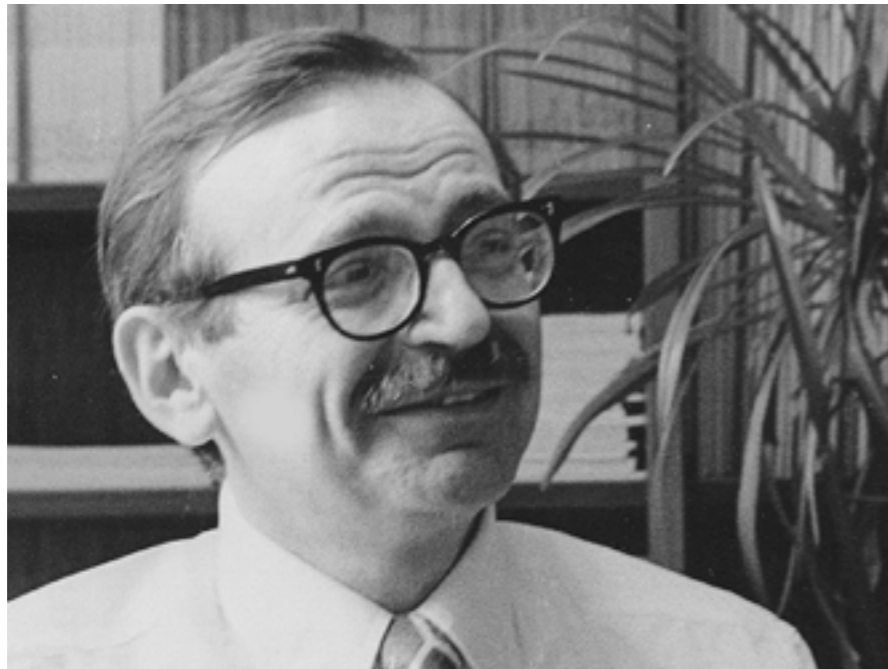


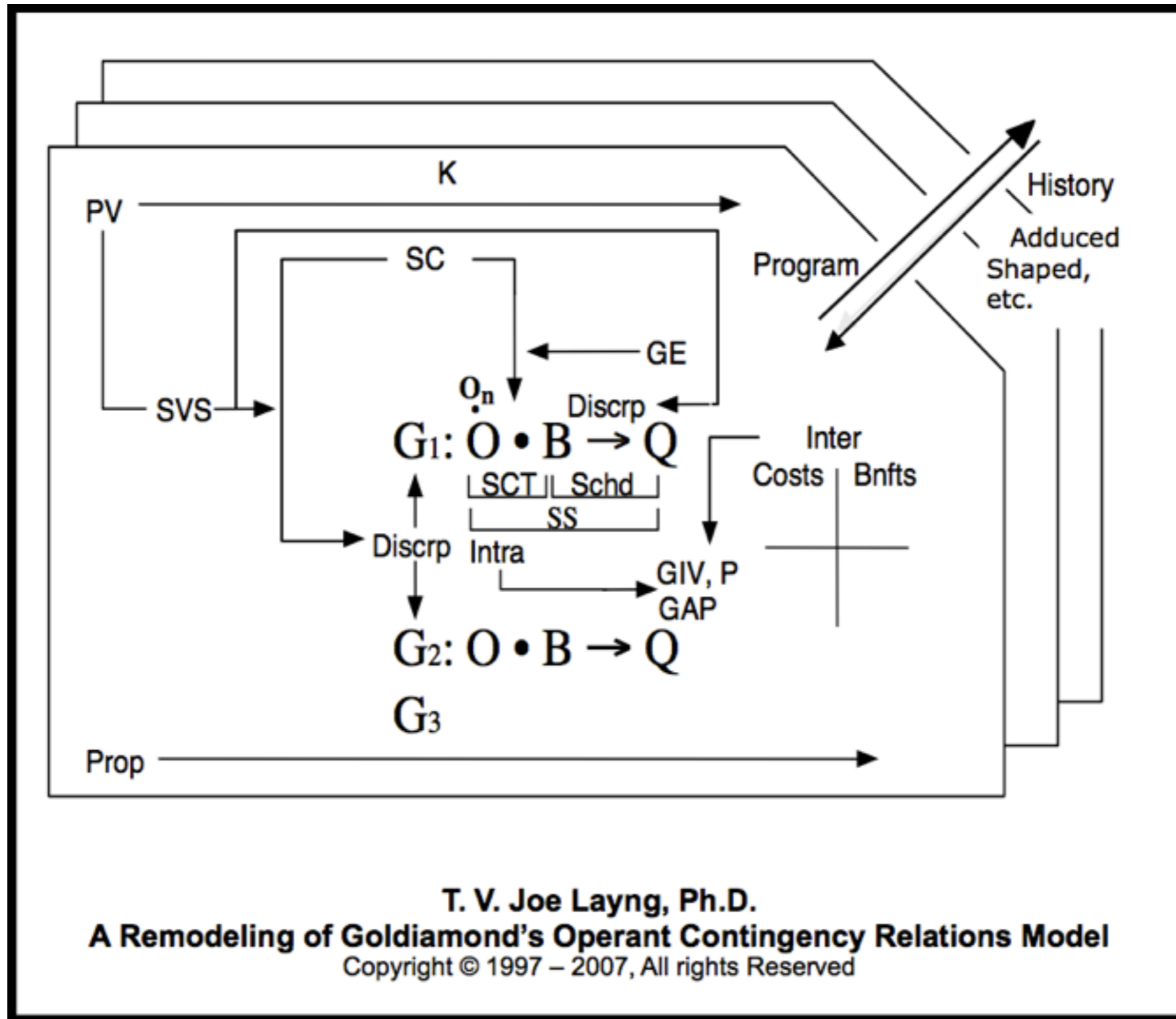
# Goldiamond Contributions

T. V. Joe Layng, Ph.D.

# Israel Goldiamond



# Contingency Defined



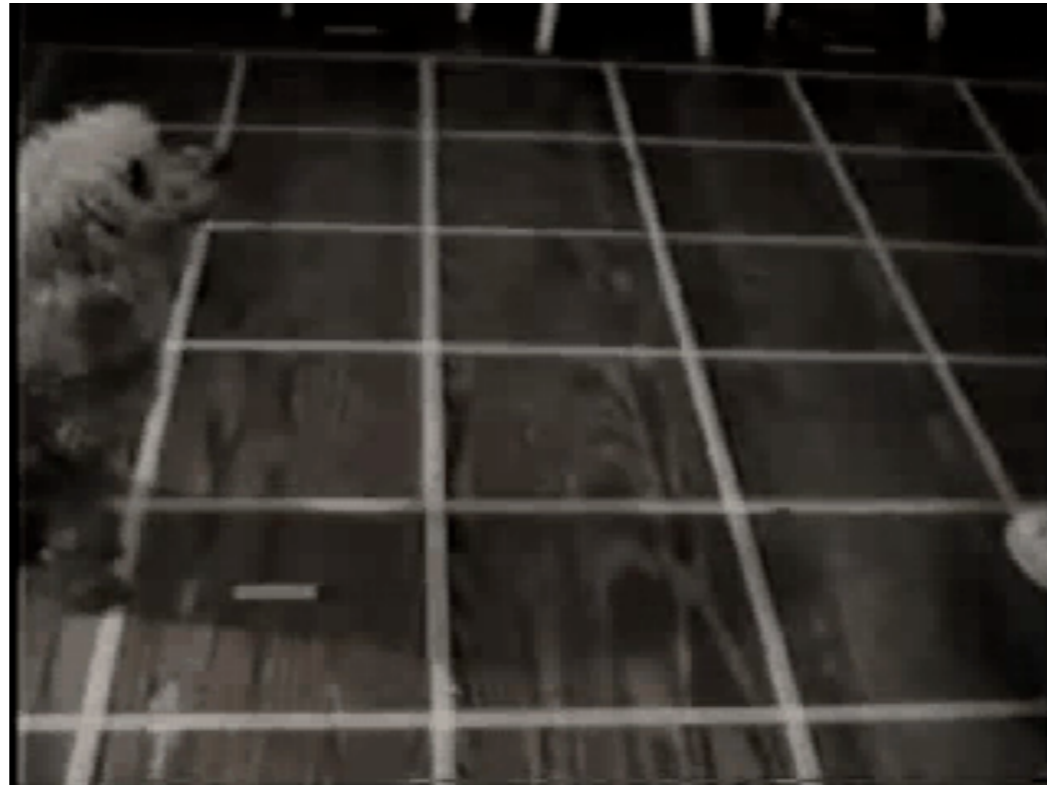
**T. V. Joe Layng, Ph.D.**  
**A Remodeling of Goldiamond's Operant Contingency Relations Model**  
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Venn • TB → Click ...Food

Venn • TB → Click ...Food

Punir • TB → Click ...Food

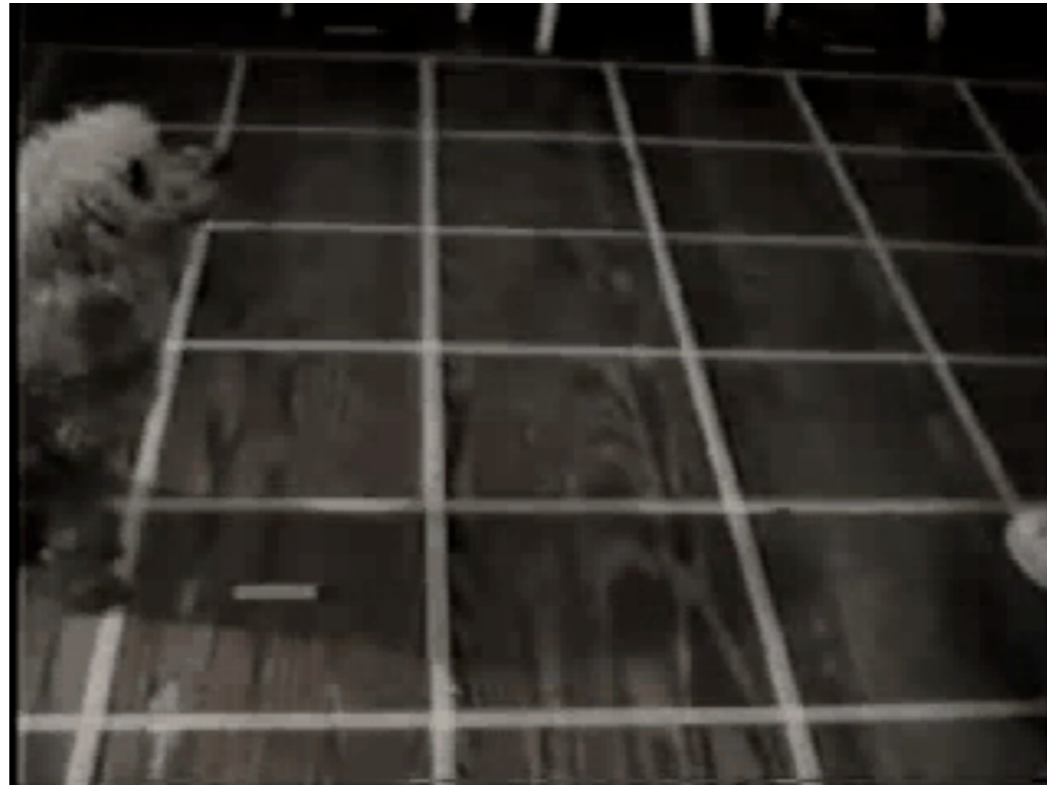
“Venn”



Video used with permission

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“Venn”



# “Punir”





# “Punir”



# “Venn”



# “Venn”



# “Punir”



# “Punir”





“Venn”



“Venn”



