

Essential Definitions

POLICY

- Lasswell & Kaplan: Policy is a projected program of goals, values and practices.
- Thomas Dye: Whatever government chooses to do or not do.
- Charles Jones: Functional analytic category -- a course of action rather than specific decisions.

Essential Definitions

PUBLIC POLICY

- Definition: "Purposive action by actors acting in public institutions to produce direction in government.
- Key terms:
 - Purposive action Acting in public institutions Direction in government





- 7. Decide
- 8. Tell your story





Public Policy Environment



Key Individuals:

- President, governors, city managers, mayors
- Senior policy-makers (eg. Department heads)
- Key legislators (eg. Speaker)
- Key lobbyists (eg. Nader)
- Media stars





- Key feature: Policy is a product of public institutions, must be *legitimized*.
- Policy without legitimization is just rhetoric.

Ethical Issues:

- Roles of <u>ideology</u> and
- <u>objectivity</u> of key individuals.
- Recognizing and serving the "Public Good"



Why PUBLIC Policy?



- Political reasons
- Moral or Ethical reasons
- Economic and Market Failures



- Key to the start of the analytical process. If the wrong problem is identified, the quality of analysis is moot.
- Public policy problems arise as a result of *change* or *pressure for change*.





Recognizing Public Policy Problems



- Public vs. private problems
- Policy vs. management problems
- Solvable vs. Unsolvable problems
- If we fail to properly recognize a public policy issue, we cannot hope to solve it: G.I.G.O.

Problem Recognition Criteria

- Asking proper questions is critical to establishing the correct criteria: Four key questions:
 - <u>Where</u> did the problem come from?
 - How do you know about the problem?
 - What are the <u>dimensions</u> of the problem?
 - Who is involved and why?

Where did the problem come from?

- What is the history?
- Have we seen this problem before?
- What do we know now?
- What do we need to know to solve the problem?



How do you know about the problem?

- How did this problem come to public awareness?
- What are your sources of information?
 - Facts
 - Opinions
 - Primary and secondary data
 - Who do you trust? Why?
- How much information is enough?

What are the <u>dimensions</u> of the problem?



- Purpose: to set a context and limit the inquiry.
- The six critical dimensions of a policy problem:
 - Type
 - ScaleLocation
 - Intensity
 - Extensiveness
 - Time-line

Dimension: Problem Type

- Political
- Social
- Economic
- Technical

Virtually all public issues combine multiple problem types.

Defining the type of problem leads to types of appropriate policy solutions.



Dimension: Problem Scale

- Macro (societal)
- Micro (organizational/individual)

Dimension: Problem Location

- Bounded by:
 - Physical location
 - Cultural/Social characteristics
 - Political venue
- Domestic or International (Note: international policy problems are not bounded by U.S. laws or culture – separate field entirely.)

Dimension: Intensity

- How important is it to solve this problem now?
- How strongly to people feel about the problem?
- How is the problem being portrayed in the media?
- How is the problem being portrayed politically?

Dimension: Extensiveness



- How large is the target population?
- How extensive are the geographic boundaries?

Dimension: Time-line

Two basic time-lines for problems:

- Longitudinal for these problems, the passage of time causes changes in the solution to the problem. Problems are time-dependent.
- Cross-sectional for these problems, the passage of 2. time does not cause the solution to change. Problems are time-independent.

Who is involved in the problem?

Stakeholder identification is critical to successfully defining a problem.

- Elements to stakeholder ID: 1.
- Who has a stake in the policy solution? both institutions/ groups and individuals. What are the positions on the issue for each stakeholder? 2.
- 3.
- How much influence does the stakeholder have on the policy solution? What will the policy consequences be if the stakeholder preferred solution is selected? 4.

Implying <u>Causality</u> in Policy

- Must be careful of implying <u>causation</u> when examining change and interaction among variables.
- Correlation -- the variables show a consistent relationship
- Causation -- must show both necessary and sufficient reasoning (extremely difficult in policy)
- Often look for proximate (doable) rather than ultimate causes for policy solutions

PROBLEM STRUCTURING



- Problems exist on a structural continuum: Low structure (seek political solutions)
 - Moderate structure (seek mixed solutions)
 - High structure (seek economic/technical solutions)
- · Understanding the structure of a problem aids defining a solution set

Problem Structuring Approaches

For low/moderate structure problems:

- "Back-of-the-Envelope" calculations.
- Provides:
 - Estimation of boundaries of the problem
 - Indication of direction of movement of problem
 - Rough idea of the magnitude of the problem
- Use known and available indicators to develop a rough estimate of the dimensions of the problem. This is speculative.



