Impact Evaluations and Evidence-based Programs

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Me

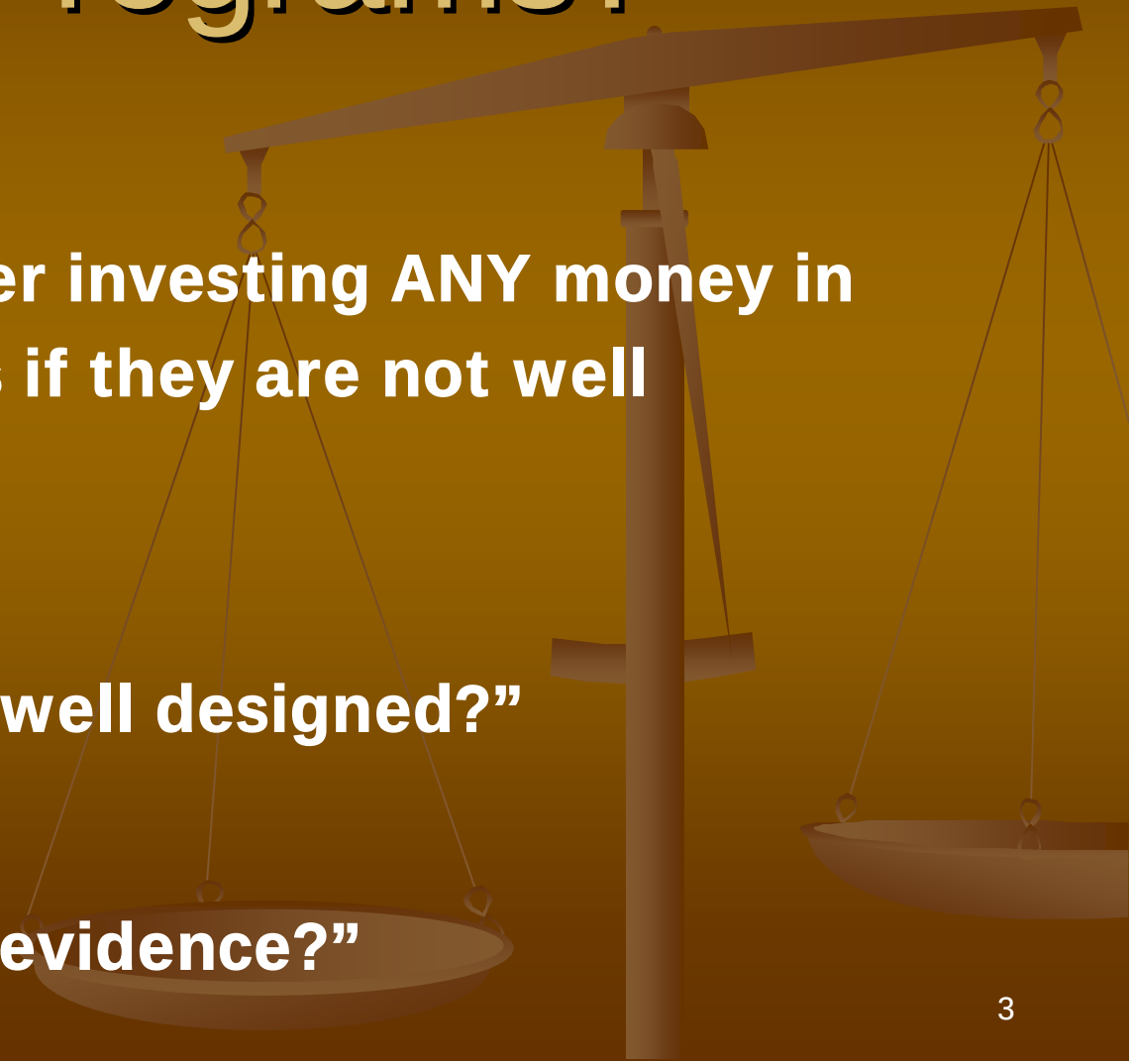
Environmental Policy

Impact Evaluations

Work with NGOs and multilateral international organizations

*** Measure effectiveness ("measures of success")**

Who Wants Evidence-free Programs?



