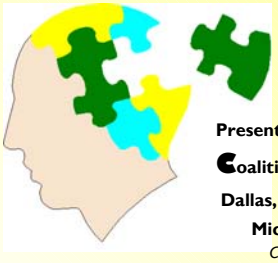
# Neuropsychotherapeutic Rehabilitation:
# ReBuilding the Shattered Self




Presented at the 4th Annual

Coalition of Clinical Practitioners in Neuropsychology

Dallas, Oct., 19, 2003

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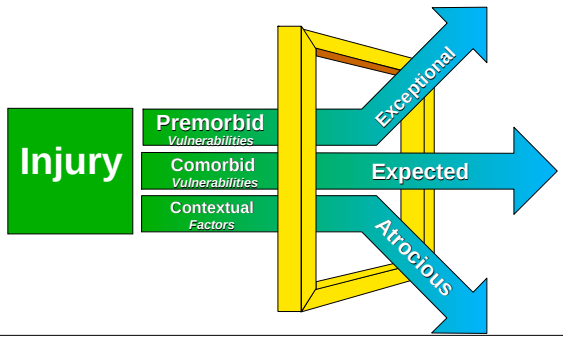
***http://villamartelli.com***


## Purpose of Talk

- Offer a Model and Methodology of Neurorehabilitation (*Holistic Self Habit Rehabilitation, Martelli (in press)*) that:
  - Reduces the overwhelming complexity of trying to do psychotherapy with persons with neurologic disorders...
  - Integrates psychotherapy as Necessary Rehab Process Ingredient
  - Simplifies and combines processes and methocs of accomplishing the goals of psychotherapy and rehabilitation
  - Issues from: (a) the "automatic learning" and "errorless learning" literature and recent evidence of skills relearning; (b) a task analytic examination of acquisition of relevant habits as a model of skills retraining; (c) analysis of developmental, characterologic, organic and situational obstacles to strategy utilization; and (d) techniques for promoting rehabilitative strategy use (adapting techniques to fit an individuals inherent & naturalistic reinforcers, highlight relationships to functional goals, utilize social networks, and employ a simple and appealing cognitive attitudinal system and set of procedures).

## *Myths of Recovery and Adjustment Following Neurologic Insult or Illness*

- If the Structure Tests say they Can, They Will
- If the Structure Tests say they Can't, They Won't



| | ***Cartesian Dualism*** *(Descartes, 1596-1650)* | **Biopsychosocial** Systems *Model* (e.g,. Engels, 1977, 1980) |
|---|---|---|
| ***Overview*** | Reductionistic Mind-Body Dualism: a theory that proposes a separation (duality) between the mind and the body. | Holistic, Interactive, Dyanamic: theory built upon the foundation that the mind and body are integrated and utterly inseparable. |
| ***Concepuali-zation of the Organism*** | Dichotomous. Mind vs. Body Duality, Where Each Component is Mostly Distinct and Separable and Uniform | Holistic System Reflecting Interaction of Integrated (interdependent, inseparable) Subsystems of Biology, Psychology & Social. Subsystems. |
| ***Conceptual ization of Subsystems*** | Dual Systems, Each Mostly Uniform | Individual Differences In Interacting Subsystems (genetics, physiology, gender, individual history and learning, personality, culture, etc.) |

| | ***Cartesian Dualism*** *(Descartes, 1596-1650)* | ***Biopsychosocial*** *Systems Model (e.g,. Engels, 1977, 1980)* |
|---|---|---|
| ***Conceptual Emphasis (Health and Disease)*** | Illness / Pathology; Absence of Pathology = Health. Aim = Decreased Disease, Cure. | Health; Absence of Health = Illness; Aim = Increased Health |
| ***Unit of Measure-ment*** | Single Factor (Organic Or Nonorganic; Biologic Or Psychologic). Doses. | Interacting Factors: Biological X Psychological X Social |
| ***Variability in Symptom Expression*** | Simple Dose Response Relationship to Single Factors (biologic OR psychologic). What dose = what effect for which system. | Interactional Relationships (what happens to what person, under what circumstances); Marked by individual differences in the (bio, psych, soc.) systems of the whole |
| | | |

| | ***Cartesian Dualism*** *(Descartes, 1596-1650)* | ***Biopsychosocial*** *Systems Model (e.g,. Engels, 1977, 1980)* |
|---|---|---|
| ***Causation & Variability in Health & Symptom Expression*** | Single Causal Pathway (biologic OR psychologic) and Fixed Dose Responses of Single Factors Produce Variability in Disease | Dynamic System with Mutiple Causal Pathways Reflecting Complex Interactions of Subsystems Which Produce Variability in Health |
| ***Research & Treatment Investigat.*** | What Dose Works for What System. If treatment fails, look for stronger single intervention dose. | Interactional (what works for what type of ind. person under what particular circumstances - cf G. Paul, 1967). If treatment fails, study systems |
| ***Associated Treatments*** | Traditional Single Discipline Dominant (medical or psychological; possible organ system subspecialist) aimed at treating the diseased part | Multi-, Inter- Disciplinary, with Combination Treatments aimed at restoring functioning to the whole person via their systems in their life context |

| | ***Cartesian Dualism*** *(Descartes, 1596-1650)* | ***Biopsychosocial*** *Systems Model (e.g,. Engels, 1977, 1980)* |
|---|---|---|
| ***Applica-bility*** | Simple, Single Agent Disease Processes and Acute Disorders | Multiple Factor Chronic Disorders |
| ***Treatment Efficacy*** | Poor support for chronic, complex disorders | Good support for complex (multiple factor) and chronic disorders |
| ***Societal Impact, Person & Public Response, Profession Credibility for Chronic Disorders*** | Adequate for Single Agent, Simple Disorders, Poor for Chronic Diseases; At worst, polarization, patient blaming by doctors and doctor shopping and alternative health pursuits by patients | Adequate for Single Agent, Simple Disorders Fair to Good for Chronic Diseases; At best, referential to collaborative relationship with improved symptom management and improved symptom course equalling improved health |
| | *Michael F. Martelli, 2002* | |

# REHABILITATION

## The Systematic Process of:

- Removing Obstacles to Independence
- Accessing Opportunities for Stepwise Achievements *(Of Desired Goals)* in the areas of Love, Work and Play!
- Changing Destiny!

Initial Evidence of Biopsychosocial Influences:

## TBI VULNERABILITY FACTORS

- Accident Type
- Length of PTA
- Premorbid Neurologic
- Premorbid Psychiatric
- Premorbid IQ
- Victimization (Perception)
- Collateral Injuries
- Marital Relationship

## TBI VULNERABILITY & WORK STATUS

| | | HI - VULN/ RISK | LOW VULN | Total |
|---|---|---|---|---|
| CURRENT | Not Working / School | 7 | 6 | 13 |
| WORK | Part-Time Work/ School | 1 | 6 | 7 |
| STATUS | Full-Time Work/ School | 0 | 8 | 8 |
| | Total | 8 | 20 | |
| p < .01 | | | | |

## TBI VULNERABILITY & DISABILITY STATUS

| | | HIGH **RISK** | LOW RISK | *Total* |
|---|---|---|---|---|
| CURRENT DISABILITY STATUS | No Disability | *2* | **14** | *16* |
| | Receiving Disability | **6** | **6** | *12* |
| | *Total* | *8* | *20* | |
| **p < .05** | | | | |

Martelli, M.F., Zasler, N.D., MacMillan, P. (1998). Mediating the relationship between injury, impairment and disability: A vulnerability, stress & coping model of adaptation following brain injury. NeuroRehabilitation: An interdisciplinary journal, 11, 1, 51-66.

## Predictors of Poor Adjustment: Impediments to Recovery

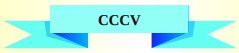
- **Anxiety / Catastrophic Emotional Reactions**
- **Fear of Failure Or Rejection (e.g. damaged goods)**
- **Loss of Self-confidence and Self-efficacy associated with Residual Impairments**
- **Excessive Stress (Real & Percieved)**
- **Fear of Pain (*Kinesophobia, Cogniphobia*) Re-injury / Exacerbation of Injury**
- **Discrepancies between Personality / Coping Style Behaviors and Injury Consequences**
- **Anger or Resentment or Perceived Mistreatment**
- **External (health, pain) Locus of Control**

## Impediments to Recovery (cont)

- **Depression**
- **Dependency Traits**
- **Greater reinforcement for "Illness" vs "Wellness"**
- **Absence of Signficant Supportive Other(s)**
- **Emotional Immaturity/Inadequacy, Poor Coping Skills**
- **Previous Treatment Failures**
- **Length/Duration of Complaints**
- **Vagueness or Inconsistency of Complaints**
- **Presence of Serious Psychopathology, and, to a lesser degree, a Personality Disorder**
- **Repressive and Somatization Defenses, including strong Hypochondriacal (e.g, MMPI scale 1) and Hysterical Traits (e.g., MMPI Scale 3)**

## Impediments (continued)

- **Insufficient Residual Coping Resources / Skills**
- **Disuse Atrophy /Conditioned Nonuse**
- **Fear of Loosing Disability Status, Benefits, Safety Net**
- **Perceptions of High Compensability for injury**
- **Preinjury Job (task, work environment) Dissatisfaction**
- **Collateral Injuries (especially if "silent")**
- **Inadequate and/or or Inaccurate Medical Information**
- **Mis- or Late- diagnosis and Mis- or Late- Treatment**
- **Dichotomous (organic vs. psychologic) Conceptualizations of injury and symptoms**




## *Recovery and Response Bias (cont)*

**Incidence & Claim Closure speed of Whiplash injury after Change to No-fault in Sask., CA** (Cassidy, et al, 2000)

- Claims dropped by 28%
- Time to claim settlement was cut by 54%.
- Intensity of neck pain, level of physical functioning, depressive symptoms, having attorney increased claim closure for both
- **Conclusion: Compensation for pain and suffering increases frequency, duration of claims, delays recovery**
- Note: No-fault system eliminated most court actions, income replacement and medical benefits were increased and medical care became universal, without barriers
  - ►Pre-injury anxiety was associated with delayed claim closure only under the tort system
- **New Conclusion:** Removal of financial disincentives and medicolegal associated treatment barriers & anxiety provocation (e.g., treatment barriers) facilitates post-injury recovery.

## Recovery and Response Bias

**Longitudinal study of PI MVA litigants** (Evans, 1994)

- Strongest predictors of successful outcome were
  - Inclusion of psychological services in the Tx plan
  - Receipt of immediate intervention, with return to work (RTW) treatment focus
  - RTW at reduced status or modified duties
- >= 6 months: uncooperativeness and delayed bill paying of medical insurance carriers (vs. medical symptoms) was most frequently reported stressor.
- Insurance carrier bill payment very strongly predicted RTW
  - Prompt ( <=30 days): 97% had returned to work.
  - Delayed ( > 90 days): 4% had returned to work.

