

# THE FOOD SYSTEM

# THE OMNIVORE'S DILEMMA

*To one degree or another, the question of what to have for dinner assails every omnivore, and always has. When you can eat just about anything nature has to offer, deciding what you should eat will inevitably stir anxiety, especially when some of the potential foods on offer are liable to sicken or kill you. (p. 3)*

- As omnivores, what should humans eat when we could, hypothetically, eat anything?

# DEFINING FOOD

## Food

Any substance or stuff that provides nutritional calories

## Nutritionism

An ideology that conceives of food purely in terms of nutrients consumed for the maintenance & development of the organism's bodily health

# AN ALTERNATIVE TO NUTRITIONISM?

*Perhaps what we need now is a broader, less reductive view of what food is, one that is at once more ecological and cultural. What would happen, for example, if we were to start thinking about food as less of a thing and more of a relationship?*

# FOOD HOLISM

## Food Holism

We should evaluate the status of a foodstuff as **food** with respect to its place in a chain of production and consumption

- Is the foodstuff heavily processed?
- Is the foodstuff that is produced also consumed by its producers?
- Is the production of the foodstuff harmful to the environment?
- Is the production of the foodstuff heavily dependent on technological intervention?

# THE AGRARIAN IDEAL

## Agrarianism

a social philosophy which sees farming as a way of life, valuable not only for the food and agriculture it produces, but also in itself.

# THE INDUSTRIAL FOOD SYSTEM

1. Technologically driven
2. Large scale
3. Highly efficient
4. Monoculture
5. Commodification

## TECHNOLOGY

- Relies on largely mechanized production
- Consumes significant amounts of fossil fuels
  - High "carbon footprint"
- Makes heavy use of synthetic pesticides & fertilizers



## SCALE & EFFICENCY

- 1850
  - Total population: 23.2 million
  - Farm population: (approx) 11,680,000
    - Farmers constitute roughly 50% of population & 64% of labor force
- 2012 (most recent farm census)
  - Total population: 314.1 million
  - Farm population: 3.2 million (roughly 2% of population)
  - Today's farmers produce 262 percent more food with 2 percent fewer inputs (labor, seeds, feed, fertilizer, etc.), compared with 1950.
  - Farm goods are shipped **globally** not locally

## MONOCULTURE

- The agricultural practice of producing or growing a single crop, plant, or livestock species, variety, or breed in a field or farming system at a time
  - advantages include specialization & cheaper sale prices from economies of scale
  - disadvantages include heavy dependence on fertilizers, pesticides, and GMO seed, all of which have known negative "externalities"

# COMMODIFICATION

## Commodity

an economic good or service when the demand for it has no qualitative differentiation across a market

## Commodification

(1) the transformation of the market for a unique, branded product into a market based on undifferentiated products; (2) the assignment of economic value to something not previously considered in economic terms

## "FAMILY" VS. "CORPORATE" FARMS

- 96.4 percent of the crop-producing farms in the U.S. are owned by families, and they represent 87 percent of all the agricultural value generated

# CRITIQUING THE IFS

## Genealogy

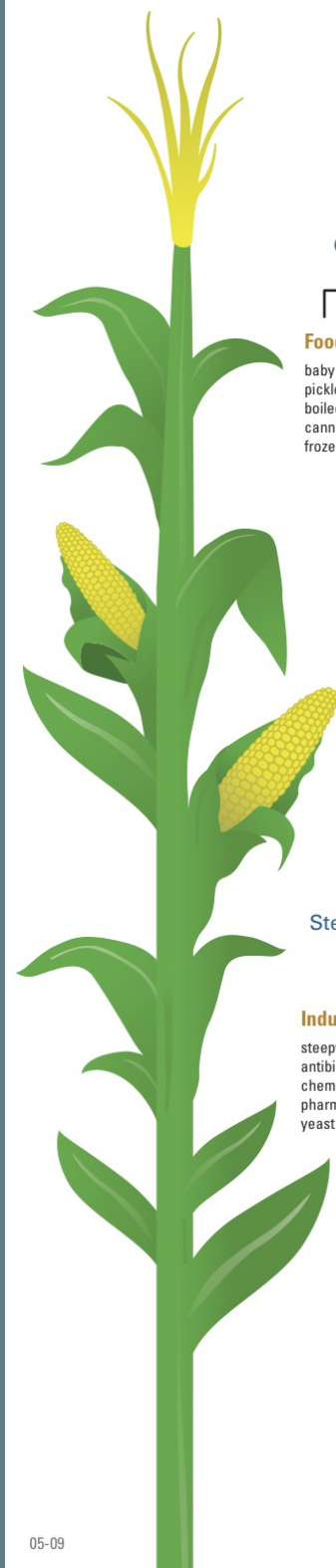
an explanation of some cultural phenomenon in terms of the way it came about