# “Punir”





# “Punir”



Venn • TB → Click ...Food

Venn • TB → Click ...Food

Punir • TB → Click ...Food

Venn • TB → Click ...Food

Venn • OB → No Cnsq

Punir • TB → Click ...Food

Venn • TB → Click ...Food

Venn • OB → No Cnsq

Punir • TB → Click ...Food

Punir • OB → Leash Tug

# Poisoning the Cue: The Effects of Combining Positive and Negative Reinforcement During Training

Venn • TB → Click ... Food

Venn • OB → No Cnsq

Punir • TB → Click ... Food

Punir • OB → Leash Tug

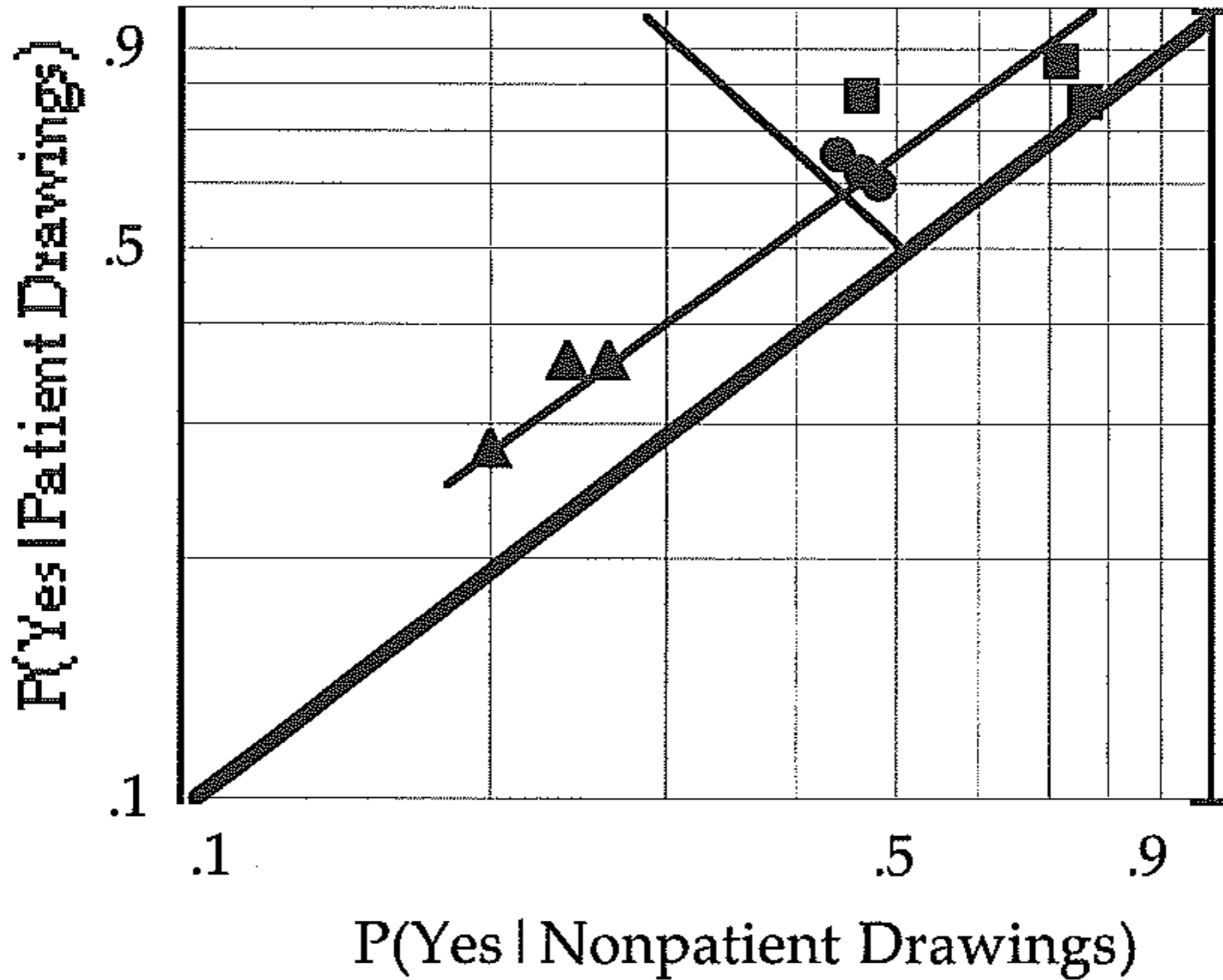
Nicole A Murrey & Jesús Rosales-Ruiz

# Signal Detection Theory

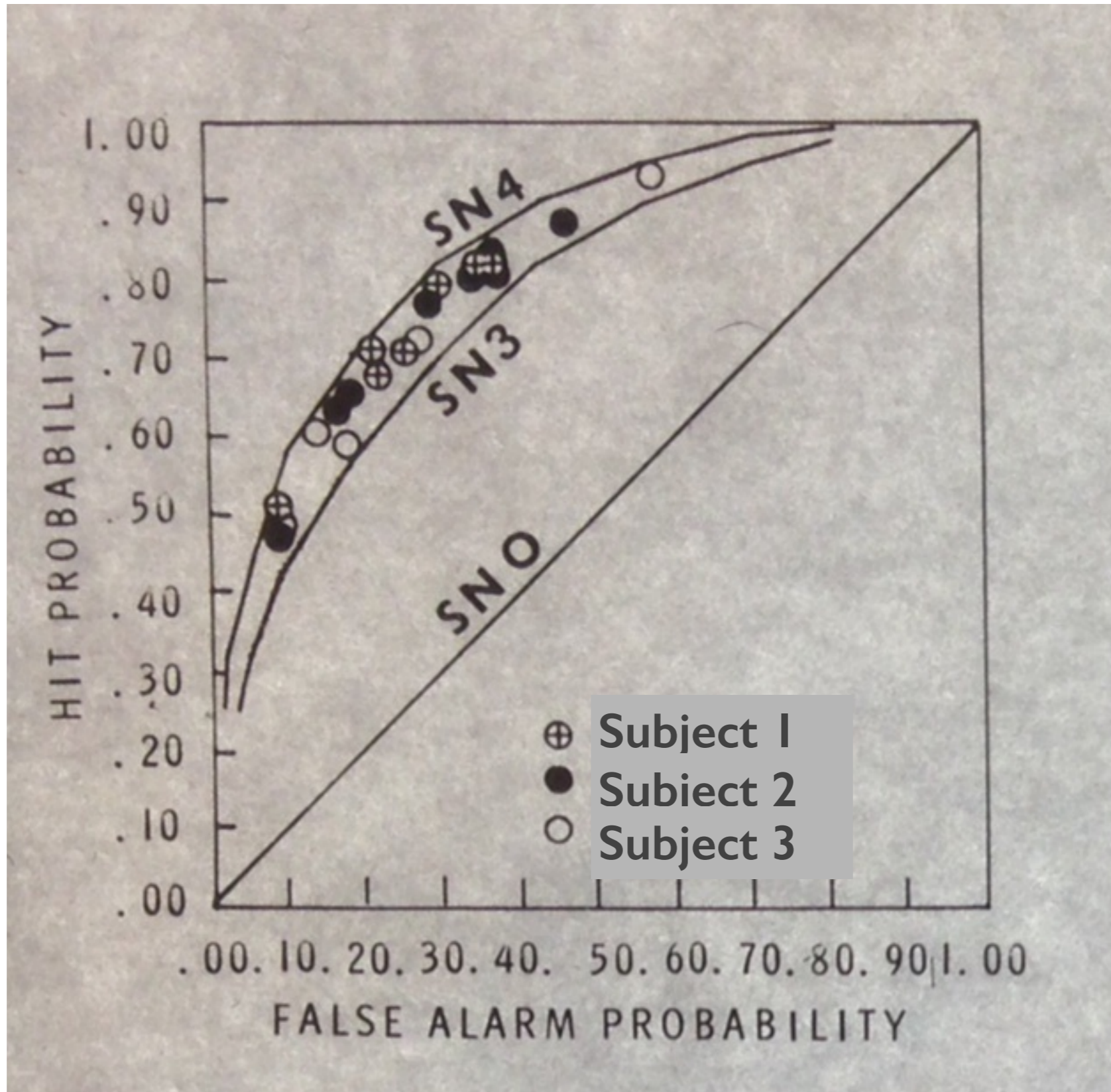
States of Environment

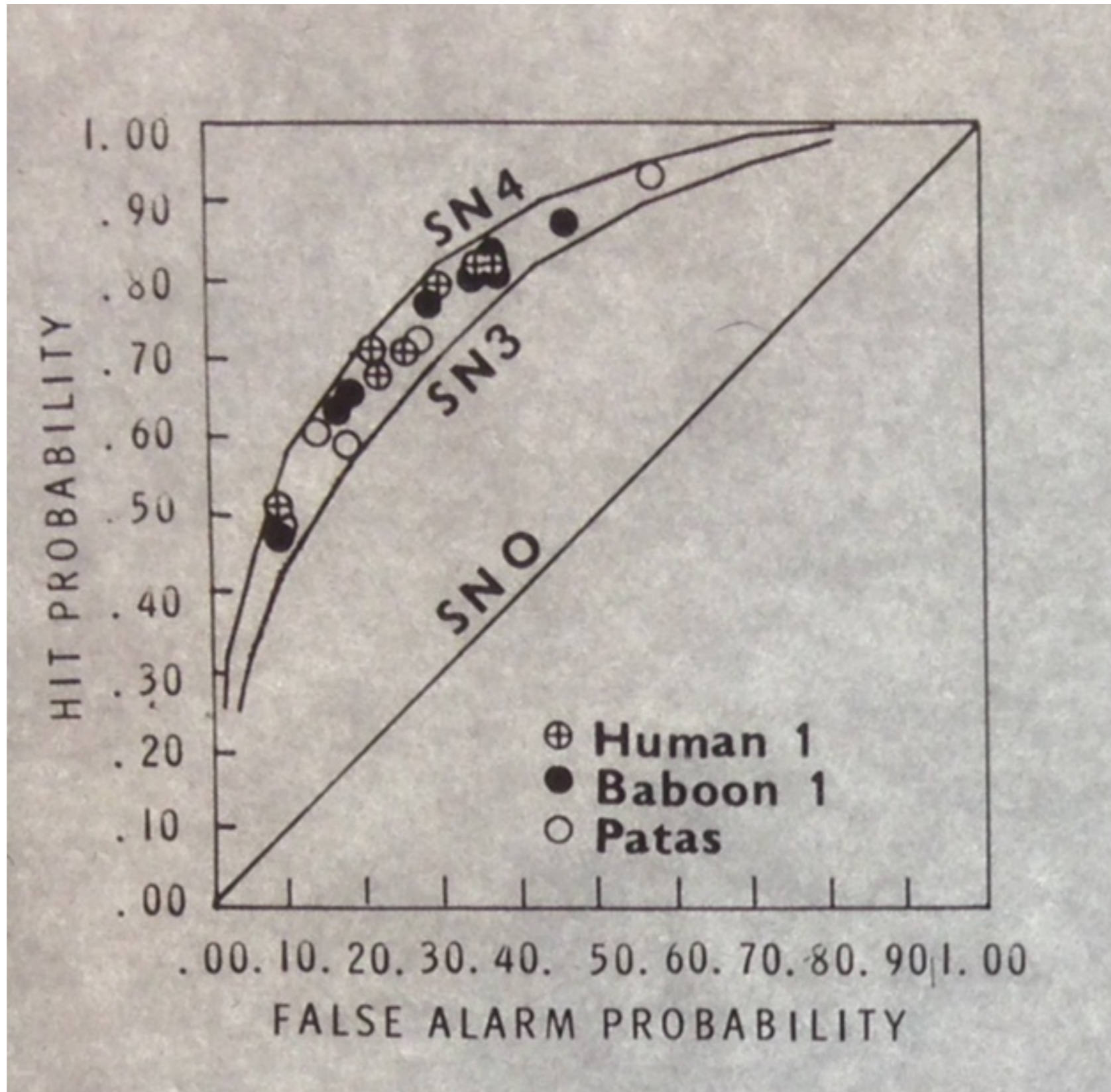
		<u>N</u>	<u>SN</u>
Responses	<u>Yes</u>	FA	H