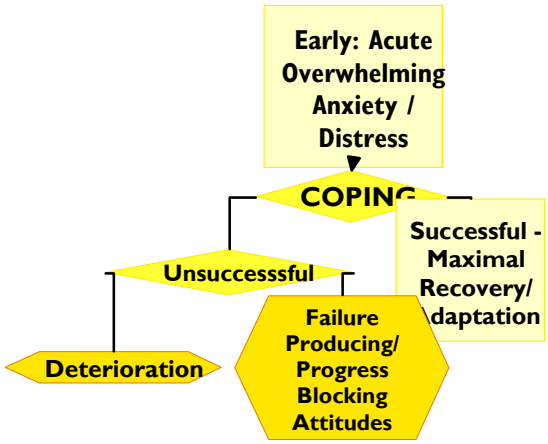
## Commonly Elaborated Purposes of Psychotherapy Following Neurologic Insult / Illness

- Improving Coping
- Reducing Stress
- Assisting Adjustment to new capabilities, helping mitigate cognitive, behavioral and personality changes
- Help Cope with Feelings of loss re: decrements in function, status
- Provides a Roadmap for the Future
- Promote Positive Attitude, Set New Goals
- Improving Awareness and Compensation

## Commonly Elaborated Advantages of Group Psychotherapy

- Many of the Same Purposes of Individual Therapy, with addition of:
  - Developing More Effective Social Skills in a Non-threatening Environment
  - Reducing feelings of Isolation and building a peer-support group.
  - Challenge: For some persons experiencing cognitive, perceptual and social interaction problems, Groups must be handled delicately

# Catastrophic Reaction




**Catastrophic Reaction:** Goldstein's term for the extreme depression he observed after left-hemisphere lesions.

- *"We have characterized the conditions of brain-injured patients, when faced with solvable and unsolvable tasks, as states of ordered behavior and catastrophic reaction. The [latter] show all the characteristics of anxiety."*
- Organism in struggle to cope with the challenges of environment and own body.
- Whole; Cannot be divided into "organs" or "mind" & "body"
- "Disease" = changed state with the environment.
- Healing comes not through "repair" but through adaptation to conditions causing the new state

## Common Personality Disturbances Following TBI (Prigatano, 1987)

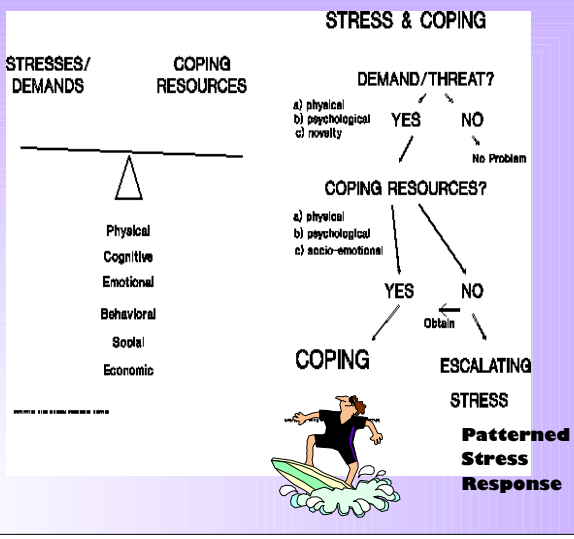
- Anxiety and the ***Catastrophic Reaction***
  - cf Chronic Compensatory Effort Syndrome (Hopewell, 2001)
- ***Denial*** of Deficits (Anasognosia / Anosodiaphoria)
- ***Paranoia*** and Psychomotor ***Agitation*** *(cf Bateson)*
- **Depression**, Social **Withdrawal & Amotivational** States *(cf Seligman; Taub)*

## Other Psychoemotional & Neuro-behavioral Patterns Associated with TBI

- **Behavior** Disorders
  - Irritability / Reduced Frustration Tolerance, Impulsivity, Reduced Insight, Social Inapproriateness, Reduced Motivation, Increased Emotionality
- **Executive** Disorders
  - Initiation, Planning, Problem Solving, Self Regulation
- **Psychosocial** Disorders
- **Substance** Abuse

## Sequelae That Tax Reduced Coping Systems (Contribute to Emotional Distress)

- **Physical** Dysfunction
  - **Headache (chronic pain), Fatiguability, Dizziness**
- **Cognitive** Dysfunction
  - **Sensation, Perception, Information Processing (Att, Memory, Reasoning, Judgement)**
- **Psychosocial Changes**



## Constraint-Induced Movement Therapy (CIMT):

### Evidence for Rehabilitation Suppression by Catastrophic Reaction

- To date, CIMT used effectively for:
  - Upper paralytic/ paretic limb of Chronic , Subacute CVA, TBI, LE CVA, Focal hand dystonia, Phantom limb pain
- Use Dependent Cortical Reorganization
  - Numerous efficacy studis, 5+ TMS, EEG, MEG studies with humans, 2+ studies of monkeys indicate: Cortical reorganization associated with TX effect of CIMT.
- Several Converging Lines of Evidence: Nonuse of a Single Deafferented Limb is a Learned Conditioned Suppression of Movement...efforts to use limb during initial post trauma period are unsuccessful (due to diaschesis, etc.), painful, anxiety and failure inducing and result in Learned Nonuse (cf. Learned Helplessness, Catastrophic Reaction) which persists after cerebral reorganization is possible.
- Mechanism of Action
  - (1) Changing learning contingencies reinforces Use Learning, inhibits Nonuse Learning
  - (2) Sustained, repeated practice of functional arm movements induces expansion of contralateral cotical area controlling movement and recruitment of new ipsilateral areas.

## COPING: Active Vs. Passive

| Challenge | Resignation - Depression |
|---|---|
| ✓ Believes in Challenge, Commitment | ✗ Believes in Helplessness, Hopelessness |
| ✓ Positive Identity ---> Satisfaction - with insistence on being an active shaper of the future& finding ways to have a constructive effect ("I Want.. ---> Vision of a more Positive Future!) | ✗ Negative Identity ---> Dissatisfaction - contentment with being a helpless Victim of the past and a powerless complainer who cannot effect the future ("I don't Want --> Prophecy of Doom!) |
| ✓ Goal Attainment Focused - with Specific attention to one situation at a time and searching for solutions one at a time | ✗ "Why Me/My Disability" or "Things Aren't Fair" Focused with Global perception of failures, helplessness/ resentment over losses |
| ✓ Looks for New Ways to do things & feel satisfied with abilities despite disabilities! | ✗ The Old Way or Easy Way or No Way. Like before or not at all! |

## More Evidence for Biopsychosocial Effects of Catastrophic Reaction: Traumatic Disability & NEUROSENSITIZATION Syndromes

(e.g., Miller, 1997; 1998; 1999; 2000)

- Neurosensitization Syndrome (NSS)
  - Syndrome of Subjective Discomfort and Objective Functional Disability
  - Often appears Excessive in Duration and Severity (vs. initiating event)
  - May be Resistant to Conventional Medical and Psycholgical interventions
  - Hypothesized to Develop from Progressively Enhanced Sensitivity / Reactivity of CNS mechanisms

## Traumatic Disability & NEUROSENSITIZATION Syndromes

(Miller, 1997; 1998; 1999; 2000)

- Frequently Comorbid and Treatment Refractory Syndromes
  - Post Concussion Syndrome
  - Post Traumatic Stress Disorder
  - Chronic Pain
  - Depression
  - Multiple Chemical Sensitivity
  - Anxiety

## Traumatic Disability & NEUROSENSITIZATION Syndromes

(Miller, 1997; 1998; 1999; 2000)

- Effect of Repeated Stimulation on CNS
  - Kindling vs. Habituation
    - Habituation: continuous or short interval stimulation effect
    - Kindling: extended interval subthreshold stimulation summating as seizure, with permanent changes in CNS excitability resulting in susceptibility to intermittent stress, and spontaneity (amygdala)

## Traumatic Disability & NEUROSENSITIZATION Syndromes

(Miller, 1997; 1998; 1999; 2000)

**Depression:**

- Stressors related to separation, loss, and devalued self esteem associated with depression onset following traumatic disability can pathophysiologi- cally trigger repeated depressive episodes with each successive failure, frustration or disappointment (cf Paykel, 1994)
- Neurobiological encoding can produce heightened vulnerability to subsequent recurrences with lessening degrees of psychosocial stress

## Traumatic Disability & NEUROSENSITIZATION Syndromes

(Miller, 1997; 1998; 1999; 2000)

- **Chronic Pain:**
  - **Activation of closed neural circuits in the limbic system** *(e.g., cingulum bundle, fornix, anterior thalamic neuclei, cingulate cortex, hippocampus, mammilary bodies and back to the anterior thalamic neuclei or somatosensory thalamus)* **during initial exposure to painful stimulation induces a sensitized state within the limbic system, enhancing responses to subsequent stimuli.**

## Traumatic Disability & NEUROSENSITIZATION Syndromes

(Miller, 1997; 1998; 1999; 2000)

- **Post Traumatic Stress Disorder:**
  - **Sensitization by fear associated with traumatic stress produces excitability changes in amygdaloid neurons, in turn influencing a variety of limbic and brainstem structures involved in the somatic and autonomic expression of fear and anxiety** (e.g., reduced activation threshold of locus coeruleus resulting in increased norephinephrine output; elevated medocortical dopaminergic neuron activation).

## NEUROSENSITIZATION Syndromes: Treatment Implications

(Miller, 1997; 1998; 1999; 2000)

- **Conceptualization of interaction based on a pattern of maladaptive positive feedback that eventuates in a pathological outcome based on neuroplasticity at, at least the following:**
  - **Neuropsychological: coritical perceptual-evaluative vs. Limbic emotional-reactive**
  - **Neurophysiological: synaptic reorganization or kindling, and electrophysiologic sensitization**
  - **Molecular-genetic: alteractions in intracellular third messenger systems leading to longer-term changes in neuronal functioning, including in experience and behavior.**

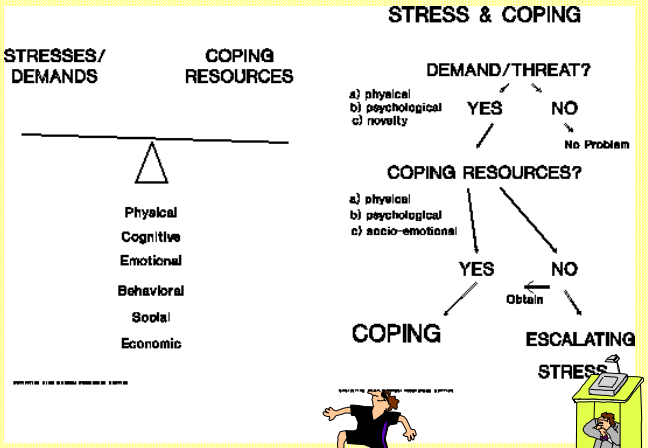
## NEUROSENSITIZATION Syndromes: Treatment Implications

(Miller, 1997; 1998; 1999; 2000)

- Psychotropic and Pain Medications are often First Stop Gap Measures
- Psychotherapy is the Treatment of Choice for most cases of Traumatic Disability Syndromes
- Dubovsky (1997): psychotherapy relationship "splints" the neurophysiological regulatory mechanisms, providing a repeated corrective stabilization that eventually allows normal functioning
- Martelli (2000): "Calming the Catastrophic Reaction" through Integrated Combination Treatments

## Resolving the Persistent Catastrophic Reaction

- Confront deficits:
  - Without being Overwhelmed by distress
  - With a Conceptual Framework and Rehab Methodolgy that Bolsters and Supports and offers Hope Through Conceptually and Through Graduated Successes
  - With a Calmer CNS and Decreasing Catastrophic Reactions (emotional, cognitive, neurophysiologic) that would block optimal recovery



