



INSTITUTE *for*  
RESEARCH *on*  
POVERTY

UNIVERSITY OF WISCONSIN-MADISON

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# Approaches to Studying Poverty

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For

Teaching Poverty 101

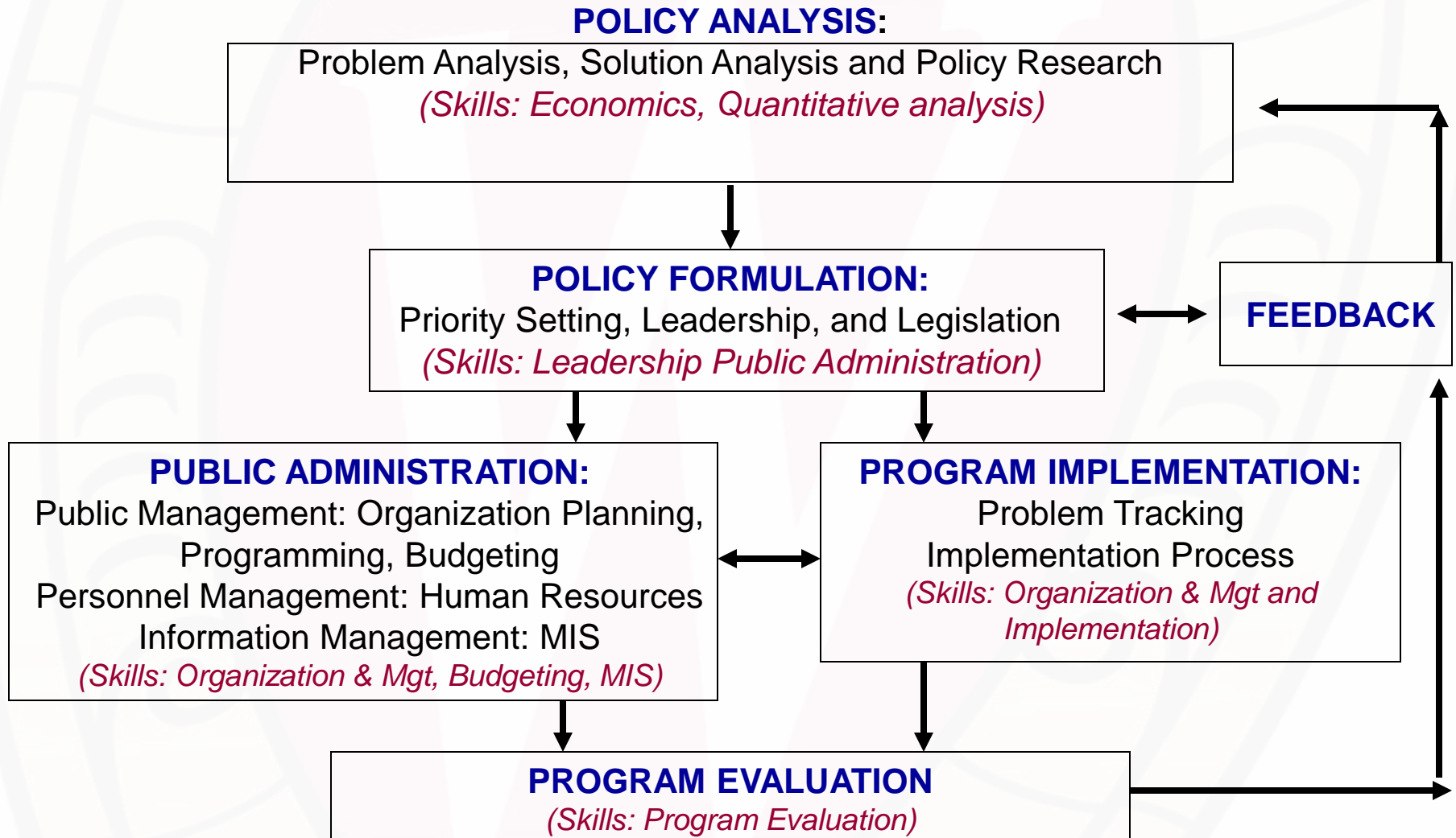
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# Division of Labor

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- Dan and I will share this session.
- I'll describe briefly the following approaches
  - Demographic/Descriptive
  - Policy Analysis
  - Program Evaluation
    - Benefit cost analysis
    - Cost effectiveness analysis
  - Program Implementation
- Dan will discuss
  - Empirical studies of behavioral responses
    - Random assignment experiments
    - Approaches to gaining statistical control
  - Simulation studies
  - Ethnographic approach