Problem Structuring Approaches



For moderate/high structure problems: Systematic Analysis:

- Relies on <u>forecasting</u>. (Projecting existing situations to a point in time when policy action will be taken.) Long-term, very expensive.
- Forecasting Techniques:
 - Modeling -- simplified version of reality.
 - Trend extrapolation -- time series analysis
 - Monitoring -- continual review of critical info.

Tools to Aid Structuring

- "Borrowing" problem definitions:
 - Avoiding re-invention of the wheel
 - Best-practices research
 - Best-of-Breed recognition
- Reasoning by analogy: Synectics
 - Researching similar problems
 - Learning from the mistakes of others
 - Distinguishing the relevant from the irrelevant.
- Others (see readings)
 - Classification analysisHierarchy analysis
 - Assumptional analysis





Agenda Setting:



Limited resources require choice of issues to continue analysis.

Basis (Cobb & Elder):

- Distribution of access and influence has inherent biases
- Range of issues which can be considered is limited
- The system's inertia make it difficult to change the prevailing biases

Agenda Building:

Two agendas

- Systemic -- discussion only
- Institutional -- set of items up for active and serious consideration
 - Only items on the Institutional agenda are acted on by policy institutions.

Division of the Institutional Agenda:

- Problem definition agenda. "Active and serious" research
- Proposal Agenda. Shift to finding a solution
- Bargaining Agenda. Support for proposals is developed
- Continuing agenda. Items keep resurfacing

Agenda-setting options:



- Let it happen. Pluralistic, gov't is passive
- Encourage it to happen. Gov't assists in definition and articulation of views
- Make it happen. Gov't takes an active role
- Non-decision.

Agenda-setting forces:

- Interest groups
- Media
- Politicians
- Events
- Notables
- Violence

Formal Problem Statement



- Once a problem is structured and on the institutional agenda.
- Statement of problem to be solved is "locked" for final analysis.
- Must be defined prior to alternative solution search.



DEVELOPING ALTERNATIVES

- What is an alternative?
 - A *potential* solution to the policy problem under consideration.
- To be effective, a selected policy must be the product of a <u>comprehensive</u> alternative search.

Factors Influencing Alternative Searches:

- Theory of political action of potential decision makers. (Eg. "Law of large solutions.)
- Systemic inertia -- do nothing.
- Limits on resources: Time, money, expertise, etc.
- Anchoring and parochialism which tend to foreclose options before they are explored.

Alternative Sources

- Literature Reviews
- Existing policy proposals
- Best-Practices/Best-of-Breed
- Generic solutions
 - Experiences
 - Pilot studies
 - Brainstorming
- Custom-made solutions tailored to a unique situation (most expensive and difficult)



Information to be provided on each alternative:

- Narrative Description
- Costs (monetary and not)
- Spillovers (externalities)
- Estimated effectiveness
- Other considerations:
 - Morality
 - Risk
 - Political feasibility

Validating alternatives:

- Does the alternative meet basic criteria and objectives?
- Has new information impacted on previously developed alternatives?
- Does it have an appropriate time horizon?
- Does it foster both internal and external policy consistency?
- Is it workable & are resources available?
- Have risk and uncertainty been accounted for?







Selecting Criteria for Evaluating Policy Alternatives



- Establish value prior to alternative test.
- Informed by:
 - Definition of the problem (dimensions/boundaries)
 - How the problem was structured
- Alternative test methods should be chosen to validate the selected criteria.

Alternative Evaluation Criteria

- Policy effectiveness (quality of outcome)
- Policy efficiency (cost/reward)
- Equity (fairness for target group)
- Liberty/Freedom (enhancement of rights)
- Political Feasibility (politically acceptable solution)
- Social acceptability (public support)
- Administrative feasibility (ease of implementation)
- Technical feasibility (technology is viable and appropriate)

Testing Alternatives

Purpose: To critically evaluate each proposed alternative.

Values:

- Assessment of strengths/weaknesses of each alternative.
- Provides a method of directly comparing alternatives
- Provides information to decision makers on final selection.



Alternative Test



- All alternatives considered must be tested using the <u>same</u> test methods.
- Tests may be *qualitative* (more political) or *quantitative* (more economic) in nature.
- <u>Multiple</u> methods should always be used.