## Holistic Habit Rehabilitation: A Stress, Coping and Vulnerability Model of NeuroRehab

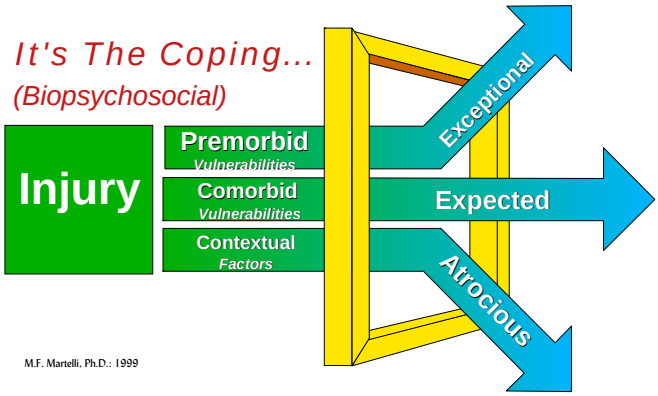
- Multiple cognitive, emotional, physical &social sequelae of TBI constitute, singularly and in combination, severe stressors which both challenge coping capabilities & directly diminish available coping resources through loss of abilities, independence, self esteem and identity, financial & social supports.
- Carefully evaluating perceived stress, perceived resources, and emotional responses, provides an intuitively appealing, understandable model for organizing rehabilitation efforts. May be useful in directing rehabilitation professionals toward appropriate recommendations and treatment targets
- Guiding Consideration: Balancing Perceived Stress with internal & external Coping Resources.

## Recovery After Injury

**...and Adaptation to Impairment**

*It's The Coping...*

*(Biopsychosocial)*




M.F. Martelli, Ph.D.: 1999

## Models of Neurorehabilitation: Old and New

| FEATURE | OLD REHAB MODEL | NEW REHAB MODEL |
|---|---|---|
| Treatment Theory Base | Acute Rehabilitation Outpatient Rehabilitation Day Rehabilitation Physical / Industrial Rehabilitation Traditional Education | Post-Acute Neurorehabilitation Transitional / Community Reentry " " Neurobehavioral Rehabilitation " " Executive Skills Rehabilitation Progressive Special Education |
| Treatment Targets | Isolated Component Behaviors | Complex Behaviors |
| Treatment Goals | Restoration of Absent/ Deficient Behavioral Components | Compensation - Emphasis is with Integrating Complex Behaviors and Executing Complex Sequences |
| Treatment Method | Stepwise Component Skills Building | Task Analysis Based Compensation |
| Treatment Model | Simple - Assumes Sufficient Patient Skills, Participation & "Motivation" - Primary Determinants of Outcome are Patient Variables | Complex - Assumes Neurobehavioral & Executive Deficits, Catastrophic Reactions, Deficient Coping; Requires Specialized Behavioral Treatment Skills - Primary Outcome Determinants are Program, Therapist Variables |
| Therapist Role | Expert: Instruct, Direct, Teach Patient, Family Members | Reference/Collaborator: Guide & Shape Behavior of Client, Family Members, Life Skills Tutors (LST's), Liaisons, etc. |

M.F. Martelli, Ph.D.: 1997

## Models of Neurorehabilitation (cont.)

| FEATURE | OLD MODEL | NEW MODEL |
|---|---|---|
| Prereq. Therapist Skills | Technical Skills Competence in PM&R Disciplines | Technical & BehaviorSkills Competence (with personal adjustment, emotional stability & flexible problem solving style) |
| Treatment Setting | Analog - Tx exercises mimic class room, often reflect remote simulations, and offer indirect rewards | Real Life - Realistic, relevant Tx exercises with rewards that mimic life & are inherently rewarding to Client |
| Tx Schedule | Part-time, during the work day | 24 hours/day, Everyday |
| Ecological Validity | Training Setting and Functional Goal Relationships are Often Indirect | Training Setting and Functional Goal Relationships are Direct & Apparent |
| Vocational Training | Train & Place - Assumes Generalizability; e.g. Traditional VocRehab, Work Hardening | Place & Train - Assumes Specificity of Learning; e.g., Supported Employment |
| Outcome Measures | Performance on: Training Tasks in the Rehab Center Standardized Neuropsych & Other Office Tests | Performance on Everyday Activities: Home Workplace Community |

M.F. Martelli, Ph.D.: 1995

## Habit Retraining Model for ABI:
***(continued)***

- If some of even the most basic habits are weakened or erased, everyday abilities and routines can be seriously disrupted, efficiency lost. What was once automatic and effortless can become overwhelming, requiring the same effort it took before efficient ways of performing any of the components of daily activities were learned.
- Even if important behavioral habis are lost, and the brain cells which sustain them destroyed or altered by injury or illness, the ability to relearn is seldom destroyed. Newl learned habits can be developed as replacements.
- We know the prerequisites for learning / relearning:

M.F. Martelli, Ph.D.: 1995

## Habit Retraining Model for ABI:
***(continued)***

- The greatest obstacle to learning or relearning is the redirection of energy away from goal directed activity and toward debilitating emotion and activity.
- The most frequent Rehab Energy Reserve *Poisons* (Re-Learning Blocks) include:
  - Fear / Anxiety, Persistent Catastrophic Emotional Reactions (usually subterranean), Anger and Resentment, Feelings of Victimization, and inertia
- Rehabilitation Requires Removal of Blocks

M.F. Martelli, Ph.D.: 1995

# Holistic Habit Rehabilitation

## Rx Ingredients: The 3 P's

**Plan:** A strategy or design for stepwise progress toward a desired outcome. Most plans are based on task analyses, or breaking seemingly complex tasks down into simple component steps, and proceeding in a list wise fashion. Clearly, the more specific, concrete, and obvious, the more likely the plan will work.

**Practice:** Repetition is the cement for learning which makes complex and cumbersome and boring tasks more automatic and effortless. With practice and repetition, even complex tasks become automatic and habitual. That is, a habit, or automatic robots, performs the tasks for us without special effort, energy, concentration, memory, and so on.

**Promoting Attitude:** A facilitative attitude provides the motivation that fuels persistence & mobilization of energy necessary for accomplishment of a progressive series of desirable but challenging goals.

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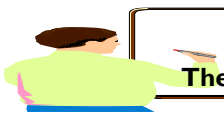

## Task Analysis:

### The Building Block of LEARNing

- **TA**: B**reaking a task into single, logically sequenced step**s **& recording in a Checklist** and then checking off each step as it is completed.
- **TA**'s always **make task initiation, completion & follow through much easier**....greatly improveperformance despite limitations in memory, attention, energy, initiative, ability to sustain performance, organization...any other difficulty.
- **TA**'s **reduce demand and energy consumed** by reasoning and problem solving associated with planning, organizing & having to recall, make decisions & prioritize appropriate steps and sequences for both **basic and complex tasks**.
- **TA**'s **(re)establish** efficient **habit routine**s that make up normal everyday activity. **30 to 1000** consistent **repetitions** produce **automatic habits**
- **Ingredient**s for (re)building automatic habits are the **3 P's**: **Plan, Practice, Promoting Attitude.** The result is (re)habilitation, or increased efficiency accomplished by removing obstacles to independence.

# The Five Commandments

## *of Rehabilitation:*

***Incorporating Cognitive Behavioral Psychotherapy to Conquer the Catastrophic Reaction***

Rx

| | |
|---|---|
| I | **Thou Shall Make Only Accurate Comparisons.** ***Thou shall not make false comparisons.*** |
| II | **Thou Shall Learn New Ways to Do Old Things.** |
| III | **Thou Shall Not Beat Thyself Up...Instead, Thou Shall Build Thyself Up!** |
| IV | **Thou Shall View Progress as a Series of Small Steps** |
| V | **Thou Shall Expect Challenge & Strive to Beat IT** |

M.F. Martelli, Ph.D.: 1999

Concussion Care Centre of Virginia, LTD.
Medical Psychology / Rehabilitation Neuropsychology

# Rehab Commandment IV:
## Rehabilitation Imperative

- ✓ **First - *Want* to Improve**
- ✓ **Second - *Believe* that You Can Improve**
- ✓ **Third - *Set* a Series of *Gradual, Incremental Goals* so that You Can Improve *in small steps!***

*You can only Get Better If...*
*You want to get better more than you want anything else**

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- Patience
- Persistence
- Coax it Out Gently
- Build Yourself Up!! (& Never Beat Yourself Up)
- Read & Re-read the "Five" Commandments of Rehab"
- Look to the Future (Not the Past)

*Before*
Good:
Attention
Memory
Walking
Etc.

*Injury*

Rehab *...Retraining / Recovery of Function*
Recapitulates (summarizes)
Ontology *...Development of Individual Organism*
Recapitulates
Phylogeny *...Development of Species*

***The Future***
**Driving?**
**Full Legal Competence?**

***Need: Cheerleader, Spectator***
Better & Better Att, Mem, Walking, etc.
*(cf. Off to School Vs. Off to Community)*

***Need: Coach, Supervisor***
*(cf. From bottle to cup Vs From doing it for them to cueing them to do it!)*
A Little Att, Mem, Walking, etc.

***Need: Aid, Caretaker, Nurturer***
Very Little Att, Mem,Walking, etc.
No Att, Mem, Walking, etc.
*(cf. I.V. feed vs Umbilical Cord)*

***'s Rehabilitation***

M.F. Martelli, Ph.D.: 1999

## Essential Commandments of Counseling & Psychotherapy

- I. Do No Harm
- II. Know Your Biases, Correct for Them
- III. Learn the Best, Know the Best, But Then Discard It While Meeting Client
- IV. Relationship Rules ('is the Ruler')
- V. Shaping, Shaping, Shaping
- IV. Do Not Commit Amateur Therapist Mistakes

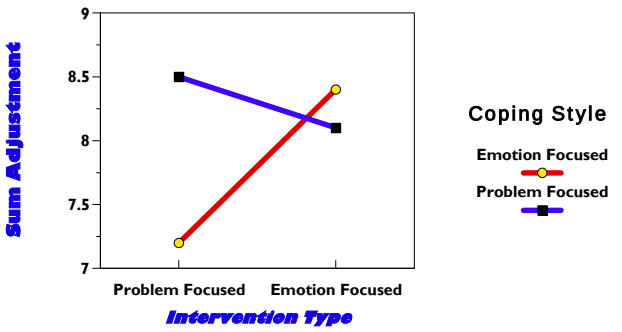
M.F. Martelli, Ph.D.: 1999

## Essential Commandments:
# I. Do No Harm

- Haphazzard Therapy - May cause Negative Expectancies, Prevent or Undermine Future Treatment
- Premature Confrontation - e.g., Substance Abuse - Confrontation can remove needed social support from confronters; Removal of Alcohol in absence of replacement coping mechanisms can cause serious decompensation
- Intervention (incl. information) X Coping Style Mismatches (cf example on subsequent slide)
- Imposing Traditional Psychotherapy Models
  - Prigatano (1999) 10th Principle of NP Rehab: "failure to ID which patients can and cannot be helped by different approaches creates a lack of credibility for the field"



## Anxiety, Interpersonal Impact and Adjustments to Stressful Oupatient Surgery




Auerbach SM , Martelli MF, Mercuri LG (1983). **Anxiety, interpersonal impacts, and adjustments to a stressful health care situation.** Journal of Personality and Social Psychology, 44, 1284-1296.



