



## Why are There Unintended Consequences, and What are the Implications for Doing Evaluation?

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- Why should evaluators care about unintended consequences of programs?
  - Because they limit our ability to apply strong methodology and assess outcome
- Nothing will make the invisible visible, or the unknowable knowable. But we can:
  - Increase the range of what we can see
  - Glimpse (in a hazy and incomplete way) possibilities that were previously hidden
  - Build agility into our evaluation designs to contend with the inevitable surprises
  - Chip away at the problem
- What I'm up to
  - I'm trying to nudge evaluation in the direction of dealing with these issues
  - So, thanks for giving me the chance
- Structure of presentation
  - Part 1: Theory of where types of unintended consequences come from
  - Part 2: Practical advice about what to do about it

## Unforeseen and Unforeseeable Consequences

- Need to appreciate the difference between consequences of programs that are
  - Unforeseen, and
  - Unforeseeable
- Unforeseen: Some surprise can be anticipated if we looked in the right way
- Unforeseeable: Anticipation is *impossible*
- Issues are well known in planning. My interest is applicability to evaluation
- Evaluation Tactics Differ Depending on the Mix of Unforeseen and Unforeseeable Consequences

## Reasons for Unforeseen Consequences

- Unforeseen – Multiple analytic frameworks are not employed
  - Planners don't use enough history
  - Evaluators usually look to planners and implementers as sources of logic models
  - Different intellectual frameworks provide different (and complementary) insight
- How many perspectives? Which ones? I can't prove it, but I think it doesn't matter
  - A unidimensional view is always problematic
  - Time and access to expertise are limited. Only a few of many perspectives can be included
  - Intellectual disciplines and insights do overlap
  - I have faith in the Pareto principle
- No precision, but it does point to possibilities and directions
- Example: high stakes testing applies a single metric to the multidimensional system
  - Framework 1: Systems theory
    - Systems deploy resources to achieve performance criteria
    - Long term survival and growth requires joint optimization of multiple objectives
    - Optimizing a single metric may be necessary for short term needs, but will distort the system in the long run
  - Framework 2: Educational research
    - When pressed, teachers will teach to the test, regardless of other objectives, however, dear to the educational system

## Reasons for Unforeseeable Consequences – The Planner's Perspective

- Multiple interacting processes
- Nonlinear interactions
- Long feedback loops
- Sensitive dependence on initial conditions
- Inability to completely specify all relevant program elements
- Adaptations of programs to environmental changes
- Decision making based on less incomplete information
- Miss early indications of relevant changes
- Ability to make change happens intermittently along the policy or program life cycle

## Reasons for Unforeseeable Consequences – The View from Evolutionary Biology

- Any program is one organism competing in a complex ecology of other programs
- Program evaluation looks at one particular program out of many in an ecosystem
- Change in any program engenders adaptation in the others – co-evolution takes place
- At any time, each organism has a range of “choices” as it adapts
- As a “choice is made” the options for adaptation for all the others shifts
- Change may affect not only the inhabitants, but the shape of the fitness landscape
- From the point of view of a single program that is changing, unintended consequences mean that the course of all this interactive change cannot be predicted in advance

## Why Does Unexpected Change Tend to be Undesirable?

- Evaluation is done from the point of view of a single program among many competing programs
- At least in the short run, resources are fixed, thus making change zero sum, or close to it
- If we define "good" from the narrow perspective of a single program, most responses of competitors will tend to be "bad" for the program of interest

## Example of Unforeseeable Consequences: Automobile's Environmental Impact

- Long feedback loop between implementation and effect
- Complex trajectory of implementation
  - gas costs and distribution
  - highway system
  - suburban development
  - mass production, purchase costs
  - aftermarket support
- Applicable theory unknown (CO2 impact on environment)
- Measurement non-existent
  - Satellite
  - Remote sensing
  - Computing power

## Evaluation Tactics

### **Unforeseen Consequences**

Life cycle dynamics	Use developmental processes to identify relevant variables. E.g. Technology change rate in technical education
Interdisciplinary teams	Under the right circumstances, groups make better decisions than individuals. Combine diverse perspectives with views core of stakeholders.
Building on the already known	Few programs are unique. Exploit the history of similar programs, and knowledge from outside the evaluation
Planning methodologies	Many techniques from planning can be adapted e.g. multiple scenario planning, assumption based planning, and backcasting.
Temporal, causal distance	Design for shorter distance between innovation and outcome in order to decrease surprise.
Group process	Manageable group size can be expanded by using special methods to handle large groups and to defuse conflict (e.g. Delphi, Dannemiller Tyson).

## Unforeseeable Consequences

Extend internal monitoring	Evolving logic models and qualitative methods to monitor changes as well as conformance to design intent
Environmental scanning	Low cost monitoring methods can identify likely sources of change.
Futures markets	Aggregating <i>independent</i> knowledge, belief, and intuition, without centralized direction, can provide strong indicators of trends and outcomes.
Retrospective logic modeling	Backwards looking logic modeling can link unfolding events to program activity.
Data	Flexible, multi-purpose data sources insure against being locked into irrelevance due to changing circumstances. Not always possible, e.g. need for specialized health status measures, difficulties of using data from existing IT systems
Knowledgeable pool of advice	Advisory boards can provide informed expertise that can be rapidly deployed at low cost.