Policy Models



Purpose: To analyze alternative proposed solutions.

Why? Most alternative are too complex for complete analysis, so we use models.

Definition:

Simplified version of reality.

- Levels of models:
 - Descriptive
 - Conceptual (more qualitative)
 - Predictive (more quantitative)
- Policy analysis tends to focus on conceptual and predictive models.
- Selecting the correct models of analysis is critical to successful policy selection.



Sample Policy Models

Models used for more qualitative analysis:

Institutional

- Group
- Public Choice (aka Rational Choice)
- Models used for more quantitative analysis:
 - Game Theory
 - Decision Theory
 - Economic Rationalism Theory
 Cost-benefit Analysis
 - Cost-effectiveness Analysis



Policy as institutional output.

The Institutional Model:

• Key focus is on the structural elements that produce policy. How the relationship between institutional arrangements and the environment affect the content of policy.





Institutional Model Policy Examples



- Competing agencies auto safety & EPA
- Distribution of resources among levels of government – Education support
- The Institutional model tends to be appropriate for more structured issues

The Group Model:

Policy as group equilibrium.

- Basic assumption: Interaction among groups is the basis for politics and therefore policy.
- How well does the policy alternative manage group conflict?

How:

- Establish rules of the game.
- Arrange compromises and balance interests.
- Enact compromise as policy.
- Enforce the compromise.
 - How is equilibrium maintained:
 - "Latent group" basically supports the status quo.
 - Overlapping group memberships prevent too extreme positions.
 - Checks and balances from group competition.

Group Theory Model Policy Examples



- Ideology Abortion, Religion in schools
- Competing Interests Environmental protection vs economic development

Public Choice Model:

Public choice theorists focus on the question of what government policies are *likely* to be implemented in a given political setting, rather than what policies *would* produce a desirable outcome if they *were* implemented.

Key Aspects:

- Individual "self-interest" drives policy.
- "Government Failure" akin to market failure produces bad policy.
- Local government is best choice to act.

Public Choice Model Examples

- Alaska "Bridge to Nowhere" Sen. Ted Stevens.
- Funded political junkets Sen. Tom Delay
- Any "pork-barrel" project (eg. military bases, highways, parks) keyed to constituent self-interest, not public good.



Game Theory Models:



Rational choice under competitive circumstances.

- "Zero-sum" games
- Pay-off matrices
- Risk preference analysis: Maxi-max, Maxi-min, Mini-max



- separately, cannot communicate
- Both A and B are offered the same "deal"

The Deal

- A. If you confess the crime was commited by both of you, and the other prisoner denies it or remains silent, you go free and the other goes to prison for 5 years.
- B. If both deny the crime, there is enough circumstantial evidence to jail for 3 years each.
- c. If you both confess, you each get one year.



Prisoner's Dilemma Pay-off	
Matrix	

	Pay-off I	Matrix	
Ac	ction	Pa	y-off
А	В	А	В
Cooperate	Cooperate	-3(R)	-3(R)
Cooperate	Defect	-5 (S)	0 (T)
Defect	Cooperate	0(T)	-5(S)
Defect	Defect	-1(P)	-1(P)



The "Payoff Matrix"

- Involves:
 - Strategies
 - Alternative conditions.
 - Probabilities
 - Calculated payoffs from all probabilities



Payoff Mat	rix Exan	nple	
 Add in probal 30% chance 	bilities: of rain		ſ
	Rain (30%)	No Rain (70%)	Total Value
Carry Umbrella	10(.3)=3	0(.7)=0	3
No Umbrella	-30(.3)=-9	5(.7)=3.5	-5.5





Add in probabilities:
5% chance of rain

	Rain (5%)	No Rain (95%)	Total Value
Carry Umbrella	10(.05)=.5	0(.95)=0	.5
No Umbrella	-30(.05)= -1.5	5(.95)=4.75	3.25

Accounting for Risk Preference

- Used when multiple players have different riskpreferences.
- Requires subjective probability estimates.
- Perceived pay-off values.
- Approaches:
 - Maximax: maximizes payoff (optimist)
 - Maximin: Avoid lowest pay off (pessimist)
 - Minimax: Minimizer of regret

rport Ca	ase B	asio	: pay	∕-off	matrix
S1-Sell			N1 –D)ecreas	se services
S2 – Status	Quo		N2-St	atus Qi	uo
S3-Increase	funding		N3-Ind	crease	services
	-	N1		N2	N3
	S1	20		30	40
	S2	0		50	60
	S3	-50)	10	100