## Essential Commandments:
# I. Do No Harm: Confronting Unawareness

- Often Necessary first step, but Not Always
- In at least Some Situations it is Harmful (e.g., "Individuals ...more severe organic deficits and/or psychologically fragile...might experience overwhelming distress when their customary defenses are disabled.")
- Limited Cognitive skills may Block increased awareness or compensation
- Can be much easier to change behaviors first
- Simplifying expectations, rewarding desirable alternative behaviors until habitual, may be a more effective alternative

## Essential Commandments:
## VI. Amateur Mistakes

- Imposing a strategy that doesn't fit
- Mismatching counseling style with client style and needs
- Neglecting to first develop the Relationship
- Not differentiating client need for ventilation or validation or empathy versus active treatment solution, problem solving, rescue, etc.
- Blaming the patient instead of the therapist relationship, therapeutic plan or process, or therapist skills, for failures



## V. Amateur Mistakes *(cont)*

- Failing to Conceptually Convert Maladaptive, Ineffective, Undesirable Behaviors to Alternative, Effective Behavioral Replacements
- Failing to Make Shaping of Desirable Replacement Behaviors the Primary Therapeutic Focus
- Failing to Bolster & Provide Structures to Support Learning via Compensating for Necessary Cognition and Motivation Deficits
- Therapist Learned Helplessness



## Powerful Psychotherapy Interventions

- **Relaxation Procedures, Biofeedback, Hypnosis**
- **Cog Beh Analysis System of Psychotherapy**
- **Desensitization Procedures**
- **Shaping**
- **Behavioral Programming**
- **Schwartz (1996) 4-Step OCD TX Method**
- **Holistic Habit Retraining & Practical Adaptations**
- **Combination Interventions**
- **Network Therapy**
- **Group / Family Therapy**

**The Behavior Management Imperative: Replace Negative Reinforcement (the "Stick") with Shaping (the "Carrot")**

| Negative Reinforcement "The Stick" | Shaping "The Carrot" |
|---|---|
| ☒ Believes that human nature is basically bad and that bad must be guarded against and kept in check<br>☒ "Bad" Focused. Avoiding Bad is Good & the Absence of Bad is Good. Focus is with Avoiding and Preventing Bad Behaviors and Negative Behaviors -->"I don't want"...something Negative<br>☒ A Self-Fulfilling Prophecy of Bad!<br>☒ Uses "Should, Ought, Must... Shouldn't; Mustn't", Frowns, Nods, etc. Leads to --> Anxiety, Distress, Pessimism & Negative Identity<br>☒ Uses Distress / Punishment to Decrease and Prevent Undesirable (Bad) Behavior and<br>☒ Uses Anxiety, Fear, Distress & Guilt Until the Bad Behaviors Stop and Good Ones Begin | ☑ Believes that human nature is neutral and that good and bad are learned. Good can be taught, nurtured and cultivated<br>☑ "Good" Focused. Good is Good, which Prevents Bad. Focus is with a Driving/ Goal Directed Vision of Making Desirable Changes and a Positive Future --> "I want"... something Positive<br>☑ A Self-Fulfilling Prophecy of Good!<br>☑ Uses "In Your/Their Best Interest... Not in ...Best Interest", Smiles, Pats, etc.. Leads to --> Confidence, Optimism, Hope & Positive Identity, in My / Their / Our Best Interest<br>☑ Uses Rewards to Increase Desirable (Good) Behavior Rewards & Praises approximations of Good/Desirable Behavior that are present, and<br>☑ Gradually and Successively Shapes Increases in Desirable Behavior Until Achieved |

## Shaping via Reinforcement of Successive Approximations of Desired Behavior:

**This involves successively rewarding the smallest movements (baby steps) in the desired direction with carrots (i.e., verbal rewards, expressions of approval & appreciation, smiles & nonverbal gestures of approval, physical/tangible rewards, jumping up with joy, etc.)**

**Each successful small step is rewarded, which teaches feeling good about being good.**

## CogBehavior Analysis Systemn PsychoTx (CBASP)

Components

**Happened:** Event: newspaper reporter account, minus interpretation, reaction, emotion, inference...Just the Facts

**Meant:** Significance: What makes it good or bad, and why? Relevance, from the individual's phenomenologic perspective and vantage point

**Felt:** Emotions, affective reactions (not thoughts) ...abandoned, demeaned, unappreciated, resentful, angry, irate, like: hands caught in cookie jar, dog just died, mother yelled at me when I was little, etc.

**Did:** Actual overt, but also covert responses. e.g.: did nothing, or yelled, or told him to F*$% off, or said okay, etc., etc., etc.

**Wanted:** Desired situation outcome. e.g.: wanted him to compliment my work, at least not criticize it...wanted her to pay attention to what I was saying... him to apologize and promise not to do it again....

**Turned Out:** What actually happened. e.g.: nothing, or something bad or unwanted, etc., or a violent explosion with negative consequences, etc.

**Evalation:** How close did it turn out vs wanted (See G.A.S.)

## CogBehav Analysis System PsychoTherapy (CBASP)

**CLINICAL MODEL:**

- **Learn Thematic Patterns of Maladaptive Functional Contributions to Undesirable Situational Outcomes and Ineffective Patterns in Relationships and Living --> Distressful Emotion, Negative Mood States, General Maladaptation, Unhappiness, and specific to general life Dissatisaction.**
- **RX_1. Analysis of Functional Contributions at each level**
- **RX_2. Specific Remedial Interventions " " "**
  - **Happened_RX:** When relevant, changing poor situation selection habits and poor situation involvements.
  - **Meant_RX:** Challenging Cognitive Distortions or Inflexible and Distorted Interpretive Patterns (overgeneralization and the other cognitive distortions; e.g., Ellis's 11 irrational idea, Martelli et al's Therapist and Patient Ideas (to make you distured or help you function); Specification of the Global, hard to challenge, to the Specific and testable.

## CogBehAnalysisSystemPsychoTx (CBASP)

- **Felt_RX:** Remediation of Emotion Modulation Problems; Relaxation Training and Protocols; Assertiveness, Distraction, etc.
- **Did_RX:** Training in Skill deficit areas (assertiveness, anger control, etc.) or self efficacy
- **Wanted_RX:** Remediation of Poor need formulation and problem solving; Goal Attainment Scaling
- **Got_RX:** The formula for effective functioning and mental health is Good approximations of Getting `What You Want'. In CBASP, therapy always begins with: 1) phenomenal Mismatches; 2) Absence of Recognition of functional contributions to situations, and; 3) Powerlessness to effect outcome or produce desirable situational outcomes. Therapy ends (good outcome) when homework Stress Survey Q's all Produce good semblance of Desired Outcome.

**Keller, M. B., J. P. McCullough, D. N. Klein, B. Arnow, D. L. Dunner, A. J. Gelenberg, J. C. Markowitz, C. B. Nemeroff, J. M. Russell, M. E. Thase, M. H. Trivedi, and J. Zajecka. 2000. A comparison of nefazodone, the cognitive behavioral-analysis system of psychotherapy, and their combination for the treatment of chronic depression [see comments]. N. Engl. J. Med. 342:1462-1470.**

## Situational Analysis *(CBASP cont.)*

- Detailing a Stress Situation in order to personally Control/Shape Behavior to Maximize Chances for a Desired Outcome:
  - (a) Analyze situation
  - (b) Problem-solve potential actions
  - (c) Implement plan most likely to be succesful
- ***INSTRUCTION***
- Think of Past Stressful Situations, Role-play likely Future Ones
- Answer the following set of Questions:
  - (1) What happened (who, what, when, where),
  - (2) What were your thoughts, feelings, and actions at the time
  - (3) What was the actual outcome
  - (4) What was the desired outcome
  - (5) What response (thoughts and actions) would have been more adaptive? What response is more likely to get you what you want?

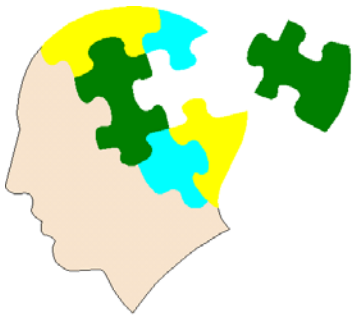
    RX: *Devising a standard list of adaptive thoughts to refute maladaptive ones*

## CBASP (cont)

- **Situational Analysis (cont)**
-
- Example Problem Scenarios:
- Coworker says: I don't see why YOU should get special privileges. You're just pretending you can't do it to get advantages...
  - How do you **Feel**?
  - What would you like to get out of this situation (**Want**)?
  - How do you react (**Do**) in order to get what you want from this situation?

## NeuroBehavioral Regulation:

Adaptative Habit Retraining Strategies Derived From Task Analyses



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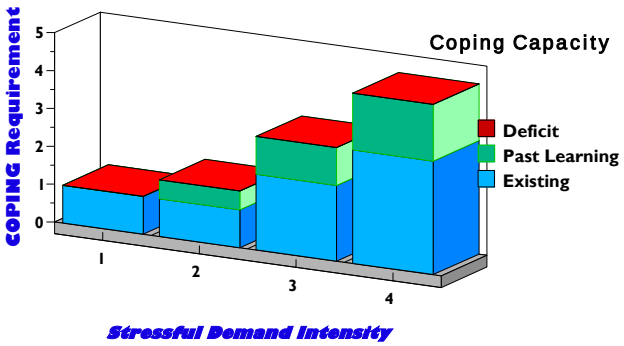
## Acquisition of Coping: Resilience

(Optimal Learning)

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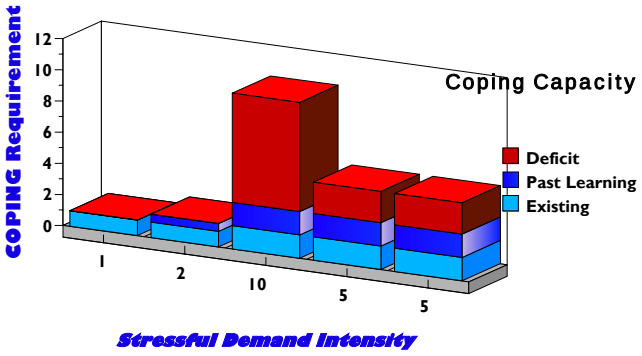
## Poor Acquisition of Coping: Resilience

### (Suboptimal Learning: Traumatization)

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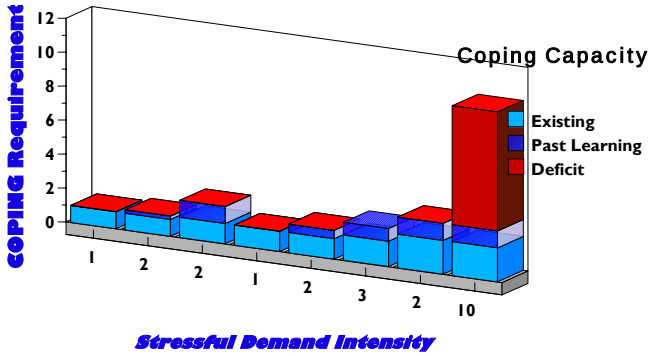
## Poor Acquisition of Coping: Resilience