	<u>No</u>	CR	M

# Observer 3

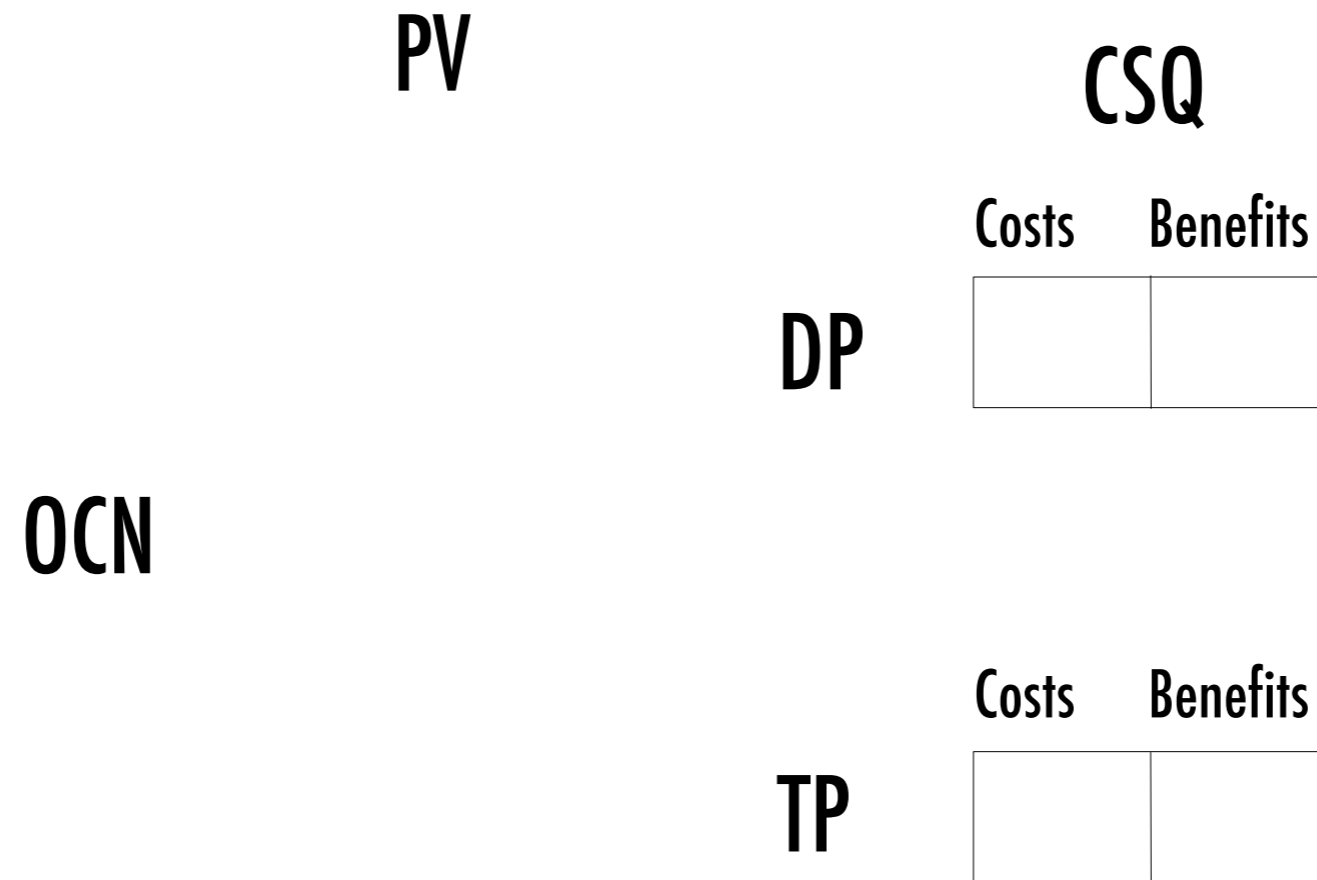








# Typical Functional Analysis





# Example Functional Analysis

## PV Difficult Task

### Disturbing behavior

Slaps self

### Costs

Preempts progress,  
disruptive, makes program  
progress difficult

### Benefits

Escape task

## OCN Response Request

### Substituted behavior

Teach to say "no"

### Costs

Takes time & effort,

### Benefits

Escape task, easier to  
make program  
changes, less disruptive

# Anxiety relief: Topical functional analysis

PV: Work piles up, coworkers asking for things

	Costs	Benefits
Get candy	Increased calories and fat	Break from work, time to think what to do next
Stay at desk	Work piles up, coworkers on back	Fewer calories & fat