Airport Cas	e Maximin	
	Minimum Payoff]
S1	20	-
S2	0	-
S3	-50	-



Airport Case -- Minimax

Regret Table:

S1 0 20 60 S2 20 0 40 S3 70 40 0		N1	N2	N3	
S2 20 0 40 S3 70 40 0	S1	0	20	60	
S3 70 40 0	S2	20	0	40	
	S3	70	40	0	



Decision Theory

- . . .
- Decision Tree models
 Used to determine the utility
- Used to determine the <u>utility</u> or <u>value</u> of possible outcomes
- Procedure:
 - Use the value (estimated) of each outcome.
 - Use the probability (subjective) of each outcome.

Decision Trees

• Steps:

- Determine all components:
 - Initial state
 - Decision points
 - Outcome paths
 - Value
 - Probability
- Diagram the system of decision points and outcome paths (tree structure)



Decision Trees



- Calculate <u>conditional</u> probabilities for each outcome path.
- Sum up conditional probabilities for each type of result.
- Determine which result has the greatest <u>utility.</u>













COST-BENEFIT ANALYS

- CBA is a <u>life cycle analysis</u> of both the <u>costs</u> <u>and benefits</u> associated with a project.
- CBA is usually associated with capital projects
- Basic information needed:
 - Measurement of all costs and benefits.
 - Determination of the <u>Net Present Value</u> of all C & B.
 - Assessment of the relationship between the costs & benefits.

Cost-Benefit Process

- 1. Specify objective.
- 2. Identify alternatives
- 3. Collect & analyze info.
- 4. Specification of target groups
- 5. ID. All C&B
- 6. Discount all C&B
- 7. Estimate risk & uncertainty
- 8. Specify criteria for selection

Cost-Benefit Process

- Steps 1 4 are the same as in the basic policy analysis process.
- Identification of all costs and benefits is a very complex undertaking.
- Use of classification schemes can assist in the identification process.



Identifying Costs/Benefits



- Use three questions:
 - 1. Is the C/B Internal (inside) or External (outside) to a target group?
 - 2. Is the C/B *directly measurable (tangible)* or *indirectly measurable (intangible)* result of the program?
 - 3. Do the combined C & B create a *real (net efficiency)* increase in utility or a *redistributional* shift?



Variety of costs must be considered:

- 1. Capital costs
- 2. Maintenance & operating costs
- 3. Opportunity costs
- 4. Social costs externalities (eg. Pollution)

Major problem: many public-sector C&B are not directly measurable. Must use <u>shadow pricing</u>

Shadow Pricing for CBA



- Examples:
 - Cost of a human life (actuarials)
 - Cost of pollution (clean-up)
 - Benefit of quality of life (property value)

EAR P	rogram	Example	
Tabel IV.2. N	Ionetized Bene	fits (Costs per V	Victimization)
Category	Tangible	Intangible	Total Cost
Assault	\$1,753	\$8,822	\$10,575
Arson	\$22,055	\$20,358	\$42,413
Rape	\$5,768	\$92,063	\$97,832
Robbery	\$2,601	\$6,447	\$9,048
Carjacking	\$5,485	\$6,447	\$11,932
Murder	\$1,164,930	\$2,160,210	\$3,325,140
Kidnapping	\$7,804	\$28,275	\$36.079

Making Costs & Benefits Comparable: Discounting

- Allows comparison of C&B incurred over a period of time. Uses the <u>NET PRESENT</u> <u>VALUE</u> to allow direct comparisons.
- Since the value of money declines with time, we must find a way of equalizing it: *The Discount Factor*







DISCOUNT TABLE

S, use a spreadsheet

- To simplify matters, use a spreadsheet or <u>Present Value table</u>.
- Tables represent discount factors for a variety of discount rates
- Take care to use 4 decimal-digits in calculations

Using the NPV Excel Function



- Excel contains built-in financial formulas
- Formula for Net Present Value: =npv(rate, value)
 - Be sure costs are represented by negative values: (50000) or -50000

Choosing a Discount Rate

- D.R. should accurately reflect the declining value of money over time -- usually keyed to *expected inflation*.
- D.R. should also account for the *risk* preference of the decision maker.