### (Suboptimal Learning: Overprotection)

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## Protocol for Increasing Self-Confidence

(Decreasing Self-Consciousness, Anxiety, Low Self-Esteem, etc.)

| | | Required Amount of | of External | Assistance Structuring/ | / Cueing |
|---|---|---|---|---|---|
| Complexity | | High | Medium | Low | None |
| of | Low | | | | |
| Task | Mediu m | | | | |
| | High | | | | |

- Subsequent introduction of slightly more challenging tasks and reintroduction of the above noted process of maximum to gradually diminishing cues (method of diminishing cues)

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## **Graduated Exposure Programs** in Rehabilitation

- **Exposure to distressful emotional, physiological and sensory reaction situations**
- **Incremental increases in tolerance (and incremental compensatory learning, anxiety extinction, sensory interpretation distress) without experiencing significant anxiety or sensory distress.**
- **Requires person Not experience distressful reactions or experiences.**
- **Examples: anxieties, phobias & distressful emotions and sensory reactions related to the following:**
  - **Noise and/or light (when not mediated by headaches, etc.)**
  - **Crowds and public places (e.g., stores, malls, sporting events)**
  - **Overwhelming visual stimulation and patterns**
  - **Driving (especially in traffic)**

**METHOD: Schedule Gradually Increased Exposure / Assigned Activities, Incremented in Time and/or Distance and/or Intensity that are followed Exactly**

## Lisa's Graduated Exposure Driving Program

(Beginner's Version)

| Level /Step | Activity | Time | Frequency | SUDS |
|---|---|---|---|---|
| 1-1 | **Sit in and Start Car** | <= 2 min. | 1-3 X/day | |
| 1-2 | **Start Car, Back up slightly, then pull forward in driveway, going no further than is comfortable** | **<= 2 min.** | **1-3 X/day** | |
| 1-3 | **Start Car, Back up all the way to street, then pull forward, going no further than is comfortable, and repeat one or two times.** | **<= 2 min.** | **1-3 X/day** | |
| 2-1 | **Start Car, Back up all the way to street and then slightly into street, then pull forward, going no further than is comfortable, and repeat one or two times.** | **<= 2 min.** | **1-3 X/day** | |
| 2-2 | **Start Car, Back up all the way to and one full car length into the street and then then pull forward, going no further than is comfortable, and repeat one or two times.** | **<= 2 min.** | **1-3 X/day** | |

**RULES:**

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- **Stop the activity if you begin to feel even a little shaky.**
- **Do not progress to next level previous level completed for all exposures for 2 consec. days**
- **Email feedback to MFM re: progress, any shakiness you experienced, when level completed**

## LT's Graduated Exposure Driving Program

**Monday (3/23)**

**Drive from home around 6:00pm to Chamberlayne Avenue and follow to Broad Street to Mid Town Auto Sales, look at cars for 10 minutes, and return home.**

**Tuesday**

**Drive from home around 6:00pm to Chamberlayne Avenue and follow to Broad Street to Bailey's Auto Sales, look at cars for 15 minutes, and return home.**

**Wednesday**

**Drive from home to technical center while mom is in back seat around 6pm, drive from center to home around 9:30pm with mom in back seat.**

**Saturday (3/28)**

**Drive from home around 6:00pm to Chamberlayne Avenue and follow to Broad Street to the Mid Town Auto Sales, look at cars for 10 minutes, drive to Bailey's and look at cars for 10 minutes, drive to any other car lot on Broad Street and return home.**

**Thursday (4/3)**

**Drive from home around 5:00pm to Byrd Park, circle through, head to Broad St. to Mid Town Auto Sales, then to Bailey's, then to a lot on the South Side and then return home.**

**Friday (4/4)**

**Return at 5:00pm to Sheltering Arms. Drive self. After leaving, head to Byrd Park, circle through it, then head to Broad Street to the Mid Town Auto Sales, then head to Bailey's, then to a lot on the South Side, and then return home.**

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## Graduated Exposure Sensory Tolerance Program

| Level /Step | Activity | Time | Frequency | SUDS |
|---|---|---|---|---|
| 1-1 | **Stand on stepladder or chair for 3 Sec's** (s | **3 Sec.** | **3 X/day** | |
| 1-2 | **Perform a visuomotor scanning computer exercise** | **30 Sec** | **4 X/day** | |
| 2-1 | **Listen to radio while driving** | **1 Min** | **1-3 X/day** | |
| 2-2 | **Track 2 persons talking at same time** | **2 Min.** | **1-3 X/day** | |
| 3-3 | **Visit Clover Mall** (9-11am, 2-4pm, Main ent.) | **10 min.** | **1-2 X/day** | |

***Sample Rationale:*** **"Like Breaking a Bronco, you can't learn to ride until you can get in the saddle. You can't get in the saddle until the horse believes it won't die if something gets on its back. Similarly, You can't increase your tolerance for (sounds, etc.) unless your system learns that it can tolerate some level of that (noise, etc.) without great (distress, pain, fatigue, etc.)."**

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## Increasing Self-Confidence: Graduated Successes

(Decreasing Self-Consciousness, Anxiety, Low Self-Esteem, etc.)

- **Graduated Success Shaping**
  - Noncomplex tasks, successfully completeable
  - Gradual increases in complexity (challenge) following successes
  - Diminishing Cues / Errorless Learning
  - Increasing Accuracy of: a) Self-Monitoring; b) Self-Evaluation and c) Self-Reinforcement (self-delivered praise, etc.)
- **Progress gauged through progression from:**
- Initial stages: Maximal, Diminishing Cues, Errorless Performance & accurate self-monitoring, self-evaluation & self-reinforcement
- Middle stages: increasing internal cueing & decreasing need for external assistance for task completion, accurate self-monitoring, self-evaluation & self-reinforcement, to
- Later stages: independent task completion and independently conducted accurate self-monitoring, self-evaluation & effective self-reinforcement
- Subsequent introduction of slightly more challenging tasks and reintroduction of the above noted process of maximum to gradually diminishing cues (method of diminishing cues)

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## Self-Regulator for Involuntary Sadness!

**1-Re-Label**...*It's Not an Intended, or Legitimate Degree of Emotion...It's* ***Involuntary Sadness****!*

**2-Re-Interpret**...*It's just Involuntary and Unintentional Sadness in which nerves connecting the brain's emotional experience centers to emotional expression muscles are weakened - resulting in decreased control & exaggerated release of emotion!*

**3-Re-Focus**...Concentrate on *something different, or pleasurable or funny, to distract myself and & restore control of expression ("Plop, Plop, Fizz, Fizz...."!)*

**4-Re-Evaluate**...*Decide that the involuntary sadness or teariness is Illegitimate and False Information. Decide to Dismiss This Information and Restore Control through re-focusing attention! Re-LIFE it!*

Re-LIFE it!

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adapted from Schwartz (1996) OCD Procedure

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## Management of Emotional Reactions: Temporal Lobe Epilepsy (TLE)

**To increase control of emotions and improve problem solving and general stress management and coping, we have developed a 4 step self-control procedure called Re-L.I.F.E..**

**The general outline for the Re-L.I.F.E. procedure is as follows:**

**Re:**

1. **L-Label: re-label the feelings as illegitimate, hyper-intensified emotions**
2. **I - Interpret: re- interpret them as emotional amplifications or hyperintensifications caused by electricity (i.e., kindling or hyperconnectivity) or B.S. (Between Seizure electrical amplification)**
3. **F- Focus: re-focus on anything less distressing, more pleasant, different, in order to disrupt the developing escalation of electricity and intensified emotions**
4. **E - Evaluate: re-evaluate the theme of electricity intensifying emotion as a component of epilepsy, as requiring that the primary red flags be monitored, and, when identified, re-interpreted more accurately, so that they can be controlled.**

**When this "self-talk" self-control procedure is used before the amplification of emotions progresses too far, it can counter amplification, preventing the escalation of emotions that leads to: psychic changes and increased emotional distress; increased fatigue and possible eventual exhaustion; and increased probability of eventual seizures - and a recurring pattern of poor emotional and/or seizure control.**

**Notably, posters, and graphic representations, with personalized details, are typically employed to assist with learning and application of this self-control intervention.**

**cf. Psychophysiologic Aura/Red Flag Discrimination / Self Control Habit Procedure**

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# Mission Impossible

## Assignment

*Your Mission, should you decide to accept it:*

- **Look for Opportunities to Build Stability By Practicing Emotional De-escalation / Self-Control Strategies**
  - **Practice Both:**
    - **(A) Preventing Temporal Lobe Based Emotional Hyper-intensication (i.e., use Emotional Well-Being Habit to prevent "kindling" of electro-emotion)**
    - **(B) De-escalating "kindled" Emotion via Re-Interpreting it as electrical buildup trying to replicate itself by using your emotions against you to fuel more electricity !**

**Freedom is Worth The Effort!**

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Derived from Task Analysis

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## CRISIS SURVIVAL RULES:

## Emotional Control Strategies

## Mirroring

- **<u>Sponging:</u> absorbing/ catching others negative emotions; allowing them to control your emotions, reactions.**
- **<u>Mirroring:</u> reflecting negative emotions, with factual comment and without emotional reaction or obligation to "catch" the emotion or respond with it.**
  - **involves a slow, deliberate and open look at the others statements while <u>*Under reacting*</u>: prevents escalation, allows self control through control of response, allows keeping a cool head to help calm the situation, not let another persons problem become your own.**

**RX: Be a Mirror (not a Sponge). Contract with partners to allow mistakes, not beat each other up when mistakes are made... learning and taking into account the "Rules of Crisis" can help...!**

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Derived from Task Analysis

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## EMOTION CONTROL HEADQUARTERS

### HOMEWORK

- Look for Opportunities to Think Suspsicious Thoughts, Think Someone is Screwing You, and Get Angry, *and then:*
  - Practice re-interpreting them in a harmless, non-threatening, non-angering way!
  - Practice Saying "So What", "Who Cares" and "Who Says"
  - And, Remember the Stress Buster Rules:
    - Rule#1: Don't Sweat the Little Stuff!
    - Rule#2: It's All Little Stiff!

*(it's just that your injury makes it seem bigger than it really is!)*

M.F. Martelli, Ph.D.: 1999
Derived From T.A.

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Chris's **Mission Impossible**

### HOMEWORK

*Your Mission, Should you decide to accept it:*

- Look for Opportunities to Feel Urgency Or Need for Immediate Fulfillment and Convert it to Strategic Under-Reaction
  - Practice Countering Urgency via the Stress Buster Rules
  - Practice Building up Tolerance to Need/ Stress Frustration (i.e., Become *More Stress Resistant*, *More Under-Reactive*, and *More Strategic*)
  - Remind Yourself that Strategic Behavior is the Key to Influencing Important People (e.g. Dad) and Desirable Persons (e.g., girlfriends)

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*** cf.: Vestibular Overload**

## Rehab N Pacing Imperative *

**Neurogenic Fatigue**

- **Remember to Leave Enough Reserve Energy For Brain Recovery, Strengthening & Building of Resilience/Increased Capacity in Brain Cells....**
- **....If You Go as far as Tolerance or Energy Will Let You (i.e., until fatigued and/or sick), you will Not Allow Continued Recovery and Brain Strengthening (...instead, energy will go toward recovery from sickness, which only returns you to where you were...without progressing!)**

*Pace it...Don't Race it!*

Progress is a series of small Steps...Celebrate each one patiently!