Should NGOs bother investing ANY money in impact evaluations if they are not well designed?

What qualifies as “well designed?”

What qualifies as “evidence?”

Evaluation

- Nozipho Bhengu
  - HIV positive in 1998
  - CD4 count 55 in 2003
  - Manto Tshabalala-Msimang (Health Min) recommends diet change
  - <3months, CD4=135
- Florida water conservation education campaign
  - Reduce residential landscape water use
  - Targeted communities see 40% decline in water use

TREMENDOUS ENVIRONMENTAL IMPROVEMENT. WILDLIFE NUMBERS – TRIPLED – 3YRS

Experiments

Conservation Education Messages

Randomly assign different conservation messages to households in Georgia and contrast water consumption.

Eco-certification

Randomly assign third-party shade-grown coffee certification among interested and eligible coffee farmers in Colombia. Contrast changes in farm forest cover and household welfare over time.

Quasi-experiments

U.S. Endangered Species Act

Listing without funding has detrimental effect on species recovery. Listing with funding has salutary effect.

Costa Rica's *Programa de Pagos de Servicios Ambientales*

Payments have small positive or zero effect on recipients' vegetation cover.

Avoided Deforestation

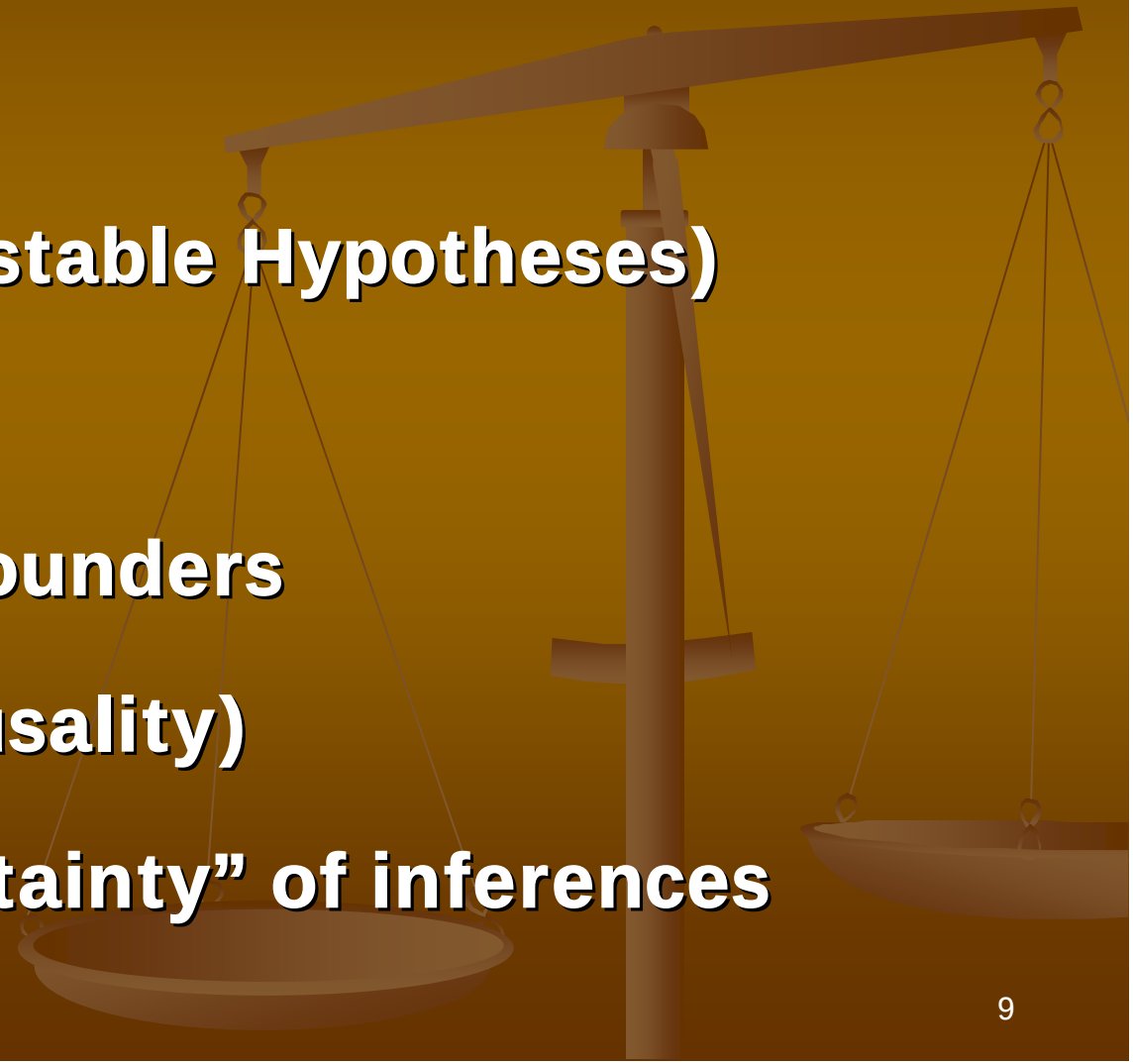
Protected areas have had little effect on preventing deforestation b'c targeted in low-risk areas.