# Anxiety relief: Topical functional analysis

PV: Work piles up, coworkers asking for things

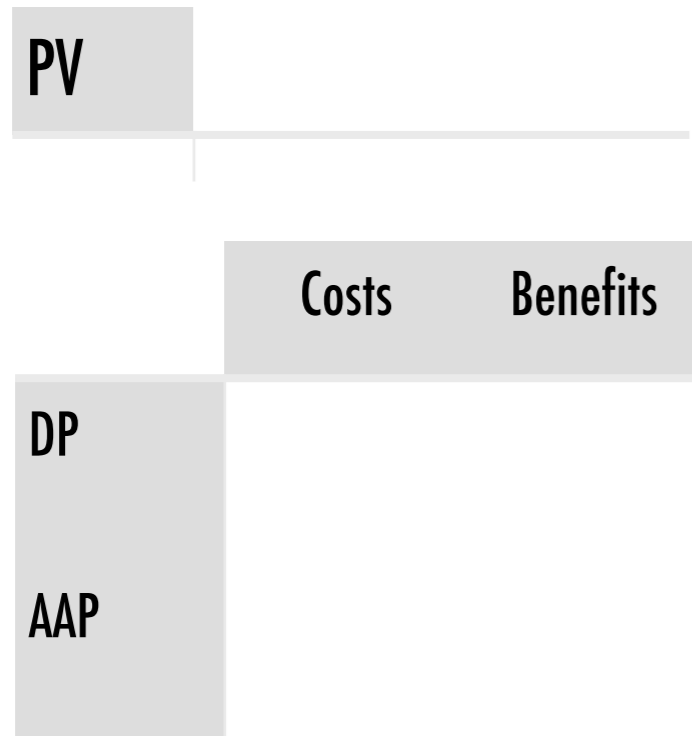
	Costs	Benefits
Get candy	Increased calories and fat	Break from work, time to think what to do next
Stay at desk	Work piles up, coworkers on back	Fewer calories & fat

Target Pattern	Costs	Benefits
Walk to get healthy snacks	Takes preparation	Break from work, time to think