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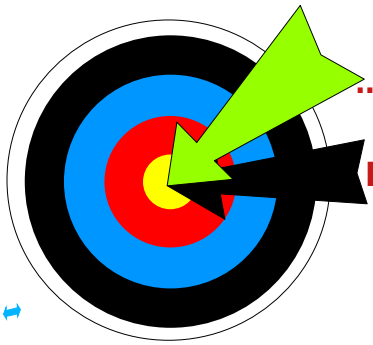
AJAX Strategies...Cognitive Cleaning Detergent!



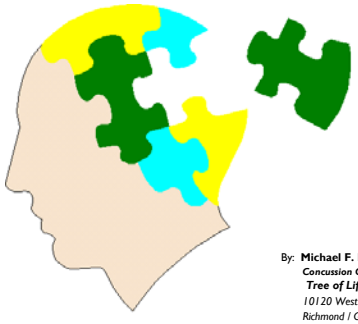
... Stronger than Neurobehavioral Dirt!

Derived From Task Analyses...

Designed to Counter Cognitive Obstacles

# Attention Regulation:

Strategies for Habit Retraining



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## ATTENTION REGULATION STRATEGY

### Auditory Comprehension & Memory

- TO REALLY CONCENTRATE, I MUST LOOK AT THE PERSON SPEAKING TO ME
- I Must Also Necessarily FOCUS ON WHAT IS BEING SAID, NOT ON Sorrounding Sounds or Activities or OTHER THOUGHTS WHICH WANT TO INTRUDE
- ALTHOUGH IT IS NOT HORRIBLE IF I LOSE TRACK OF CONVERSATION, I MUST TELL THE PERSON TO REPEAT THE INFORMATION IF I HAVE NOT Fully ATTENDED TO IT
- I Must CONCENTRATE ON WHAT I AM HEARING AT ANY MOMENT BY REPEATING EACH WORD IN MY HEAD AS THE PERSON SPEAKS

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**ATTENTION REGULATION STRATEGY**

## General Distraction Buster

- TO REALLY CONCENTRATE, I MUST LOOK/ FOCUS ON THE TASK AT HAND
- I Must Also FOCUS ONLY On WHAT IS BEING Done, NOT ON Surrounding Sounds, Sights or Activity, or OTHER Stresses of THOUGHTS WHICH WANT to Intrude
- I I MUST CONCENTRATE ON WHAT I AM DOING AT EVERY MOMENT BY FOCUSING ON THE CURRENT STEP TOWARDS TASK COMPLETION
- IT IS NOT HORRIBLE IF I LOSE My FOCUS or CONCENTRATION. I will simply have to Repeat and Re-Focus ON THE ONGOING TASK AT HAND, THE NECESSARY STEPS TO COMPLETE IT, AND THE NEXT STEP TO WORK ON!

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**ATTENTION REGULATION STRATEGY**

## Lecture Distraction Buster

- To REALLY CONCENTRATE, I Must LOOK / FOCUS on the PERSON LECTURING
- I Will ALSO FOCUS ONLY On WHAT IS BEING SAID, NOT ON Surrounding Sights, Sounds or Activities, or Other Thoughts Which Want to Intrude
- I MUST CONCENTRATE ON WHAT I AM HEARING AT EVERY MOMENT BY FOCUSING ON THE CURRENT WORD & PHRASE AS I HEAR IT
- IT IS NOT HORRIBLE IF I LOSE My FOCUS or CONCENTRATION. I will simply have to Re-Focus ON THE CURRENT WORD, PHRASE and MEANING, To Get Back on Track!

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**ATTENTION REGULATION STRATEGY**

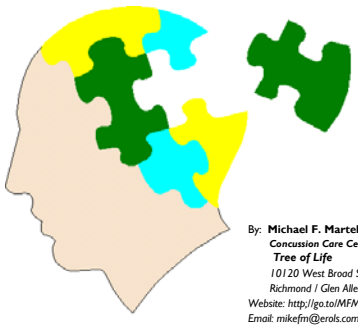
## DRIVING Distraction BUSTER

- To REALLY CONCENTRATE, I Must LOOK / FOCUS on the ROAD, My Vehicle & Other Vehicles
- I Will Also FOCUS ONLY On WHERE My CAR IS, WHERE OTHER VEHICLES & PEOPLE ARE and WHAT I AM DOING With My CAR And NOT On Surrounding Sounds, Sights, People or Activity or Other Thoughts Which Might Want to Intrude
- I MUST CONCENTRATE ON WHAT I AM DOING AT EVERY MOMENT BY FOCUSING ON WHAT I AM DOING AND TALKING MYSELF THROUGH IT
- IT IS NOT HORRIBLE IF I LOSE My FOCUS or CONCENTRATION. I will simply have to Immediately Re-Focus ON WHERE and WHAT I am DOING!

*** and Reading, Multiple Attention, etc.**

# MEMORY:

Strategies for Habit Retraining



By: **Michael F. Martelli, Ph.D.**
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## Strategies For Remembering Names

- **Repeat the Name 5 Times**
  *Repeat to yourself and out loud in sentences - "So your name is ___..I know a ___, I like the name ___", etc.*
- **Make Associations**
  *Between Name & Physical Features - e.g. Mike& mustache*
- **Write Down the Name**
  *WriteName and Description (in your head and/or Logboook)*
- **Review Your Memory Immediately Afterwards**
  *Replay Introduction in Memory and Rrepeat Five Times*
- **Use a Tape Recorder** *as a memory fail safe aid*

## Strategies To Prevent Losing Things

- **Always Review What You Have in Your Possession & Where You are Going With It & Where You Will Place it Beforehand** *...Where are you going & how will you get there & What Do You Have With You and What Are You Going to Do/ Where Will You Put It*
- **Picture Where You Are Going and What You are Taking With You** *...See every landmark, item, room, building, etc.*
- **When You Begin the Activity, Talk to Yourself to Monitor Where You are Going, Where You Place What, etc.**

## Strategies To Keep Track of Tasks & Activities

- **Always Review What You Have in Your Possession & Where You are Going With It & Where You Will Place it Beforehand** *...Where are you going & how will you get there & What Do You Have With You and What Are You Going to Do/ Where Will You Put It*
- **Picture Where You Are Going and What You are Taking With You** *...See every landmark, item, room, building, etc.*
- **When You Begin the Activity, Talk to Yourself to Monitor Where You are Going, Where You Place What, etc.**

## Strategies To Prevent Driving Lapses

- **Review the Travel Route In Your Mind Before Beginning the Trip** *...Where are you going & how do you get there?* (Include every landmark, exit, turnoff, etc.)
- **Picture The Travel Plan and Picture Yourself Driving the Route** *...See every landmark, exit, turn off, etc.*
- **When You Begin the Trip, Talk to Yourself to Monitor Travel Route, Turns, etc**
- **Consider Making a Map of the Travel Route, Placing it on the Carseat, Marking the Major Exits, Turnoffs, etc. & Following & Checking It While Driving**

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# Lisa's Habit Retrainer

3N's +1 = Necessary Nuisance for iNdependence

**iNventory:** Before you do anything!

- **Set/Check Your Scheduler**
- **Evaluate Your Fatigue and Adjust Activities**
- **Reinterpret Negatives into Positives** **(e.g., Convert Curses into Nurses; Focus on what you Can Do Despite Great Obstacles... instead of what you can't yet do or how big the obstacles are!)**
- **Pace (start out slowly, build up slowly!)**

Practice Will Make it Automatic, Like Before

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# Barb's Habit Retrainer

3N's +1 = Necessary Nuisance for iNdependence

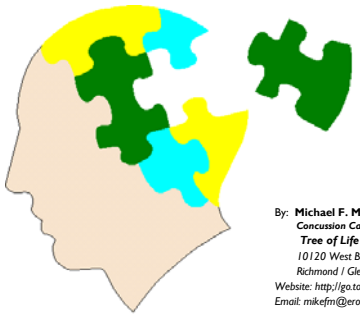
**iNventory:** Before you leave the house...

- **Get Your Exec. Organizer**
- **Take Your Medicationss**
- **Get Your Glasses**
- **Get Your Leg Rest**
- **Get Your Watch** **(start out slowly and build up slowly!)**

Practice Will Make it Automatic, Like Before

# Comprehension and Organization:

Strategies for Habit Retraining



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## Organization Strategy: Comprehension #1

**5 W's**

**WHO**

**WHAT**

**WHEN**

**WHERE**

**WHY**

and sometimes **HOW**

## Organization Strategy: Comprehension #2

**SQR3**

**Survey** *(Preview Content Areas)*

**Question** *(Formulate Questions)*

**Read** *(& Answer your Questions)*

**Recite** *(Main Points)*

**Review** *(and Rehearse)*

# The **Organization Imperative**

## Bottom Line

- Short, succinct, to the point...
- ...MAIN POINT...BOTTOM LINE!
- ...Give OUTLINE of BOTTOM LINE BEFORE elaborating DETAILS

## One Thing at a Time

- STAY FOCUSED on One Thing at a Time & INHIBIT WANDERING
- Monitor Ongoing Activities & Conversations & Demonstrate Ability to TRACK
- Use Multi-Tasking Monitor to Keep Track of other Things

*Derived from Task Analysis

M.F. Martelli, Ph.D.: 1999

# Multi - Task Monitor / Trainer

| TO DO List | 6. |
|---|---|
| 1. | 7. |
| 2. | 8. |
| 3. | 9. |
| 4 | 10. |
| 5. | Transfer incompletes to next day |

| Multi-Tasking Monitor | Multi-Tasking Monitor |
|---|---|
| Task 1: | |
| Left Off: | Left Off: |
| Task 2: | |
| Left Off: | Left Off: |
| Task 3: | |
| Left Off: | Left Off: |
| Task 4: | |

*Derived from Task Analysis

M.F. Martelli, Ph.D.: 1999

## Jim's Executive Self-Control Habit: SOBER

- Every day, and every Two Hours, to make it a habit:

**(1)** *Rate your Current Impulsiveness and Executive Status!*

- Have you been **S**cattered (Been on more than one task or idea or topic at a time) in the last 2 hours?
- Have you Been an **O**pen **B**ook ( i.e., Talking about You, Your Concerns, Your Life Story...Talking Like a Russian Novelist; Disclosing Too Much, Too Quickly...
- Have you Felt **E**xcited in any manner in the last two hours?
- Have your Thoughts or Speech **R**aced in the last two hours? (or are they Now - Don't underestimate)

*Derived from Task Analysis

M.F. Martelli, Ph.D.: 1999

*(continued)*

- **(2)** *Adjust your Daily Activities Accordingly!*
  - If You Have **Some Vulnerability** ('Yes' to 1 question, or unsure) to Dysexecutive symptoms, **Engage in Some Executive Renewing Activities and Closely Monitor and Reduce Executive Taxing Activities**
  - If You Have **High Vulnerability** ('Yes' to 2 or more) to Dysexecutive symptoms, Reduce all Executive Taxing Activities (that is, do few, pace and go very slowly) and **Engage Mostly or Only in Executive Renewing Activities**

*Activity Effects on Executive Skills*

| ***Executive Renewing Activities*** | ***Executive Taxing Activities*** |
|---|---|
| Pace / Slow / 1 Thing at a Time | Overactivity |
| Planning/Organization | Stimulating Situations |
| Relaxation / Power Nap | Stress & Worry/ Rumination |
| Q Reflex/ Deep Breathing | Working |
| Swimming / Moderate Exercise | Walking / Prolonged Standing |
| Music/Guitar/Singing Reading | Meeting New Persons / esp. Women |

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**For Anticipated, Unavoidable Executive Taxing Situations, Liberally Engage in Executive Renewers Both Before and After**

## Piloting: Internal Self-Monitor

- **ANTICIPATION**
  - ➡ How will/does this look to others, WORST CRITIC?
  - ➡ Will it help or hurt to turn out the way I want?
- **BRAKE ON ALL RED FLAGS**
  - Perceptions of Inequality, Unfairness, Mistreatment
  - Perceptions of "Stupidity" in others
  - Perceptions of Being Ridiculed
  - Feeling Lonely or Horney
  - Anger / Frustration / Excitement
- **COMPENSATION**
  - ☛ Inner Running Dialogue with constant Red Flag review
  - ☛ Practice inhibiting and braking responses during all Red Flags!