# First, A View of the Policy Process



# Example of Policy Analysis: Wolfe-Teft—Early Childhood Interventions

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- The Problem: Early childhood investments increase human capital; private decisions neglect them.
- What is Known?: Review of existing literature.
- Evaluation Criteria: What is the increase in human capital from alternative approaches; What is the cost of the alternatives?
- Identifying Alternatives: Early childhood education; improved nutrition and health care.
- Evaluating Alternative Policies: Assessed the gains and costs of alternatives, as indicated in the literature.
- Recommendation: Early childhood education, neighborhood health centers, and home visits identified as having high potential. More comprehensive analysis required prior to firm recommendation.

# Two Hidden Slides

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- There are two slides in the presentation that are hidden.
- They represent two views of the policy analysis process
  - One by David Weimer and Aidan Vining
  - A second by Eugene Bardach

Think them through at your convenience.

# What is Demographic-Descriptive Analysis

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- Take a population group—e.g., welfare recipients, poor families
- Using data (typically, survey data), describe the circumstances of families in the group—e.g., what is their income, family structure, location
- Describe a policy change that may impact the group
- Analyze how the policy change will affect those characteristics of the families in the group that are of interest.

# An Example of Demographic-Descriptive Analysis

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Cancian, Haveman, Meyer, Wolfe, Social Service Review, 2002

- First, the characteristics of those who have recently left welfare in Wisconsin are described.
- Then, the postexit earnings, employment, income (earnings plus in-work support and benefits) of recent leavers are compared to those who left welfare two years earlier, and to these values in the quarter before leaving welfare.
- These comparisons provide valuable information on outcomes for welfare recipients, and they provide important context for considering other evidence regarding the effects of the reform.

# Program Evaluation

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- Benefit-Cost Analysis
  - Based on principles of welfare economics—what is the willingness to pay of those who are benefitted; what is the social opportunity cost associated with the policy.
- Cost Effectiveness Analysis
  - Because benefits cannot be estimated accurately, carefully measure costs and tie them to indicators of program effectiveness.



# Example of BCA—The Section 8 housing voucher policy

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- Carlson, Haveman, Kaplan, and Wolfe. 2011. Journal of Policy Analysis and Management.
- Costs
- Then, Benefits

## Section 8 Program Costs

Program Cost	Participants	Non-participants	Society
Tax-related costs of voucher provision	\$0	\$6,619	\$6,619
Tax-related costs of increased public program usage	\$0	\$1,055	\$1,055
Welfare effects of recipient labor market responses	\$170	0	\$170
Origin/destination neighborhood effects	0	\$1,168	\$1,168
<b>Total Costs</b>	<b>\$170</b>	<b>\$8,843</b>	<b>\$9,012</b>

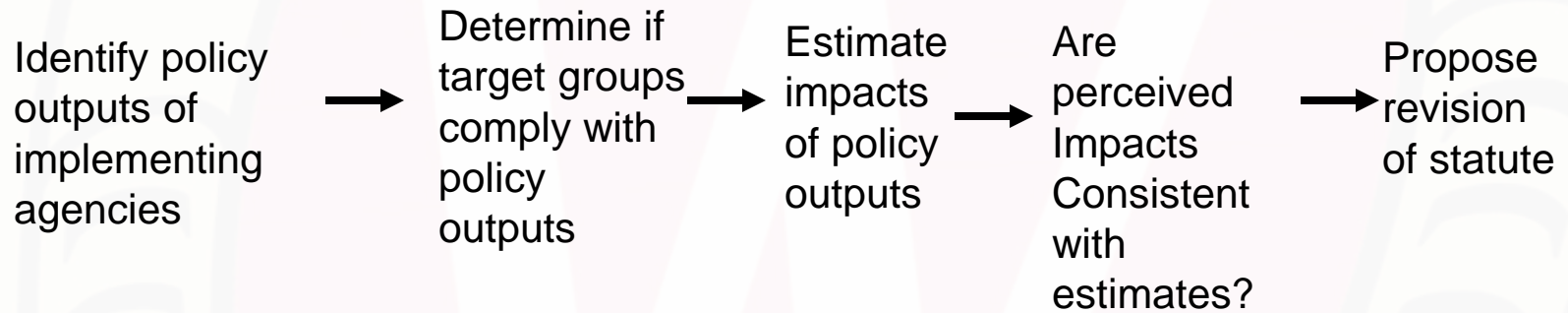
\*Standard Deviations not shown.