# How contingencies interact

Topical

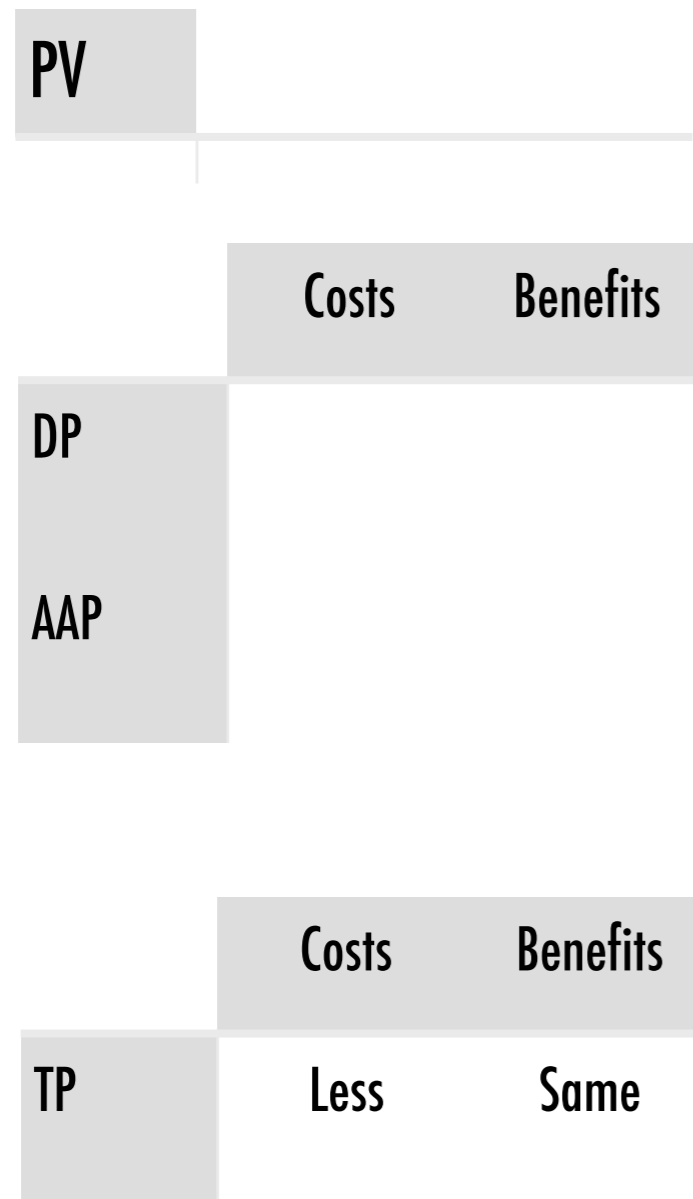
Systemic



# How contingencies interact

## Topical

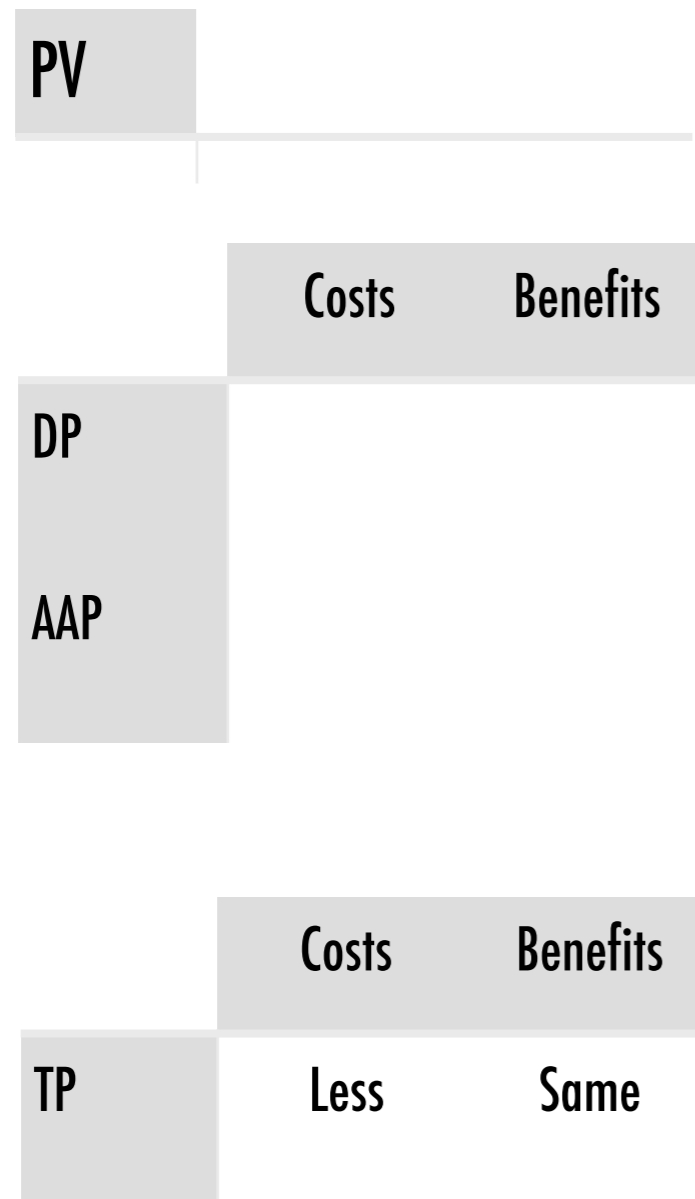
## Systemic





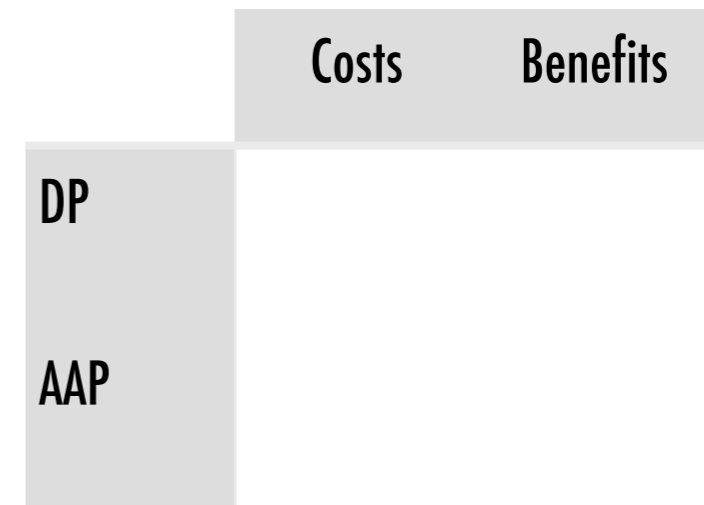
# How contingencies interact

## Topical



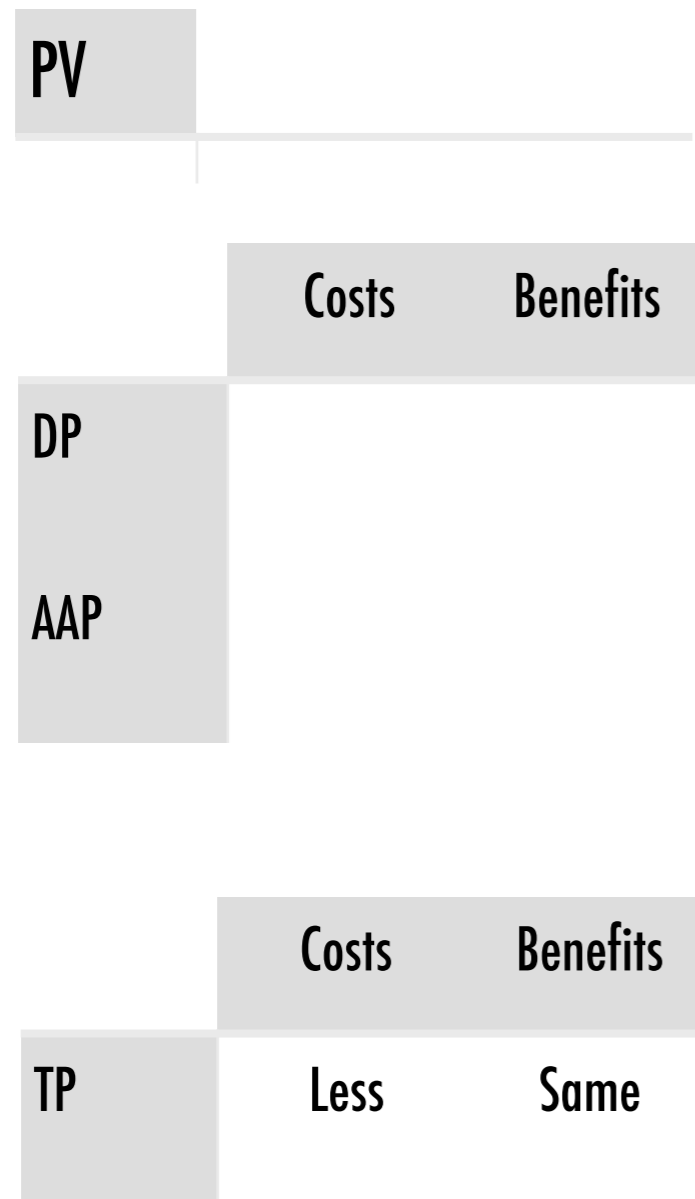
←  
**Potentiates**

## Systemic

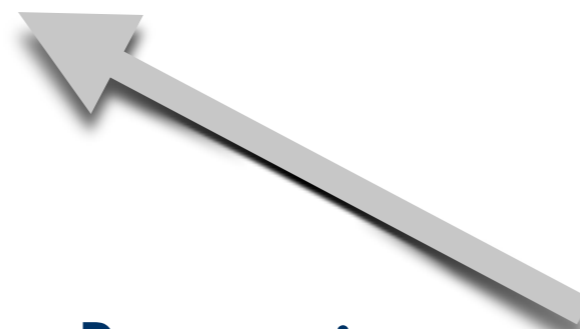


# How contingencies interact

## Topical

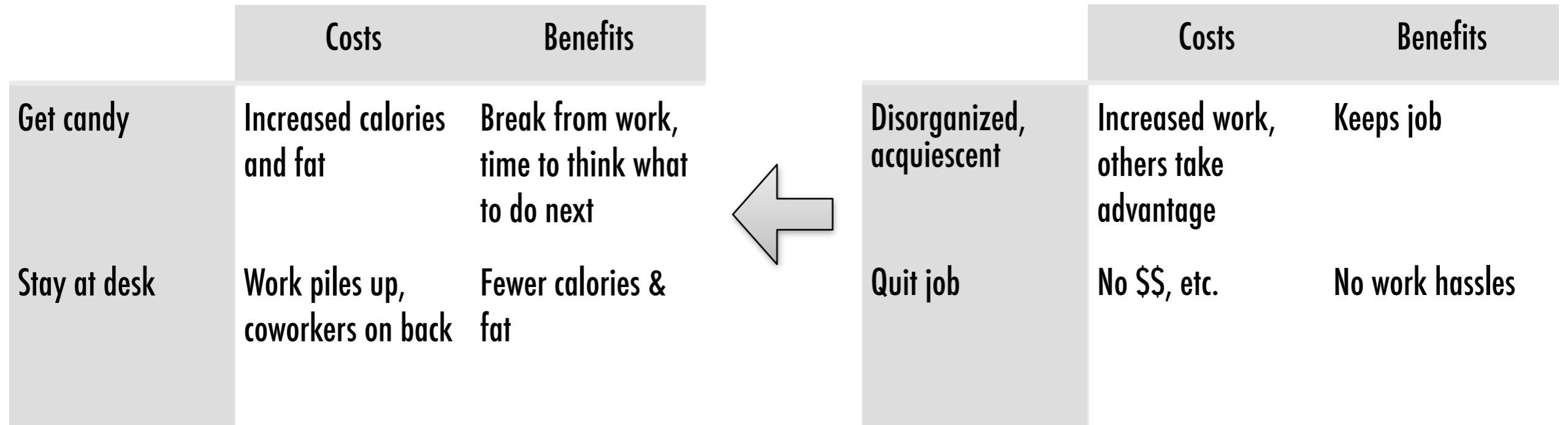


## Systemic



**Depotentiates**

# Anxiety Intervention: Nonlinear, systemic analysis



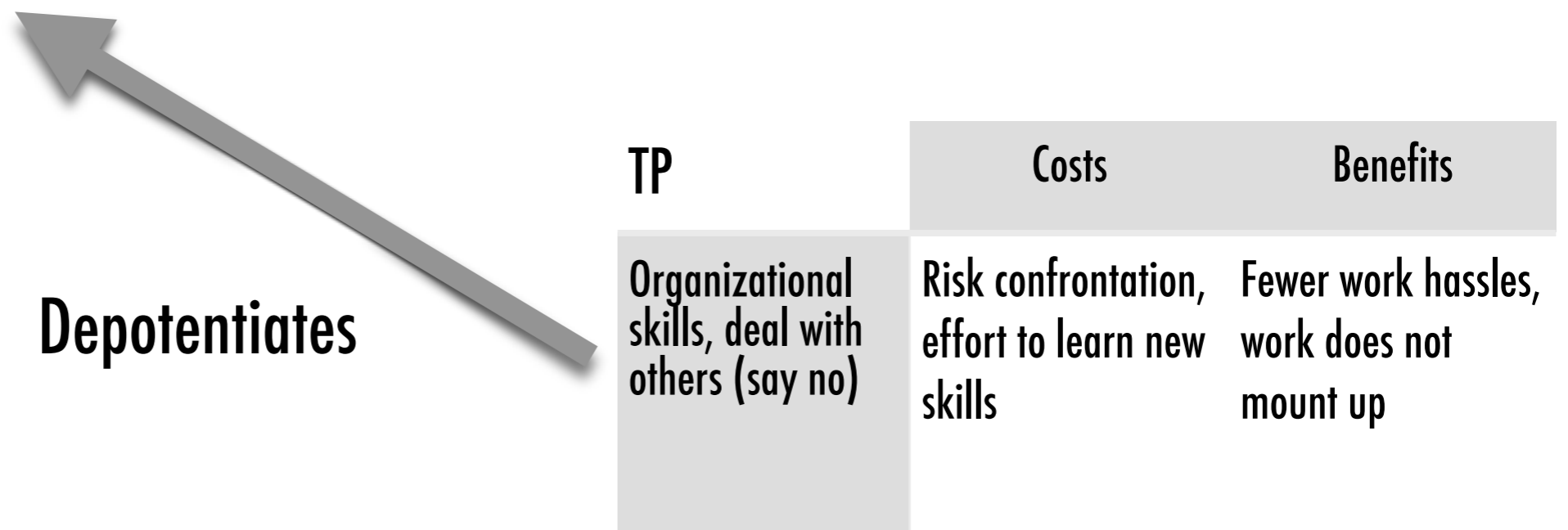
# Anxiety Intervention: Nonlinear, systemic analysis

	Costs	Benefits
Get candy	Increased calories and fat	Break from work, time to think what to do next
Stay at desk	Work piles up, coworkers on back	Fewer calories & fat

**Depotentiates**

TP	Costs	Benefits
Organizational skills, deal with others (say no)	Risk confrontation, effort to learn new skills	Fewer work hassles, work does not mount up

# Anxiety Intervention: Nonlinear, systemic analysis



# Schizophrenic Behavior: Presenting Symptoms

## Symptoms

Reports of hallucinations, early suicidal gestures, isolation, etc.,

## Costs

Remain in halfway house, no social life, little chance of making friends, no career, two children becoming more distant.

# Schizophrenic Behavior: Presenting Matrix

	Costs	Benefits
Reports of hallucinations, early suicidal gestures, isolation, etc.,	Remain in halfway house, no social life, little chance of making friends, no career, two children becoming more distant.	Taken care of, interact with mental health professionals, few responsibilities, some friends, kids looked after in Foster home.