Evaluation or Research?

Research is for eggheads unconcerned with important real-world problems.

Research-oriented evaluation vs. Utilization-focused evaluation

Impact Evaluation = Scientific Research



- **Theory**
- **Predictions (Testable Hypotheses)**
- **Observation**
- **Control of confounders**
- **Inferences (causality)**
- **Bounds on “certainty” of inferences**

Evidence = Empirical (Statistical) Evidence?

Randomized Controlled Trials – Gold Standard?

Not necessarily in practice, but conceptually YES.

Evidence

Counterfactual thinking

Key: Consideration of confounders

- **randomization**
- **quasi-experimental approaches**
- **case study with caveats**

Experimental and Quasi-experimental Approaches Required?

Treatment

Control

Intraocular Trauma Test

Causal Chain/Theory-driven Evaluations

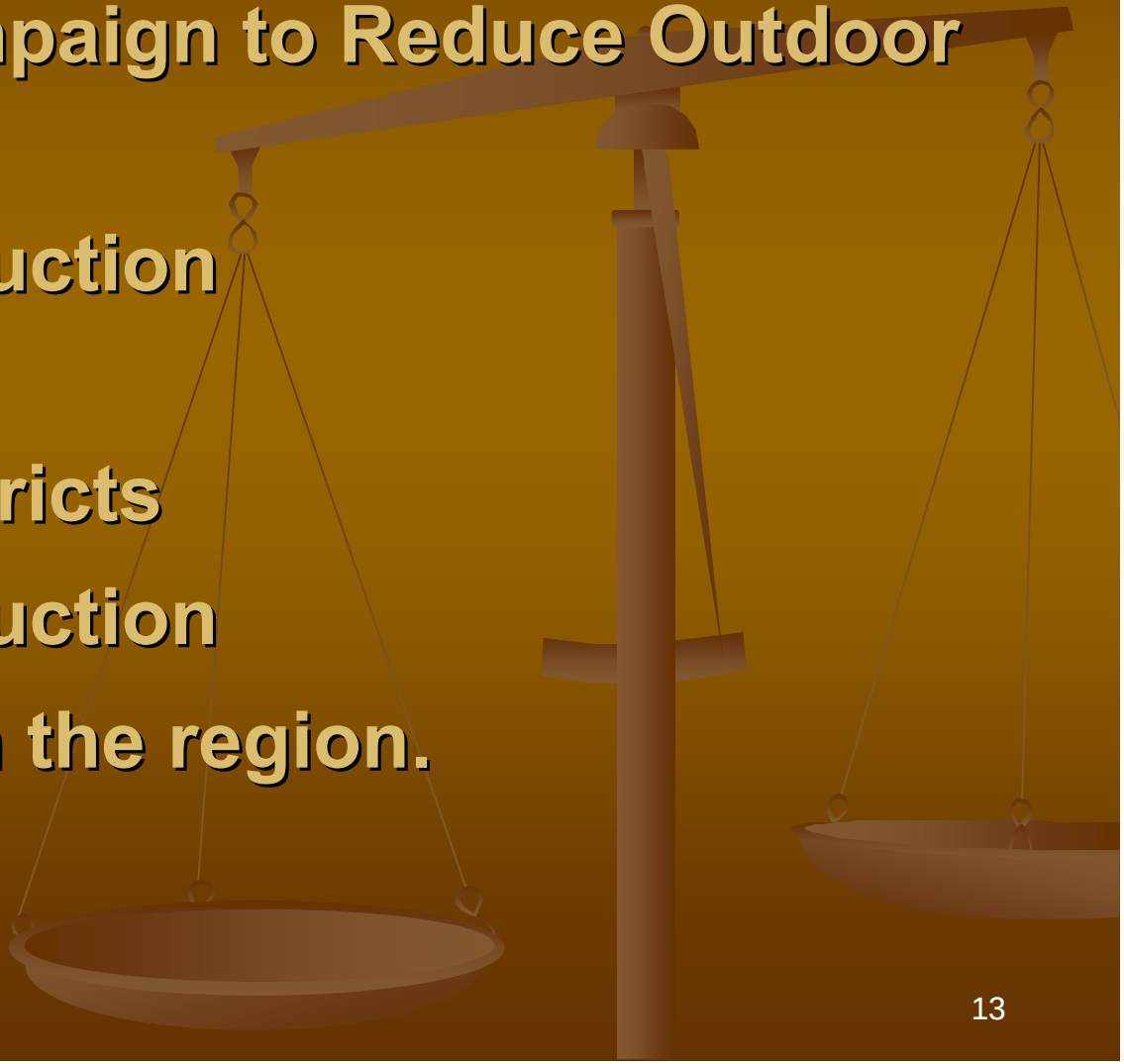
Educational Campaign to Reduce Outdoor Water Use (FL)

→ 38% reduction

Neighboring districts

→ 30% reduction

More rain in the region.



Behavioral Theories

Good theories typically have countervailing forces

and are consistent with multiple predictions.

Theory provides structure for testing, but by itself is inadequate for program development.

Same can be said of "empirical-only" approaches.

Regulations/Technology

- Endangered Species Act – how could it not work?
- Subsidizing adoption of energy efficient appliances or water-saving devices – if 40% of households adopt them, how can we not have an environmental impact?


ATTENTION
The new toilets use less water, to avoid problems the plumber has recommended the toilet be flushed twice when used.
Thank you for your cooperation.

A Four-Tiered Rule for Evaluating Conservation Interventions (↓ing Priority)

1. Consider ecological and socioeconomic factors that co-vary with the program.

2. Guess-estimate the direction of potential bias in interpreting intervention effectiveness.

3. Construct simple control groups (those that do not receive the intervention).

4. Collect data on outcomes and key inputs before and after interventions.

Why Bother?

- Should NGOs bother with impact evaluations if they cannot establish a credible counterfactual?

- If most won't do impact evaluations, who will? How will we develop evidence of what works?

bmj.com

Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials

Gordon C S Smith and Jill P Pell

BMJ 2003;327;1459-1461
doi:10.1136/bmj.327.7429.1459