- Critique by "genealogy"
  - reveals contingency of the phenomenon
  - historical causes might not justify the phenomenon with respect to relevant alternatives
    - The genealogy of industrial food
      - Where does our food come from and why should it be so?

# THE RISE OF KING CORN

- Corn production dwarfs all other agriculture production in the US
  - 386.75 million metric tons of corn
    - soybeans: 118.69 million
    - wheat: 62.86 million
- Versatile food & commodity
- The "protocapitalist" plant

# Corn



## Whole Corn Products

### Cob & Kernel

#### Food

baby corn  
pickled baby corn  
boiled sweet corn  
canned corn  
frozen packaged

#### Industrial

decorative items  
(pod & Indian corn)



### Whole Kernel Products

#### Food

popcorn  
snack food  
corn nuts  
posole  
canned corn  
soup mixes  
canned hominy  
frozen packaged

#### Feed

livestock feed  
wild animal feed



## Dry Grind Ethanol

### Cob or Stover

#### Industrial

polishing media  
furfural (chemical feedstock)  
liquid spill recovery media  
dust adsorbent  
construction board  
cosmetic powders

### Alkali Cooked

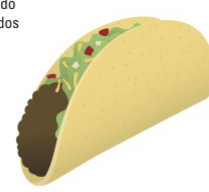
#### Food

tortilla flours  
hominy  
corn chips  
tortilla chips  
taco shells  
sopapillas  
atoles  
posole  
menudo  
tostados

### Fermentation

#### Industrial & Fuel

fuel ethanol  
distillers dried grains  
with solubles



## Fractionated Products

### Grits & Cones

#### Food

breakfast cereals  
fortified foods  
pinole  
snack foods  
maize porridges  
alkali cooked products  
breads & bakery products  
fermented beverages  
unfermented beverages  
pet foods  
corn bread

#### Industrial

wallpaper paste  
floor wax  
hand soap  
dusting agents



### Flour

#### Food

bakery products  
masa flour  
snack foods  
baby foods  
baking mixes  
batters  
desserts  
pie fillings  
gravies & sauces  
salad dressings  
frozen foods  
meat extenders  
non-meat extenders  
thickening agents

#### Industrial

fermentation media  
explosives  
gypsum wallboard  
paper products  
briquettes  
foundry binders  
ore refining  
drilling fluids  
label adhesives  
edge paste  
pharmaceuticals

### Hominy Feed

#### Feed

livestock feed



#### Oil

##### Pharmaceutical & Food

vitamin carriers  
lecithin  
soluble oils  
cooking oil  
margarine  
mayonnaise  
potato chips  
salad dressings  
sauces  
shortenings  
soups

##### Industrial

lecithin  
soluble oils  
insecticides  
linoleum  
printing inks  
rubber substitutes  
rust preventatives  
soaps  
tanning agents  
textiles

#### Meal

##### Industrial & Feed

livestock feed  
amino acids  
fur cleaner

## Wet-milled Corn

### Steepwater

#### Industrial & Feed

steepwater (feed)  
antibiotics  
chemicals  
pharmaceuticals  
yeast culture

### Germ

#### Same uses as dry-milled germ



#### Feed

cattle feed

#### Gluten Feed

poultry feed  
zein  
production

#### Gluten Meal

pan coatings

### Modified Starch

#### Food

baby foods  
bakery products  
chewing gum  
retortable thickeners  
puddings & custards  
prepared desserts  
salad dressings  
baking mixes  
pie & pastry fillings  
gum candies  
snack foods  
sauces & gravies  
condiments  
icings & glazes  
dehydrated foods  
instant tea  
instant breakfast foods  
low-cal sweeteners  
nougats  
pan coatings

