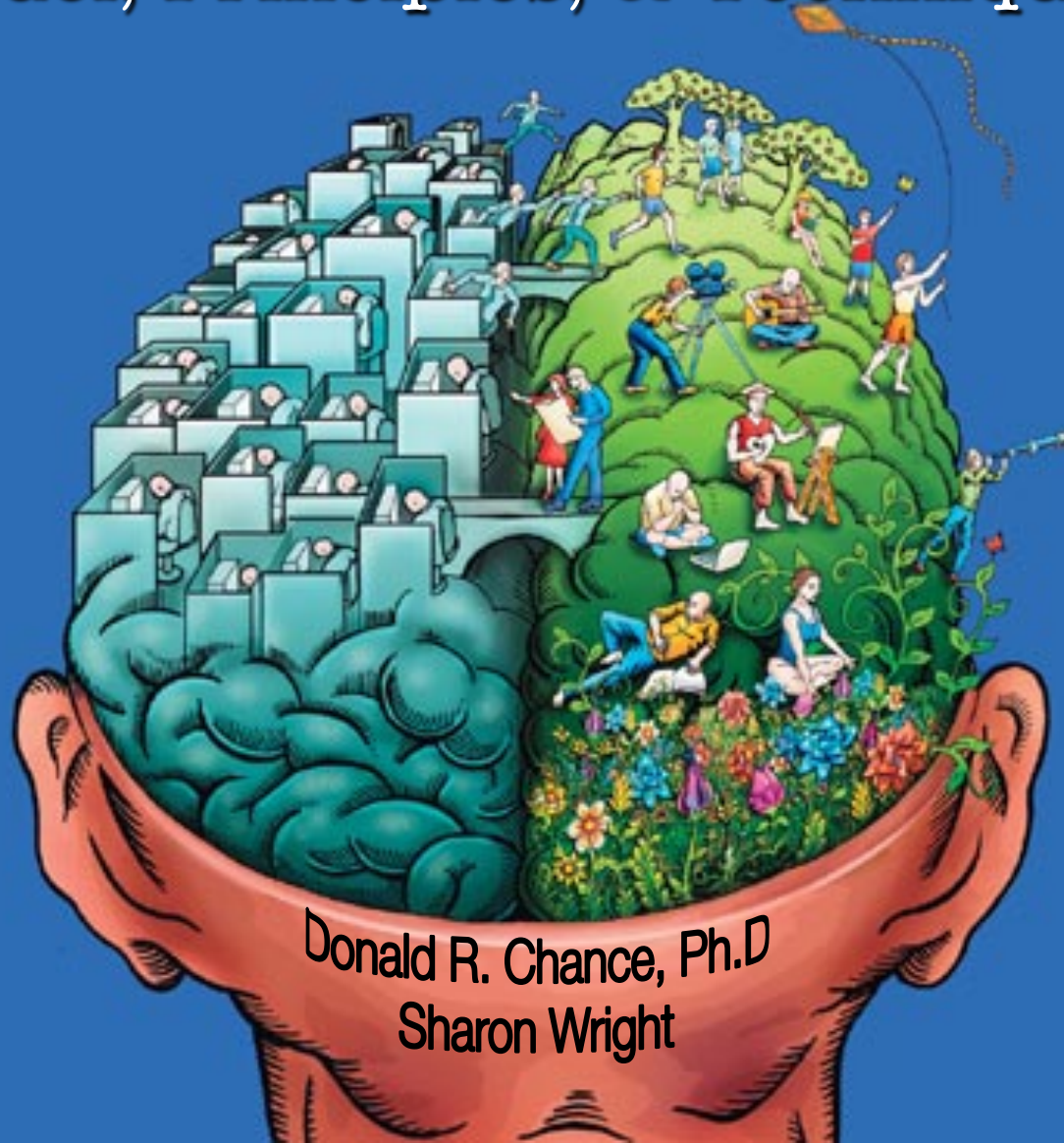


# Behavioral Planning

## Model, Principles, & Techniques



Donald R. Chance, Ph.D  
Sharon Wright

# Market Based or Organic Planning

- Market Based Order
- Business Reputation
- Contracts
- Competitive Forces

## Public Compensation

- Public Housing
- PDR Programs
- Impact Payments

## Artificial Markets

- Tradable Permits
- Wetland Banks

## Market Incentives

- Information Strategies
- Insurance Premiums
- Tax Incentives

## Public/Private Partnerships

- Urban Renewal
- TOD's

## Public/Private Self Regulation

- Food Safety
- BMP's

## Command & Control

- Zoning Codes
- Sign Ordinances
- Subdivision Ord.