## Section 8 Program Benefits

Program Benefit	Participants	Non-participants	Society
Value of Section 8 voucher	\$4,264	0	\$4,264
Security value of voucher	\$110	0	\$110
Increased public program benefits	\$817	\$400	\$1217
Increased child education	\$3,626	\$1,209	\$4,834
Improved child health	\$383	0	\$383
Reduced crime-related behavior	\$37	\$37	\$734
<b>Total Benefits</b>	<b>\$9,326</b>	<b>\$1,646</b>	<b>\$10,882</b>
*Standard Deviations not shown			

# A Word on Program Implementation

## Stages (Dependent Variables) in the Implementation Process



# Estimating Effects of an Antipoverty Policy

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- Policy change example: health care reform (ACA)
- Relatively easy to measure some *outcomes*  
e.g.: In 2014, how many people are uninsured?
- But that's not the same as an *effect*
- Key idea is counterfactual/comparison

# Approaches to Estimating Effects

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- Random assignment experiments
  - If randomization works, experimental and control groups are equivalent, can be compared
- Statistical controls: trying to compare those who experience the policy with:
  - Those like them who didn't experience the policy
  - Themselves during a period when they didn't experience the policy

# Random Assignment Experiments

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- Basic idea: individuals/families (neighborhoods?) randomly assigned to experience either an intervention (E) or a control condition (C)
- At assignment, Es and Cs should differ only by chance. Later differences should be result of intervention
- Seen as “gold standard”

# Random Assignment Experiment Example: Wisconsin's Child Support Pass-Through

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- Cancian, Meyer & Caspar study the effects of an alternative treatment of child support for welfare recipients
- In most states, the government keeps all child support paid for TANF recipients. Wisconsin wanted to allow TANF recipients to keep *all* child support, with no effect on their TANF eligibility or benefit amount
- All TANF cases on 8/31/97 randomly assigned, as were all new cases for the next 10 months. E's received all child support paid. When receiving TANF, C's received only the first \$50/month, or 41% of what was paid, whichever was more



# Random Assignment Experiment

## Example: Selected Findings

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- Results 1 (mostly mechanical): TANF mothers in the E group received more child support
- Results 2 (behavioral) : nonresident fathers of those in the E group were more likely to pay, and paid more, than those in the C group
- Results 3: little overall cost difference between E and C

# Why Use Methods Other Than Random Assignment?

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- Experiments not always ethical/feasible
- Experiments may not work (or work well) – what if assignment is manipulated, or the control group receives substantial services, or not many experimental-group members actually get served?
- Experiments not strong at measuring macro effects (e.g., changing norms, changing institutions)
- Experiments give a very good answer to a precise question: what is the effect of A compared to B? But we may have a broader question: What is the effect of  $1/2$  A compared to A, compared to  $2A$ , compared to B?

# Other Approaches to Gaining Statistical Control, part 1

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- Standard regression approaches – try to control for a variety of factors so that the key estimate is unbiased
- Propensity score matching – try to select a statistically-equivalent comparison group
  - Gibson-Davis & Foster compare those who do/don't receive Food Stamps on food insecurity

# Other Approaches to Gaining Statistical Control, part 2

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- Difference-in-difference methods. Try to get estimates of effects by examining change: comparing outcomes before and after a policy change gives one simple estimate of effects. But other things may have changed too – so even better would be to compare this pre-post difference with the pre-post difference for a group that didn't experience the policy change
  - Example: Card & Krueger classic and controversial study comparing employment in the fast-food sector in NJ and PA before and after NJ's increase in minimum wages

# Other Approaches to Gaining Statistical Control, part 3

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- Fixed-effect methods – trying to look within an individual (state) rather than across individuals to estimate effects.
  - For example, Meyer, Ha & Hu are interested in the effects of having a “high” child support order on payments. Comparing payments among those with high and low orders gives a simple estimate. But even better would be to look within the same father and see his payments during periods when his order was high and when it wasn't

# Other Approaches to Gaining Statistical Control, Part 4

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- Instrumental variable methods – try to get an unbiased estimate of the key relationship through using a variable that is not chosen and unrelated to the ultimate outcome
  - Example: Two key difficulties estimating effect of smoking on health: (a) bad health may cause smoking and (b) both bad health and smoking may be caused by something else, say high levels of risk-taking. Leigh & Schembri's strategy: use the idea that cigarette prices affect smoking but do not have an independent effect on health