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**Derived from Task Analysis*

## Stairway to Love Heaven

Name:_____

**Single Persons Introductory Guide to Relationships and Dating**

Rule #1: Don't Touch Anyone or Get Too Close or Friendly Before you take them out for a 2nd Date. This means Anyone!

Rule #2: Never Attempt to Date, get fresh, flirt with, or Touch Any Possible New Friends you meet... Grow these friends to increase your contacts with friends. Only their friends should be considered for dates.

Rule #3: Compliment anyone you think you might want to date. Compliment everyone for practice to learn how to compliment unselfishly. Some things to compliment people about, includeAre Nice; are Bright; are Attractive Have a Nice Personality; Are fun to Be With Are Witty / Funny; are Pleasant, etc.)

Rule #4: Don't go out looking for dates. The best dates sneak up unexpectedly when you are just trying to have fun.

Rule #5: Learnto Fast Dance, and dance more. Look for people to dance with and go out and dance with. Ask your friends out on a friendly basis. Ask What They Like to Do and then ask them to do something they like to do.

Rule #6: Take chances asking others out on dates - let them say no. Don't be too afraid of rejections. It takes three rejections before you learn that it won't kill you, and before you can build up courage. And in the long term, it takes three seven heartbreaks before you are courageous enough to stay out of, or get out of bad relationships.

*Before*
Good Friends and Relationships

- Patience
- Persistence
- Coax it Out Gently
- Build Yourself Up!! (& Never Beat Yourself Up)
- Read & Re-read the "Five" Commandments of Rehab"
- Look to the Future (Not the Past)

*Injury*

***The Future***

**Marriage?**

**Girlfriend**

**More Successful Dating**

**Some Successful Dating/ Clean Apt**

**Better Social Skills & Socialization & Self-Control &Friends But Unsuccessful Dating**

**A Little More Social Skills, Self-Control & Socialization/ Few Friends/ Messy Apartment, etc.**

**Very Little Social Skills & Little Socialization and Self-Control / No Friends**

**No Friends or Social Skills or Frustration Control**

*Rehabilitation*



**Derived from Task Analysis*

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## Tom's Rules of the Road for Successful Relationships

- Brake on Touching, Getting Closer than Two Feet of a Woman Until After a Second Formal Date (Date means going out with MUTUALLY agreed upon possibility of becoming a relationship - boyfriend/girlfriend combo).
- Brake on Expressing Strong Emotions (affection, like, etc.) With Any Woman Until After a Second, Formal Date (using word 'love' in any context is proscribed until after 3 mos of formal dating!)
- Brake on Hugging of anyone other Than a Relative or Girlfriend (i.e. someone you have dated more than two times who wants to continue dating you)
- If Slow Dancing, No Touching within 6 inches of Butt, Crotch, or Breasts, Until After a Second Date.
- Always Maintain your Personal Space (2 ft.) around Women
- Always Attend by Looking (at face), Being Interested in What A Woman Says, and Keep Your Talking to a Minimum
- Work on Coming Across Gently (Vs. Usually Intense or Like a Ton of Bricks!)



## Tom's (Babe) Magnetism Formula

1. CLEAN APARTMENT:
   - A. KITCHEN
     - CLEAN COUNTERTOPS DAILY
     - SWEEP FLOOR DAILY
     - ORGANIZE CABINETS &WIPE OFF ICE BOX
     - EVERY WEDS MOP FLOOR & WIPE WALLS
   - B. BEDROOM
     - FOLD CLOTHES OR HANG THEM UP AND STORE WHERE APPROPRIATE. DAILY
     - SWEEP AND VACUMN FLOORS WHEN APPROPRIATE OR PRN
     - ORGANIZE COMPUTER AREA
     - EMPTY CAT BOX DAILY
     - MOP FLOORS WHEN APPROPRIATE PRN
   - C: DEN
     - SWEEP FLOOR
     - VACUUM DAILY ETC...



## BRAKES




- Softer Voice
- Less Talking,
- Less Inflection
- Less Movement, Hand Talk
- Track the other person more than attending to your own interests, needs, opinions, etc.
- RX: Plan a Test / Challenge Situation for Putting on the Brakes
- Self-Reward for "Putting on the Brakes"
- Accomplishments (& ID'ng Opportunites for Practice)

## *The* Rehabilitation Progress Imperative

**Attack Incremental Rehab Goals, One Tiny Step at a Time! ...Remember, the Quality of Your Life Depends on it!**

**Do Nothing HALF-BUTT! ...That is, use strategies or do things half way, and then say "but..." ***

- But I used to could.. .But I didn't use to have to...
- But it's hard... But he said...But they don't understand
- ...But, What If...?...But my Butt hurts (from excessive butting!)....

P.S.
**Every Butt Leads to... Crap!**

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## Compensatory Habit Retraining

- **The use of strategies, self-talk, notes, log books, breaking things down into small steps, doing things one step at a time, using checklists, etc.**
- **It Feels Like a Pain in the Butt!**
- **Not Remembering, however, is a Colossal and Gigantic Pain in the Butt!**
- **So be aware, When Habit Retraining Strategies become Habitualized, they become Automatic and produce good memory and other skills, and are No Longer a Pain in the Butt!**
- **Think of Retraining with Strategies As a Temporary Pain in the Butt that is really an Opportunity to Get Rid of Permanent Gigantic Pains in the Butt.**



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# A Protocol for Rebuilding Life and Self Satisfaction and Identity After Brain Injury

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## Life Satisfaction and Self Esteem Protocol: Instructions

1. **Complete Life Analysis Form (i.e., follow instructions to rate each area, Love, Work and Play, according to your current satisfaction level from 0 or couldn't be worse, to 10, or couldn't be better) to get a baseline starting point for comparison farther down the road, as you work toward and make progress in each area.**
2. **Complete Life Satisfaction & Self Esteem Form Ratings (i.e., follow instructions to rate each goal area according to your current satisfaction, from 0 to 10; when completed, divide the total score by the number of goals, to get your "Self Satisfaction") to get a baseline starting point for comparison farther down the road, as you work toward and make progress in each area.**
3. **Continue working on identifying strategies and objectives to work toward Each Goal on your Master Life Organizer Task List. On the small calandar on page 1, please mark with a checkmark for any day for which work is done toward a goal (if more than once in that day, put more than one check).**

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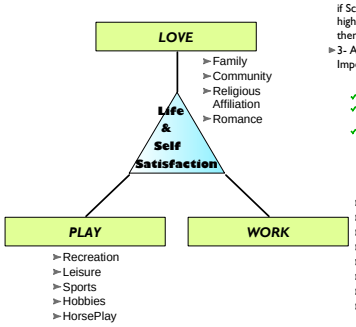
# Life Analysis




**Procedure**

- 1- Rate each Domain (Love, Work, Play) From 0 (Nothing, Zilch) Through 5 (Mixed) to 10 (Couldn't be better; Ideal)
- 2- Interpret Data:
  If Overall Score is 15 or Less, or if Score for either of your two highest categories is less than 6, then action is needed!
- 3- As needed, Employ the Rehab Imperative #4:

  - ✔First - Want to Be More Satisfied
  - ✔Second - Believe that You Can Be More Satisfied
  - ✔Third - Set a Series of Gradual, Incremental Goals so that You Can Increase Satisfaction in Small Steps!