Grin & bear it, fend for self.	Homeless or on welfare, kids well being in question	Chance for independent life out of halfway house, friends, social life.

# Outcomes

- Independent living out of half-way house
- Closer relationship with children
- “Normal” friends
- Intimate relationships
- Meaningful employment



# Intervention I – Topical: Functional

- Find alternatives that produced the same consequences of hallucinations
- Different “Hallucinations” served different functions
  - Inactivity related hallucinations (adjunctive behavior)
    - Zen-like meditation
    - Listen to relaxation tapes, hobbies
  - Hallucinations as occasions to seek out & talk to staff (social deprivation)
    - Pick a topic in which staff is interested, read about it, discuss
  - Hallucinations as methods of controlling behavior of half-way house residents
    - Sensitivity to one’s emotions, “crammed feeling”
    - Ask others to leave room before “hallucinations” start

## **Intervention II –Systemic**

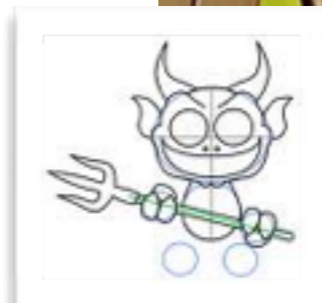
- **Begin to build independent living skills**
  - **Social & interpersonal skills**
  - **Work**
- **Resolve a different matrix to intervene in a unique class of Hallucinations based on relationships, sex, & religion**

## Example from patient log

I am hearing Our Lady & demons. On a bus a man took out his wallet & began flashing his money. I started to nudge my girl friend to say, "It sure would be nice to have all that money!" Before I could nudge her or say it, I heard a voice in my heart say "meet me when we get off the bus & you can have it." My voice in my mind was saying, "this is crazy -Lord please stop this from happening." But again, the voice in my heart took my voice and said "ok" while I almost yelled out Lord, ok, nothing, "It's not ok", then the man put the money back in his wallet...