# Hierarchical Planning



# A Sample of Behavior Focal Points

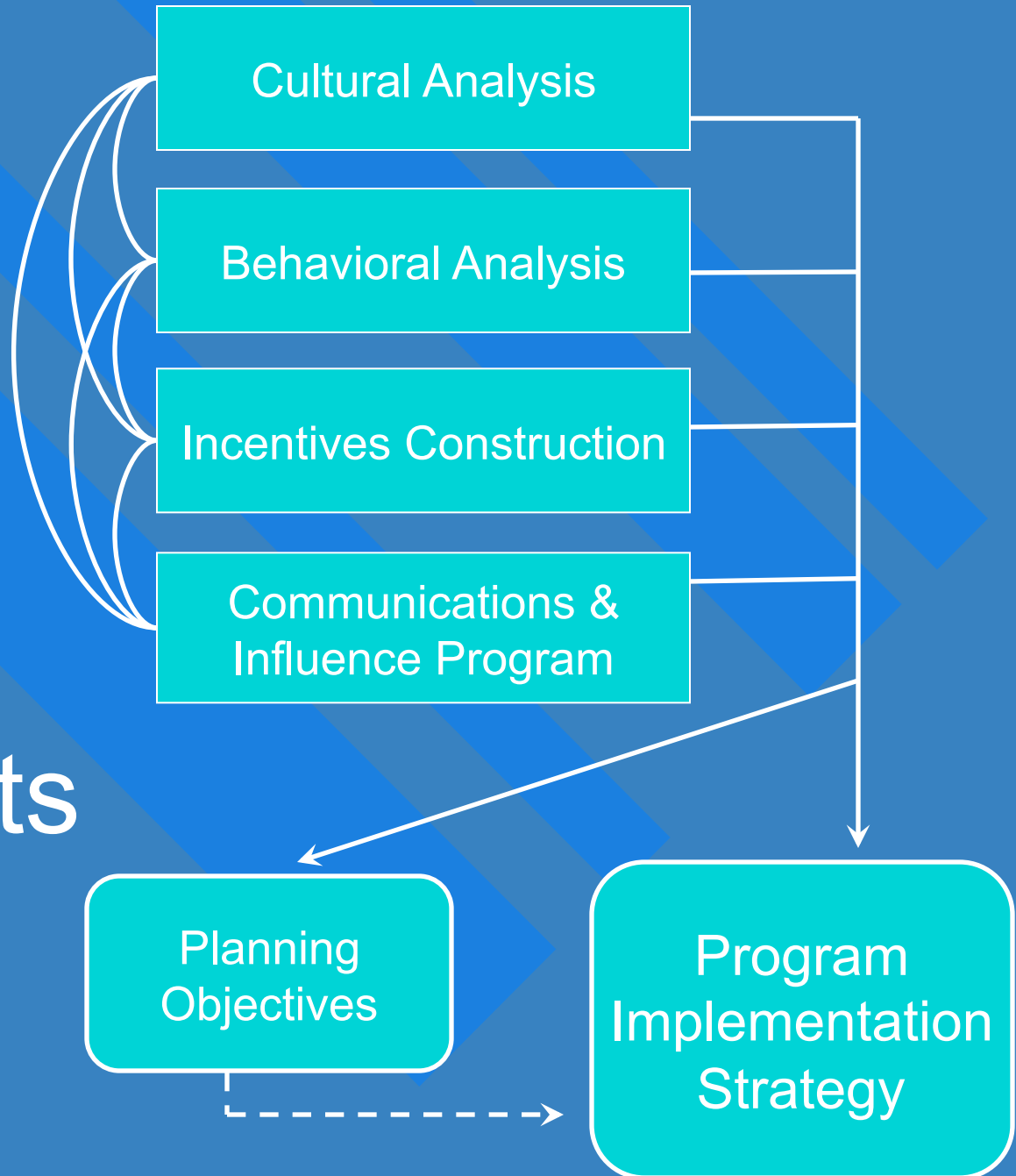
## Individual Actors

- Consumer behavior in housing
- Commuter behavior
- Builder behavior
- Planner behavior
- Elected official behavior
- Landowner behavior
- Developer behavior
- Neighbor behavior
- Local Govt. Officials
- Legislator behavior