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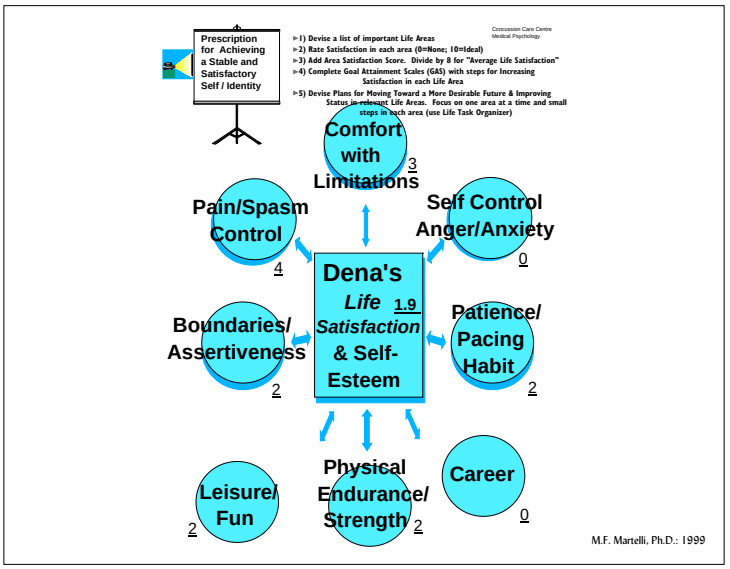
Prescription for Achieving a Stable and Satisfactory Self / Identity
Concussion Care Centre
Medical Psychology
►1) Devise a list of important Life Areas
►2) Rate Satisfaction in each area (0=None; 10=Ideal)
►3) Add Area Satisfaction Score. Divide by 8 for "Average Life Satisfaction"
►4) Complete Goal Attainment Scales (GAS) with steps for Increasing Satisfaction in each Life Area
►5) Devise Plans for Moving Toward a More Desirable Future & Improving Status in relevant Life Areas. Focus on one area at a time and small steps in each area (use Life Task Organizer)
Comfort with Limitations 3
Pain/Spasm Control 4
Self Control Anger/Anxiety 0
Dena's Life Satisfaction & Self-Esteem 1.9
Boundaries/ Assertiveness 2
Patience/ Pacing Habit 2
Leisure/ Fun 2
Physical Endurance/ Strength 2
Career 0
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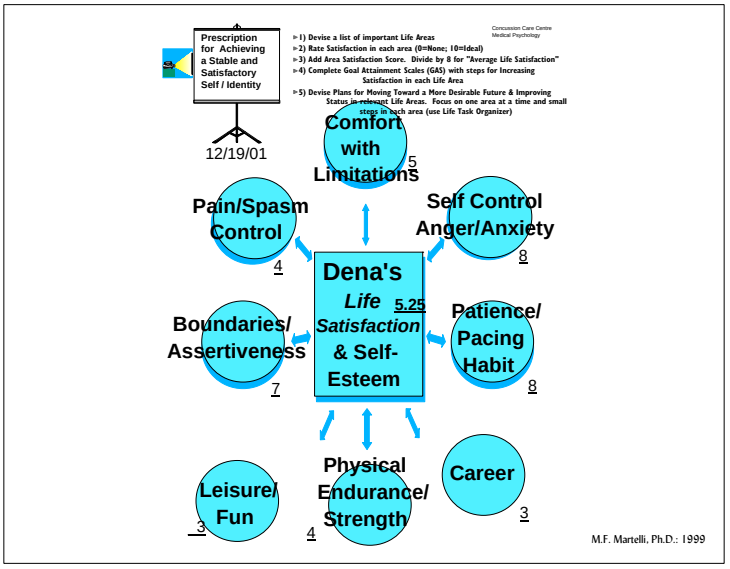
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12/19/01
Comfort with Limitations 5
Pain/Spasm Control 4
Self Control Anger/Anxiety 8
Dena's Life Satisfaction & Self-Esteem 5.25
Boundaries/ Assertiveness 7
Patience/ Pacing Habit 8
Leisure/ Fun 3
Physical Endurance/ Strength 4
Career 3
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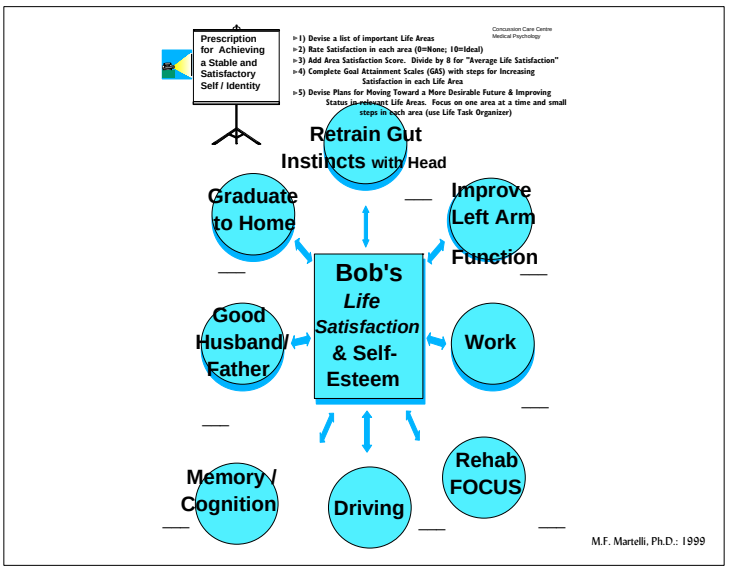
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Retrain Gut Instincts with Head
Graduate to Home
Improve Left Arm Function
Bob's Life Satisfaction & Self-Esteem
Good Husband/ Father
Work
Memory / Cognition
Driving
Rehab FOCUS
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**Prescription for Achieving a Stable and Satisfactory Self / Identity**

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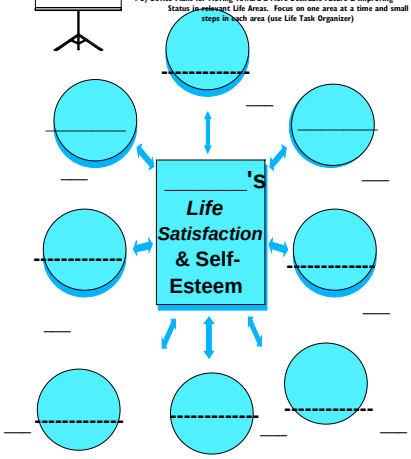


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## Master Life Goal / Task Organizer

| | | M | T | W | Th | F | St | Su |
|---|---|---|---|---|---|---|---|---|
| 1 | Relationship with Children | | | | | | | |
| 2 | Taking Care of Business | | | | | | | |
| 3 | Less Pain Interference | | | | | | | |
| 4 | Be More Self Serving vs. Self Sacrificing | | | | | | | |
| 5 | Home Maintenance | | | | | | | |
| 6 | Intimate, Romantic Relationship | | | | | | | |
| 7 | Leisure / Fun | | | | | | | |
| 8 | Career / Vocation / Avocation | | | | | | | |

| | *Specific Task/Action List:* **RELATIONSHIP WITH CHILDREN_____ No:_1_** |
|---|---|
| A | |
| B | |
| C | |
| D | |
| E | |
| F | |
| G | |
| H | |
| I | |
| J | |

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## ...Vulnerable Personality Styles

**Style** — Premorbid traits / Post morbid reactions

- **OVERACHIEVER**
  - Sense of self derived from driven accomplishments, which is frequently accompanied by obsessive compulsive traits
  - Catastrophic reaction if drop in performance is perceived
- **DEPENDENT**
  - Excessive need to be taken care of, frequently leading to submissive behaviors and a fear of separation
  - Paralyzed by symptoms if critical erosion of independence occurs
- **BORDERLINE traits**
  - Pattern of instability in interpersonal relationships and self-image with fear of rejection or abandonment
  - Exacerbation of personality disorganization, including despair, panic, impulsivity, instability, and self-destructive acts
- **GENERAL INSECURITY**
  - Weak sense of self, which can include shame, guilt, and dependency needs
  - Magnification of symptoms
- **GRADIOSITY**
  - Overestimation of abilities and inflating accomplish- ments, can include need for admiration and lack of empathy
  - Minimization or denial of symptoms. If failure results, crash of self-esteem can result in catastrophic reaction

Adapted from Ruff RM, Mueller J, Jurica P. (1996). Estimation of Permorbid Functioning after traumatic brain injury. NeuroRehabilitation, 7, 39-53.

**Styles** **...Vulnerable Personality Styles**

Premorbid traits / Post morbid reactions

- **ANTISOCIAL tratis**
  - **Tendency to be manipulative or deceitful, temperamental, impulsive and irresponsible; lacks sensitivity to others**
  - **Possible exaggeration or malingering, increased risk taking, irritability, takes little responsibility for recovery**
- **HYPERACTIVE**
  - **Restless, unfocused and sometimes disorganized**
  - **Attentional difficulties, impulsivity may be compounded; possible oppositional behavior**
- **DEPRESSED**
  - **Mood fluctuations dominated by negative affect**
  - **Increase of depressive symptoms, despondency**
- **HISTRIONIC**
  - **Emotionality and attention seeking behavior**
  - **Dramatic flavor to symptom presentation; blaming behavior**
- **SOMATICALLY FOCUSED**
  - **Preoccupation with physical well being, reluctance to accept psychological conflicts.**
  - **Endorsement of multiple premorbid physical symptoms intermixed with new or changing post morbid residua**
- **POST TRAUMATIC STRESS**
  - **Prior stressors produced an emotional reaction of fear and helplessness**
  - **Decreased coping ability, cumulative reffect of traumas with exaggerated reaction to current crisis**

Adapted from Ruff RM, Mueller J, Jurica P. (1996). Estimation of Permorbid Functioning after traumatic brain injury. NeuroRehabilitation, 7, 39-53.

## Therapist (&Caregiver) Survival Rules

- Burnout Prophylaxis
- Learn how / become comfortable Asking for / Enslistin Help from Others
- Ensure some of the therapist-client interaction includes interactions in client's areas of residual strengths and competencies and enjoyments.
- Practice "Mirroring" vs "Sponging"
- Contract with each other to allow mistakes in the beginning and in crises ...and not to Blame 'Rules of Crisis' can help...

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Medical and Rehabilitation Neuropsychology Service

## CRISIS SURVIVAL RULES:
## Emotional Control Strategies
## Mirroring

- **Sponging: absorbing/ catching others negative emotions; allowing them to control your emotions, reactions.**
- **Mirroring: reflecting negative emotions, with factual comment and without emotional reaction or obligation to "catch" the emotion or respond with it.**
  - **involves a slow, deliberate and open look at the others statements while *Under reacting*: prevents escalation, allows self control through control of response, allows keeping a cool head to help calm the situation, not let another persons problem become your own.**

**RX: Be a Mirror (not a Sponge). Contract with partners to allow mistakes, not beat each other up when mistakes are made... learning and taking into account the "Rules of Crisis" can help...!**

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Derived from Task Analysis

# Rules of Crisis

- Everyone will be at their worst!
- Our/Their behavior and communication will reflect our/their worst!
- We/They will hold others accountable and Excuse ourselves/ themselves!
- When we are hurting, we fail to appreciate other's hurt!
- Things will get better or worse after a crisis, but will not stay the same!

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## Paradox: Stephen's Failure Formula Homework!*

- ✘ **Don't Use Your Memory Book....**
  - ☛ Who wants a better memory anyway! Things Suck and Quit trying to let them get better!
- ✘ **Don't Clean Up Anything!**
  - ☛ Don't clean the apartment. Don't clean dishes. Don't take showers more than once per week. Don't use deoderant. Don't change underwears of socks. Don't change your clothes.
- ✘ **Don't Balance Your Budget!**
  - ☛ Who wants to not go broke before the end of the month. Who wants to not borrow from the family.
- ✘ **Don't Smile, Ever!**
  - ☛ Don't Laugh. Don't Joke. Don't think anything happy, funny, ever!
- ✘ **Don't be Nice to Others!**
  - ☛ If you act on your anger, you can become angrier. Oh Boy!!!
- ✘ **Forget All Goals!**
  - ☛ Don't Believe Anything Could Get Better

*This is a radical strategy requiring careful deliberation

# Conclusions

- **Holist Habit Rehabilitation (HHR) offers a Model & Methodology of Neurorehabilitation that:**
  - **Integrates psychotherapy as Necessary to the Rehab Process**
  - **Reduces the complexity of psychotherapy**
  - **Simplifies the combined processes of accomplishing goals of psychotherapy and rehabilitation, and simplifies the methods**
- **HHR Methodology Issues from:**
  - **(a) the "automatic learning" and "errorless learning" and skills relearning after TBI literature;**
  - **(b) Task analytic method for designing skills retraining strategies**
  - **(c) Analysis of developmental, characterologic, organic and situational obstacles as part of strategy design and utilization**
  - **(d) Generation of techniques for promoting rehabilitative strategy use: i) adapting techniques to fit individual inherent & naturalistic reinforcers; ii) highlighting relationships to functional goals; iii) utilization of social networks; iv) use of individualized posters for simple & appealing ("catchy") cognitive and attitudinal procedures**

# Add

- Beh Replacement Sample and Instruction Slide
- Slide on TA for using TA's,  Individualizing and Making "Catchy", then Poster It! - Build in Individual Interests and Conceptualizations...
- Definition of Psychotherapy
- An Explanation of time, distance, compensatory strategies (e.g., ear plugs) in Grad Exp. programs...
- Catastrophic Reaction extension to Prigatano...Hopewell... SLIDES, w cf Bateson, Lenared Helplessness, etc.

THE END

That's all Folks!!