

# **Unintended and Paradoxical Aggregate Economic and Environmental Effects**

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# Policy Process

- \* Arguably guided less by sound economic, ecological, environmental, and generational analyses than at any time during our professional careers

# The Current Policy Milieu

- \* Framing of policy proposals and discussion of policy alternatives increasingly dominated by
  - \* Ideology, often disguised behind so-called economic and scientific analyses
  - \* False and misleading economic (and scientific) studies
    - \* Dominated by economic (and scientific) hit men
    - \* Two recent examples (grain exports and poultry)
  - \* Perception managers—spinmeisters
  - \* Reductionism—thirty second sound bites that attempt to simplify complex issues
  - \* Definition of policy options by academics largely ignored
- \* Objectivity of academics increasingly questioned
- \* Objective economic and scientific analyses by government employees often sanitized or buried, and future analyses of certain policies squashed by threatened cuts of agency budgets

# The Future

- \* Hopefully future policy formation and debate will be based on meaningful, objective analyses, scientific and economic
- \* Important considerations are understanding of
  - \* Paradoxical effects
  - \* Unintended consequences

# The Macro or Aggregate World

- \* ***“Everything is Connected to Everything Else”***
  - \* A fundamental ecological principle
  - \* But also a fundamental characteristic of the aggregate economic system
- \* **Unintended Consequences**
  - \* May result from a focus on only one part of the household, critters or humans
    - \* some negative, some positive consequences
  - \* May result from a focus on static, current impacts, rather than dynamic, long-run impacts
  - \* May result from a micro policy focus when a macro focus is appropriate

# Examples of Unintended Consequences

- \* **Ethanol mandates**

- \* Intended to make the US less dependent on foreign oil and to have more sustainable energy production
- \* Unintended consequences
  - \* Increased drawdown of aquifers
  - \* Increased erosion and sedimentation
  - \* Increased mining of phosphorus and potash fertilizer
  - \* Increased use of natural gas to manufacture nitrogen fertilizer
  - \* Higher food costs globally may have resulted in inadequate or less nutritious food for low income populations
  - \* Very small net fossil fuel equivalent energy gain

# Examples of Unintended Consequences

- \* **Pesticide Risk Assessment (under FIFRA/FQPA and ESA)**
  - \* Intended: Preventing the “Risk Cup” from overflowing
  - \* Unintended: Increases in a plethora of other risks to people and to the environment, and even to endangered species (other than the one being evaluated)

# The Macro or Aggregate World

## \* **Micro-Macro Paradoxes**

- \* Tendency to reason or analyze issues at the micro level
- \* But what appears true at the micro level may have the opposite macro effect
  - \* e.g. Introduction of a new pesticide that increases crop yield and is profitable for a farmer to use
    - \* But widespread adoption increases production which lowers crop price
    - \* In the aggregate, farmers as a group may be **worse** off
    - \* While consumers may be **better** off

## \* **Unintended and Paradoxical Consequences**

- \* May apply to “expected” economic and ecological impacts
- \* But also apply to “risk” considerations

# Examples of Paradoxical Economic Effects

- \* **Boll Weevil Eradication**

- \* Intended: Eliminate a serious pest of cotton
- \* Unintended: Increased cotton production lowers price, and some producers make less money
  - \* *“the boll weevil eats up the cotton crop and keeps price from falling”*

# Examples of Paradoxical Economic Effects

- \* **Increased water use efficiency in the Yellowstone River basin**
  - \* Intended: Water conservation, higher profits
  - \* Unintended: Upstream conservation early in the season reduced water availability downstream late in the season.

# The Future

- \* Hopefully future policy formation and debate will be based on meaningful, objective analyses, scientific and economic
- \* Important considerations are understanding of
  - \* Paradoxical effects
  - \* Unintended consequences
- \* Quite difficult to have thorough, objective evaluation of complex consequences of public policy options with research funding piece-meal and short-term (and with the prevalence of economic hit men and perception managers at the forefront in public discourse!)

# The Future

- \* Identifying unintended and paradoxical consequences of public policy proposals is a quick “test” of tenure and academic freedom policy
- \* **Ask us how we know!!!**