# Systemic (Sylvester) analysis: History of conflicting contingencies

By Warner Brothers (Internet Archive) [Public domain or Public domain], via Wikimedia Commons



**Bad Sylvester**



**Good Sylvester**

# Systemic (Sylvester) analysis



# Systemic (Sylvester) analysis



# Systemic (Sylvester) analysis



Ocn • Bhv: Talk with attractive man, work toward intimate relationships.

# Systemic (Sylvester) analysis



Ocn • Bhv: Talk with attractive man, work toward intimate relationships.



Csq/COSTS: Lose all contact with Church lose volunteer job, lose non-hw house connection, risky, little experience with men, punished for sex outside of marriage





# Systemic (Sylvester) analysis



Ocn • Bhv: Talk with attractive man, work toward intimate relationships.

Csq/COSTS: Lose all contact with Church lose volunteer job, lose non-hw house connection, risky, little experience with men, punished for sex outside of marriage

Csq/BENEFITS: Possibly find a caring relationship, intimate relations, broader more interesting social life



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Ocn • Bhv: Avoid men and relationships

Csq/COSTS: Remain alone, no intimate or caring relationship, less interesting social life

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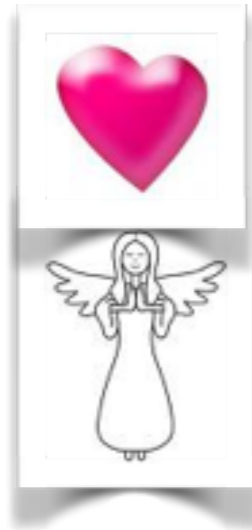


Ocn • Bhv: Avoid men and relationships

Csq/COSTS: Remain alone, no intimate or caring relationship, less interesting social life

Csq/BENEFITS: Maintain important relationship with the church, not have to deal with learning new skills

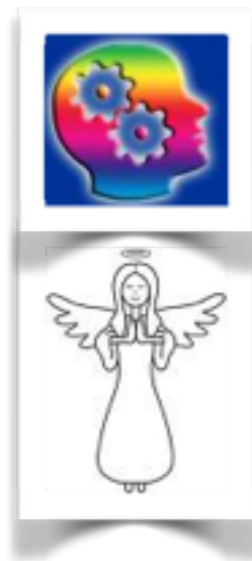
# Systemic (Sylvester) analysis



Ocn • Bhv: Talk with attractive man, work toward intimate relationships.