## Institutional Actors

- Local Government behavior
- Lender behavior
- Business Trade Associations/ Port Dist.
- Corporate behavior
- State Agency behavior
- Political Party behavior
- NGO behavior
- Neighborhood Group behavior

# Four Components of CBIP





Clearly Delineate  
the Objective. What behavior  
are you trying to encourage.



Identify Principal-  
Agent Relationships

Conduct ABI  
Analysis

Design  
Incentives

# Behavioral Incentives Design

# PROBLEM BEHAVIOR

## Developers refuse to use new Rural Clustering PUD provisions to meet rural housing demand

ANTECEDENTS	INCENTIVES	P/N	I/F	C/U
No one else is doing it. My friend did find with a large-lot development.	Safety in numbers. No evidence in the market	P	I	C
The code makes standard projects by-right and PUDs discretionary.	Standard development is less risky	P	I	C
Standard projects have fewer review Requirements. More predictable.	PUDs cost more and take longer for approval.	P	I	C
Neighbors will oppose a PUD – think Higher density and cheap housing.	More heated opposition at the public hearing.	N	I	U
Surveyors advise landowners to just do a large lot development.	I only have to hire a surveyor, not a planner.	P	I	C
PUDs are sometimes provided more Design flexibility	I could do a more cost effective project and better design	P	F	U

# DESIRED BEHAVIOR

**Rural Cluster PUDs become the norm in development**

ANTECEDENTS	INCENTIVES	P/N	I/F	C/U
PUDs by-right	My risk is significantly reduced.	P	I	C
Standard large-lot development converted from by-right to discretionary.	My risk to do large-lot traditional development is higher	N	I	U
County promotes the creation of a demonstration project	I have evidence that the market will accept.	P	I	U
County streamlines PUD requirements	My processing time and expense is reduced	P	I	C
Free technical design assistance.	My design expense is reduced and I know I will satisfy the County's desires.	P	I	C
County replaces Planning Commission review with Hearings Examiner system	Depoliticized review, increased predictability	P	I	C

## INDIVIDUAL - PRINCIPAL TO AGENT

Elected official – Planner

Consumer – Developer

Spec. Builder – Realtor

Voter – Elected Official

## INSTITUTIONAL - PRINCIPAL TO AGENT

Lender – Builder

General Public – Government

Commuter – Transportation Agency

Interest Group Constituency - NGO

# YOUR OBJECTIVE



Design behavioral incentives that align the objectives of the Principle with the self-interests of the Agent.



Create incentives that align the interests of the individual or institution (self-interested behavior) with the planning objective. Far less effective is a direct appeal for public interest goals.

# Incentives

```
graph TD; Incentives([Incentives]) --> Economic[Economic]; Incentives --> Social[Social]; Incentives --> Behavioral[Behavioral]; Economic --> Subsidies[Subsidies]; Economic --> TaxIncentives[Tax Incentives]; Economic --> PublicCompensation[Public Compensation]; Economic --> TradablePermits[Tradable Permits]; Economic --> Insurance[Insurance]; Economic --> LegalSanctions[Legal Sanctions]; Social --> Prestige[Prestige]; Social --> Respect[Respect]; Social --> Friendship[Friendship]; Social --> GroupAcceptance[Group Acceptance]; Social --> SocialRegulation[Social Regulation/ Shaming]; Social --> CultureImposedMorality[Culture Imposed Morality]; Social --> SocialConflict[Social Conflict]; Behavioral --> FramingEffects[Framing Effects]; Behavioral --> ReferenceDependenceEffects[Reference Dependence Effects]; Behavioral --> EndowmentEffects[Endowment Effects/ Loss Aversion]; Behavioral --> MentalAccountingHeuristics[Mental Accounting Heuristics]; Behavioral --> TimePreferences[Time Preferences in Discounting]; Behavioral --> Predictability[Predictability];
```