# Other Approaches to Gaining Statistical Control, Part 5

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- Multi-level models – try to account for nested data. For example, individuals are nested within a state, and states have different policies. So if looking at relationship between race and poverty in the US, might want to allow for race to have a different relationship with poverty in different states

# Simulation Studies: What Are They?

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- Question of interest: A new policy is being considered; what might its effects be?
- Typical basic approach:
  - Take data on individuals
  - Impose the policy change
  - Estimate behavioral responses
  - Aggregate outcomes



# Simulation Studies: Example

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- Meyer, Phillips & Maritato estimate effects of replacing income tax deductions for children with a children's allowance
  - Deductions: a certain amount per dependent can be deducted from income, with a tax rate applied to the remaining income. The value of the deduction is thus the amount of the deduction times the tax rate, so more valuable for those in higher tax brackets
  - Children's allowances: common in other countries; flat amount per child; available for all
- Simulation approach:
  - Take data on current system, estimate value of deduction for each family
  - Take away that amount, add in value of children's allowance
  - Estimate other (second-round) effects: welfare participation, labor supply
  - Aggregate totals: poverty, income, government revenues, etc.

# What Is an Ethnographic Study?

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- One type of qualitative research
- Often used to understand more complex processes or phenomena not currently well understood
- Samples often fairly small, focus is not on whether the story is typical of a larger population but on an in-depth understanding of some people's stories
- Interview guides, transcriptions, systematic analysis of text

# Ethnographic Study: Example

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- David J. Pate, Jr. examines African-American fathers with welfare-reliant children and the child support enforcement system
- In-depth interviews with 36 fathers in Milwaukee drawn from child support records, semi-structured interviews of between 45 minutes and 3 hours, 1-3 additional contacts for updates, 16 of these fathers interviewed one year later
- Companion to quantitative study

# Questions?

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# Some References

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- Weimer, David and Aidan Vining, *Policy Analysis: Concepts and Practice* (5th Edition). 2010.
- Bardach, Eugene, *A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving*, 4th Edition. 2008.
- Wolfe B, Tefft N. "Early Childhood Interventions and Cost-Benefit and Cost-Effectiveness Analyses." In Aidan R. Vining and David L. Weimer (Eds.), *Investing in the Disadvantaged: Assessing the Benefits and Costs of Social Policies, 2009* (Washington, D.C.: Georgetown University Press).
- Cancian, Maria, Robert H. Haveman, Daniel R. Meyer, and Barbara Wolfe. 2002. "Before and After TANF: The Economic Well-Being of Women Leaving Welfare." *Social Service Review* Vol. 76, No. 4 (December), pp. 603-641.
- Boardman, Anthony, David Greenberg, Aidan Vining, and David Weimer. 2011. *Cost-Benefit Analysis*. Prentice Hall.
- Carlson, Deven, Robert Haveman, Thomas Kaplan, and Barbara Wolfe. 2011. "The Benefits and Costs of the Section 8 Housing Subsidy Program: A Framework and Estimates of First-Year Effects." *Journal of Policy Analysis and Management* 30(2). Pp. 233-255.

# Some references, continued

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- Cancian, Maria, Daniel R. Meyer, and Emma Caspar. 2008. "Welfare and Child Support: Complements, Not Substitutes." *Journal of Policy Analysis and Management* 27(2):354-375.
- Gibson-Davis, C, Foster M. 2006. "A cautionary tale: using propensity scores to estimate the effect of food stamps on food insecurity." *Social Service Review* 80:93–126.
- Card, David and Alan B. Krueger. 1994. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review*, 84 (4), 774–775.
- Meyer, Daniel R., Yoonsook Ha, and Mei-Chen Hu. 2008. "Do Higher Child Support Orders Discourage Child Support Payments?" *Social Service Review* 82(1):93-118.
- Leigh, J. Paul and Michael Schembri. 2004. "Instrumental Variables Technique: Cigarette Price Provided Better Estimate of Effects of Smoking on SF-12." *Journal of Clinical Epidemiology* 57:284-293.
- Meyer, Daniel R., Elizabeth Phillips, and Nancy L. Maritato. 1991. "The Effects of Replacing Income Tax Deductions for Children with Children's Allowances: A Microsimulation." *Journal of Family Issues* 12:467-91.
- Pate, D. 2010. "Life After PRWORA: The Involvement of African-American Fathers with Welfare-reliant Children and the Child Support Enforcement System." In W. Johnson, ed: *Social Work with African American Males: Health, Mental Health, and Policy*. Oxford University Press.