1.<u>High Risk</u> philosophy (projects are inherently very risky). *Marginal productivity of capital in private investment*. Results in conservative (low) investment rate. (12% -- 20%)

Risk Philosophies

2. <u>Moderate</u> philosophy. <u>Social Rate of</u> <u>Time Preference</u>. Compensation necessary to induce consumers to refrain from spending. (1.5% -- 4%)

Risk Philosophies



4. Internal Rate of Return. Rate at which C&B (Net Present Value) are equal. – This is the best way to determine the value of a project without philosophical compromises.



Strengths of Cost-Benefit



- Both costs and benefits are measured in dollars as a common unit of value.
- Allows us to go beyond the confines of a single policy or program and link C & B to society as a whole.
- Allows direct comparison of programs in widely differing areas.

Limitations of Cost-Benefit



- Exclusive emphasis on economic efficiency excludes equity criteria.
- Monetary value is an inadequate measure of responsiveness (e.g. \$1,000 to a rich person and a poor person)
- The frequent use of shadow prices may be arbitrary and unjustifiable.
- The bottom line is subject to intentional manipulation to produce a pre-determined outcome.

COST-EFFECTIVENESS

- Bases:
 - Maximize value received for a given expenditure.
 - Minimize expenditure for a given value.
- This means not all benefits must be defined or measured -- only key value.

Cost-Effectiveness Procedure Steps 1 -- 4 are the same as CBA Step 5 -- Choose a comparison value criterion (what is the value to be received, lives saved, etc.) Step 6 -- Calculate the value for each alternative proposed (to NPV). Step 7 -- Rank alternatives in terms of highest cost-effectiveness C.E. = Value/Costs Step 8 -- Recommendation

eatment-Speci	fic	Variables	-	
		Existing Drug	New Drug	Surger
Drug costs (fixed)	2	200	200	1000
Drug costs (per dose)	2	105	325	
Number doses		6	13	No. of Concession, Name
Positive drug response – prob.		010	0,9	
Serious drug reaction - costs	2	200	300	
Serious drug reaction - prob.		0.05	0.05	13 1201
Surgery costs	2		1.11.2.12	5000
Surgery failure				0.025
Surgery complications prob.				0.05
Surgery complications	2			2000





Cost-Effectiveness Advantages

- Less work than CBA
- More applicable to "soft" programs -- can be used on non-capital projects

- Flexible
- Faster and requires far fewer resources than CBA



• Selection of the value criterion is arbitrary

- Quantification problems
- Tends to undervalue externalities



Circumstances that lead to non-selection: Acknowledge S.Q. and reaffirm it

- The decision is so embedded in the estimation process all options are closed out
- Make a non-decision
- Decision maker(s) do not want a clear decision.





- Leverage -- political feasibility
- Importance -- relative political significance of the issue
- Information -- What information is available to the decision maker?
- Personality -- Who will be involved in the decision







Implementation

• Definition: The translation of legislative or executive decisions into operational regulations, programs and actions, including the delivery of the policy consequences to the target population.

Variables involved in the implementation process:



- 1. <u>Tractability of the problem</u> (is the problem easy to deal with?)
- 2. <u>Nonstatutory Variables</u> (external factors present in society)
- 3. <u>Ability of Statute to Structure</u> <u>implementation</u> (effectiveness of implementation infrastructure)

Stages in the process:



1. Policy outputs of implementing agencies leads to ...

2. Compliance with policy outputs by target groups

leads to ...

3. Actual impacts of policy outputs

leads to ...

4. Perceived impacts of policy outputs

leads to ...

5. Major revision in statute.

Factors influencing Implementation:



- Source of the policy
- Clarity of the policy (legislative intent)
- Support for the policy
- Complexity of administration of the policy
- Incentives for implementation
- Resource allocations



- It must work in both the
 - <u>Political</u> and
 - Programmatic arenas.

EVALUATION: Purposes: • Assure correct alternative is implemented • Assure the alternative does not haphazardly change during implementation • Determine if desired impacts are occurring • Determine future course for policy --• Continuation • Modification • Termination









Contemporary Approaches:



- 1. Before vs. After program comparison.
- 2. Time trend projection of preprogram data vs. actual post-program data.
- 3. Comparisons with jurisdictions or population segments not served by the program.
- 4. Controlled experimentation (control group use).
- 5. Comparisons of planned vs. actual performance.