## Economic

Subsidies

Tax Incentives

Public  
Compensation

Tradable Permits

Insurance

Legal Sanctions

## Social

Prestige

Respect

Friendship

Group Acceptance

Social Regulation/  
Shaming

Culture Imposed  
Morality

Social Conflict

## Behavioral

Framing Effects

Reference  
Dependence Effects

Endowment Effects/  
Loss Aversion

Mental Accounting  
Heuristics

Time Preferences in  
Discounting

Predictability



“What consequences or incentives can be devised that are politically acceptable and culturally effective to establish the desired behavioral response?”

NOT

“What regulation can be legislatively or administratively imposed at the state or local level to achieve the planning objective?”

# Performance Tests

Social validity

Market Sensitivity

Technical Performance

Ethical Appropriateness

Implementation Resources

# Cultural Analysis

## Content

National  
Regional  
Community  
Profession  
Socioeconomic  
Political  
Race/Gender



## Influence

Landscape Vernaculars  
Perception of Density  
Perception of Neighborhood  
Design of Planning Regimes  
Response to Regulation  
Sense of Entitlement  
Self-Interest Outlook  
Antagonism Toward Government



**GRID** Institutional controls

Fatalists

2%

Hierarchists

24%

Competitive  
Individualists

48%

Egalitarians

26%



**GROUP**

Social control  
group affiliation



# + GRID

## Fatalists

## Hierarchists

Respect professional expertise and service to the community.  
Generally support government.  
Strongly pro-environment.  
Concentrated in small towns and rural communities.

## GROUP

## Competitive Individualists

Harbor weak feelings towards the group (community).  
Society organized around competition. Wealth accumulation.  
Distrust government.  
Environment a bountiful resource.

## Egalitarians

Strong desire to rebuild neighborhoods.  
Strong sense of community.  
Decision making by group collaboration.  
Condemn individualism.  
Distrust government (social privilege)  
Measure progress as social equity.  
Prefer authentic architecture – understated elevations.



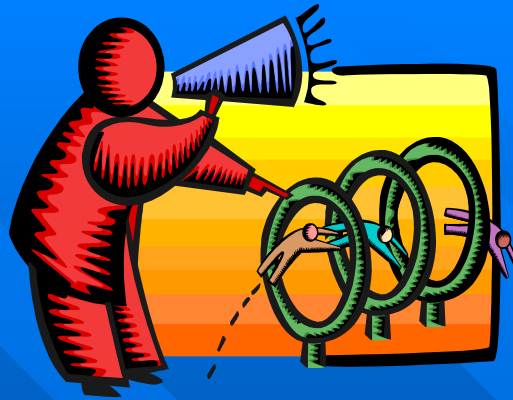




# Applied Behavior Analysis

- The more consistent the consequence the more reinforcing. (Code enforcement, Project approval)
- The sooner the consequence after the behavior, the more reinforcing. Do not delay rewards or enforcement.
- The greater the magnitude of the consequence for the individual, the larger the effect on behavior.
- Negative consequences are as effective, if not more, than positive consequences in directing behavior.
- An indirect approach to behavior change is more likely to enhance a sense of self-persuasion.

# Antecedents



# Consequences

- Education Programs (Zoning description in property tax notice)
- Prompts (electric meter in the house)
- Demonstrations (model project, stacked public hearing)
- Commitment Strategies (Weight Watchers, Designated Driver)

- Positive Reinforcement (Bonus Density, Kalamazoo college finance program)
- Negative Avoidance Reinforcement (Waving of public hearing.)
- Penalty or Punishment (Toll charge or Project denial)

# Techniques from Behavioral Economics



- Time Discounting & Time Preferences
- Preferences Over Risky & Uncertain Prospects
- Mental Accounting
- Endowment Effects & Loss Aversion
- Framing Effects

# Time Discounting & Time Preferences



- Immediacy effect (we like it now).
- Discount rates fall with duration.
- We discount gains over time more than losses - gains must be larger than penalties if used as a future incentive to change behavior.
- People dislike delays in consumption more than acceleration in gains.

