the link between space and income and/or wealth determination.
  - Relationship between school quality, academic performance.
  - Intergenerational economic mobility.
    - Describes how economic mobility varies across space.
    - The authors have not yet untangled *why* this is so.
    - That is, we don’t yet understand the economic mechanisms for connecting mobility and space.
Why Space & Place Matter: Sustainability

- To envision, plan, and create landscapes that are economically, socially and environmentally sustainable we need to know the values people have for the land.
- But, it is difficult to inventory the complete set of values that people have for land (natural resources, environment, ecosystems)
  - Many values are intangible & not priced in markets
    - Values aren’t expressed through typical transactions
    - Requires qualitative methods and/or nonmarket valuation
  - Values vary across time and space
    - Community, land and behavior vary across space
    - Values are formed by social customs, cultural traditions, geography, topography, and other factors
Case 1: Farmland Values Project

- **Key Findings for Model Development**
  - Local food as primary benefit of local farmland
    - Visitor WTP to protect WNC farmland > resident WTP
  - Scenic Quality
    - Important for resident quality of life
    - Also a tourist draw
    - Similarities between two types of food system actors
Methods: Nonmarket Valuation

● Most of the time, we can’t buy scenic quality
  ○ We could buy the view outright—but that’s expensive and not an option for many (most?) people
  ○ We may be able to buy a house with a view….but protection of that view usually doesn’t come with the price of the house
  ○ We may value the view even if we don’t live next to it: tourism, quality of life link.

● To capture these “nonmarket” values, we need to use nonmarket valuation (NMV) methods
  ○ a method to estimate values for goods/services that can’t be exchanged in markets

● There are several NMV methods that can be applied
  ○ Method selection depends on
    ■ the research question
    ■ the resource you’re trying to value
  ○ We used Contingent Valuation, Contingent Behavior and Choice Models in the studies I talk about today.
What is “Appalachian Grown™”?

- Began in 2006
- Trademark of Appalachian Sustainable Agriculture Project (ASAP)
- Certifies individual farms, farmer groups, and tailgate markets
  - Grocers, restaurants, and distributors may become AG licensed partners
- To use the brand, sellers must
  - Be located in an eligible county
  - Only label and market products grown on an Appalachian Grown certified farm
2015 Farmer Profile

- 16.6 years farming (median: 10; n=230)
- 25% reported between 1-10% of their family income is generated by their farming business (n=225)
  - 16% of farmers report operating at a loss
  - Another 16% report farming generating 11-25% of their family income
- Slightly more than half were male (n=96)
- Age (n=97): 21 - 73 years
WTP for Appalachian Grown™

Would you be willing to pay an annual fee of $x for the services you receive from the Appalachian Grown Program?

- **2011**: median “Willingness-To-Pay” for the program was estimated at $60/year

- **2015**:  
  - Insufficient response to populate the bins; contingent valuation model wasn’t viable  
  - 20.3% of farmers were willing to pay a given amount for Appalachian Grown™ services
Consumer WTP for Local Products

- Ex: “Would you choose a locally grown produce over a non-local produce if the local produce was (10%, 20%, 30%, 40%) more expensive?”

- Consumers surveyed indicate willingness to pay a premium for local food
  - Average premium: 48%
Food Events for YRL Case Study

- Participants were asked to attend at least one food-related event
- Options for the event included:
  - on-campus lectures (8)
  - cooking or gardening classes (8)
  - community events related to local food and agriculture (5)
  - food tastings on campus or at local stores (8)
  - food-related film screenings (2)
What’s Ahead for Agritourism?

● More “agri-tainment”
  ○ Dinners, dancing on the farm
● Additional themed tourist trails, activities
  ○ Moonshine & other craft beverages
  ○ Herbs
  ○ Wild edibles
  ○ Physical activities connecting land, people and place
    ■ Cycle to Farm
    ■ “Goat yoga” (pictured: Franny’s Farm)
Asheville, NC
Today’s Goal

- To develop a conceptual model for how connections between land, people, and place are formed, nurtured, and expanded in food systems across space and time

- “Place” is intangible, challenging to quantify, and thus typically not well-understood

- Focus on the role of
  - social networks and other forms of social capital,
  - cultural heritage,
  - human interaction, and
  - other less-tangible elements that influence consumer and producer behaviors