#### Industrial

adhesives  
book-binding agents  
candles  
ceramics  
casting (mold) binders  
dyes  
printing inks  
insecticides  
insulation & fiberglass  
labels  
leather products  
incendiary compounds  
fireworks  
ore separation compounds  
poster paints  
paper products  
plastic molding  
plywood & wallboard  
sandpaper  
textiles  
wallpaper  
shade cloth

### Native Starch

#### Food

baby foods  
bakery products  
baking powder  
brewed beverages  
chewing gum  
chocolate drinks  
puddings & custards  
prepared desserts  
snack foods  
salad dressings  
meat products  
baking mixes  
prepared condiments  
pie & pastry fillings  
precooked & frozen meals  
prepared soups  
powdered sugar  
canned vegetables  
candies



#### Industrial

abrasive papers  
adhesives  
dry cell batteries  
composite binders  
paperboard products  
boiler compounds  
bookbinding  
briquettes  
clay binders (ceramic)  
chemical precursor  
fermentation feedstock  
detergents & cleaners  
coatings  
paper color carriers  
textile color carriers  
cord sizing & polishing  
cork products  
crayon & chalk binders  
dispersion agents  
dye component

#### Industrial

fiberglass sizing  
fireworks  
powdered insecticides  
insulating materials  
lubricating agents  
oilcloth  
well drilling mud  
ore refining  
paints  
fillers & caulks  
cleaning compounds  
molded plastics  
printing inks  
colloid emulsions  
textile finishing  
ceiling tiles  
rubber tires  
wallpaper  
water treatment

### Pharmaceutical & Cosmetic

antibiotic products  
antibiotic production  
aspirin  
powdered cosmetics  
liquid thickener  
dietary formulations  
soaps  
disinfectants  
surgical dressings



### Glucose

#### Pharmaceutical & Food

baby foods  
medicinal syrups  
bakery products & mixes  
beverages  
breakfast foods  
prepared cereals  
cheese spreads  
chewing gum  
coffee whiteners  
cordials & liqueurs  
desserts  
prepared egg products  
extracts & flavors  
fruit jams & butters  
prepared soups & sauces  
salad dressings  
pickled products  
frozen seafood  
peanut butter



#### Industrial

adhesives  
chemicals  
dyes & inks  
explosives  
leather tanning  
metal plating  
paper products  
plasticizers  
shoe polish  
rayon  
textiles  
theatrical makeup  
tobacco products

### Fructose

#### Food

bakery products  
canned fruits  
canned juices  
condiments  
confections  
frozen desserts  
soft drinks  
wine products  
yeast production  
fruit jams & preserves



#### Food & Feed

alcoholic beverages  
acidulants  
flavor enhancers  
soft drinks  
amino acids (feed)

#### Industrial & Fuel

industrial alcohols  
engine fuel  
fuel octane enhancers  
oxygenate in engine fuels  
plastics  
solvents  
carpeting  
textiles  
food packaging

## INDUSTRIAL FERTILIZER

- Synthesizing nitrogen via the [Haber-Bosch process](#)
- Cheap fertilizer was initially due to WWII excess
- Synthetic fertilizer made monocultural farming practices possible on a large scale



## AGRICULTURE POLICY

- Abolition of the "ever-normal granary" scheme of fixing commodity prices
- Institution of "direct pay" programs to farmers during price shortfalls

## INDUSTRIAL MEAT

- Inexpensive corn becomes high-energy feed for livestock
- Corn-fed cattle reach "slaughter-weight" in less than 1/3 of the time grass-fed cattle require

## FOOD ECONOMICS

- "Inelasticity" of demand
- Constant threat of commodification