Csq/COSTS: Risky, little experience with men, less punishment for sex outside of marriage

Csq/BENEFITS: Maintain important relationship with the church, possibly find a caring relationship, intimate relations, broader more interesting social life



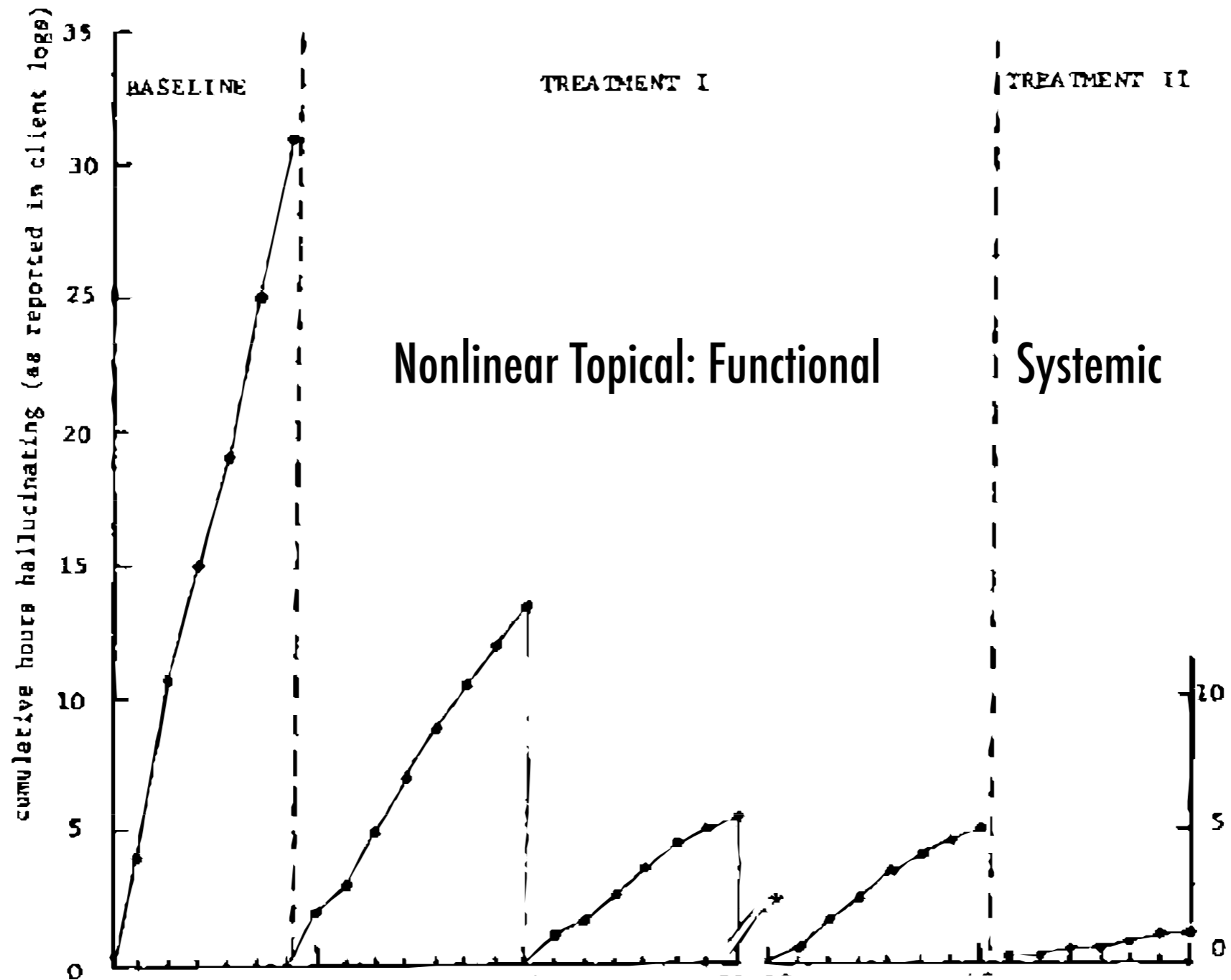
Ocn • Bhv: Avoid men and relationships

Csq/COSTS: Remain alone, no intimate or caring relationship, less interesting social life

Csq/BENEFITS: Maintain important relationship with the church, not have to deal with learning new skills

## Intervention: Find new priest

# Reported hallucinations



## 10 year follow-up

- **Out of Half-way house living with sister & brother-in-law off & on**
- **Kids never lived with her, but maintained close relationship, frequent visits**
- **Part-time work**
- **GED**
- **New friends**
- **Relationships, but not married**
- **Medical hospitalizations for kidney problems**

Topical: Direct	Topical: Functional	Systemic
Approaches include: Reward and punishment programs, specified activity monitoring and feedback, some CBT.	Approaches include: Motivational Interviewing, Acceptance and Commitment Therapy, Functional Analytic Psychotherapy.	Approaches include: Systemic Clinical Behavior Analysis, some forms of Behavioral Economics.
DP = $f$ (maintaining variables)	DP = $f$ (maintaining variables)	DP = $f$ (matrix resolution)
DP considered maladaptive.	DP considered maladaptive.	DP considered a rational choice given the available alternatives.
Consequences maintaining DP not considered.	Consequences maintaining DP considered.	Consequences contingent on DP considered, consequences contingent on AAP considered, interaction between matrices of sets of alternatives and their consequence considered.



<b>Topical: Direct</b>	<b>Topical: Functional</b>	<b>Systemic</b>
<p>DP focus of intervention, eliminative procedures, or train or reinforce incompatible or other behaviors, TP.</p>	<p>DP focus of intervention. May try to substitute alternative behaviors, TP, that produce the same consequence. May attempt to alter the function certain (often private, DP) stimuli. Other patterns may be encouraged that provide additional benefits (reinforcers).</p>	<p>DP typically not the focus of intervention. TP are patterns that resolve the matrices by providing the same or other benefits at lower cost. Consequences may be different from those maintaining DP. Benefits of TP often depotentiate consequences of DP in the matrix: DP typically drops out with no direct attention.</p>
<p>Thoughts are considered negative or positive. Positive thoughts practiced, negative to be reframed.</p>	<p>Thoughts are considered neither negative or positive. They are to be experienced without judgment, examined and accepted.</p>	<p>Thoughts are seen as private experiences that are a product of matrix relations, and are used as indicators of where one needs to intervene. No attempt is made to directly change thoughts.</p>

<b>Topical: Direct</b>	<b>Topical: Functional</b>	<b>Systemic</b>
<p>Emotions are often ignored or treated as by-products, or as respondent (pavlovian) responses; strategies may be provided to try and directly change them.</p>	<p>Emotions are often targeted to be changed as to their function. Instead of feelings to be avoided, they are to be experienced and accepted. Not to be dwelled upon, resulting in more proactive goal directed behavior.</p>	<p>Private emotions seen as indicating matrix relations. Sensitivity to them is trained as indicators of what is happening and needing change. Expressed emotions may be patterns that have their own benefits.</p>
<p>Intervention often involves reducing DP or increasing TP; regimens feature self-monitoring, feedback, reward or punishment (tangible or social): direct contingency management.</p>	<p>Intervention involves finding what maintains DP and finding substitutes or changing the function of often “covert” stimuli. Often involves becoming more focused on the “now” and how one responds (mindfulness).</p>	<p>Intervention involves resolving consequential matrices, or building new patterns, that once attained result in the DP no longer being required. Individuals become very sensitive to the world around them, using thoughts and feelings as guides to analyzing environmental events and making changes.</p>