# Time Discounting & Time Preferences

- We prefer sequences to improve over time.
- People are conflicted - they prefer to incur a loss or penalty immediately but like to ignore cost by having them separated from benefits.
- Avoid reactionary planning that jams behavior response into real time with immediate costs and benefits that stimulate shortsighted decisions

If all or most costs and benefits are in the future we will make farsighted decisions. The further in the future the more rational we tend to be.





# Preferences Over Risky & Uncertain Prospects

- We have an exaggerated preference for the status quo.
- Loss adverse people will take more risks if risks are combined.
- Recent history distorts our sense of probability
- Order effects and hindsight bias. (Can we retrieve it from memory?)
- Image effects (If it has happened to us it is easier to image and overweight).
- Humans have an aversion to uncertainty in decision-making.
- When there is no status quo we go for the default option.

# Mental Accounting

- To increase disincentive power - separate costs in many small parts.
- Social proof (public hearings & testimonials).
- Use symbols of credibility and authority (impression management).
- The power of similarity and liking.
- We ignore opportunity costs and incorporate sunk costs.
- Lock-in and Lock-out (the use of commitment & consistency techniques).

# DEVELOPMENT OPTIONS COMPARISON

	<b>MASTER PLANNED DEVELOPMENTS</b>	<b>STANDARD TRACT SUBDIVISIONS</b>
Uses Permitted	Flexible – Mixed Use	Restricted by Zoning Standards
City Design Assistance	Available	Not Eligible
Design Standards	Flexible	Fixed
Lots Size Standards	Lot Size flexible	Fixed
Public Hearings	City conducts community workshop to reduce project controversy.	Standard Hearings Required
Approval Class	Government Discretion	Prescriptive Path
Process Time	Priority Status	120 days or more

# Mental Accounting



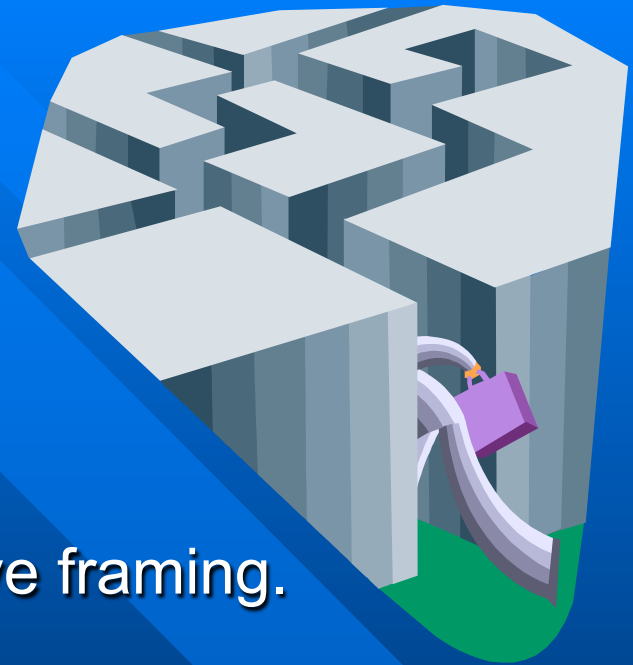
- People struggle in accounting for basic probabilities where they have little info.
- Gain and loss functions display diminishing sensitivity as the dollar amount grows - the law of small numbers.
- People judge both gains and losses in reference to a narrowly focused artificial account.
- Prepayment and post payment separates perceived cost.

# Endowment Effects & Loss Aversion

- Reference points in negotiations.
- The endowment effect.
- Loss aversion - people feel the pain of a loss more than the utility of an identical gain.
- To emphasize benefits - combine costs and separate benefits.

# Framing Effects

- Preferences are often not well defined or stable - they are effected by framing.
- Context effects - positive or negative framing.
- Agent metaphors.
- Emotionally charged words.
- How a decision is offered to an individual often has more influence than the content of their choices.
- Bracketing techniques - people are are attracted to intermediate options.





# Practice Soft Paternalism Responsibly



THIS



NOT THIS