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THE INSEPARABLE RELATIONSHIP BETWEEN NON-LINEAR APPLIED BEHAVIOUR ANALYSIS AND SOCIAL ROLE VALORIZATION

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SOCIAL ROLE VALORIZATION

The enablement, establishment, enhancement, maintenance, and/or defense of valued social roles for people--by using, as much as possible, culturally valued means (Wolfensberger, 1983).

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John O'Brien: Measurable Valued Outcomes

+ Community presence and participation, in ways that are age appropriate and valued by society
+ Autonomy and self determination, through the exercise of increasingly informed choice
+ Continuous involvement in the ongoing process of becoming
+ Increasing independence and productivity, to the point of economic self sufficiency
+ The opportunity to develop a full range of social relationships and friendships

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Who agrees that these outcomes have social value?

+ Community presence and participation, in ways that are age appropriate and valued by society
+ Autonomy and self determination, through the exercise of increasingly informed choice
+ Continuous involvement in the ongoing process of becoming
+ Increasing independence and productivity, to the point of economic self sufficiency
+ The opportunity to develop a full range of social relationships and friendships

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Applied behaviour Analysis is aimed at producing socially valued outcomes. Such outcomes are considered to be clinically valid.

Baer, D., Wolf, M., & Risley, R. (1968). Some current dimensions of applied behaviour analysis. *Journal of Applied Behaviour Analysis*, *1*, 91 - 97.

Wolf, M. W. (1978). Social validity: The case for subjective measurement *or* how applied behaviour analysis is finding its heart. *Journal of Applied Behaviour Analysis*, *11*, 203-214.

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OUTCOMES

Favell, J. E., Azrin, N. H., Baumeister, A. A., Carr, E. G., Dorsey, M. F., Forehand, R., Foxx R. M., Lovaas, O. I., Rincover, A., Risley, T. R., Romanczyk, R. G., Schroeder, S. R., & Solnick, J. V. (1982). The treatment of self-injurious behaviour Association for Advancement of Behaviour Therapy (AABT) Task Force Report). *Behaviour Therapy*, *13*, 529-554.

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OUTCOMES

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SUPPORT PLANS

Proactive Strategies			Reactive Strategies
Ecological Strategies	Positive Programming	Focused Support	
Interpersonal Physical Service	General Skills Development Functionally Equivalent Functionally Related Coping/Tolerance	Differential Schedules of Reinforcement Antecedent Control Instructional Control Stimulus Satiation Etc.	Active Listing Stimulus Change Crisis Resolution Counter-intuitive

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REFERENCES

Goldiamond, I. (1974). Toward a constructional approach to social problems: Ethical and constitutional issues raised by applied behaviour analysis. *Behaviourism*, *2*, 1-85.

Goldiamond, I. (1975). Alternative sets as a framework for behavioural formulations and research. *Behaviourism*, *3 (1)*, 49-86.

Carr, E. G., & Durant, V. M. (1985). Reducing behaviour problems through functional communication training. *Journal of Applied behaviour Analysis*, *18*, 111-126.

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SUPPORT PLANS

Proactive Strategies			Reactive Strategies
Ecological Strategies	Positive Programming	Focused Support	
Interpersonal Physical Service	General Skills Development Functionally Equivalent Functionally Related Coping/Tolerance	Differential Schedules of Reinforcement Antecedent Control Instructional Control Stimulus Satiation Etc.	Active Listing Stimulus Change Crisis Resolution Counter-intuitive

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ASSESSMENT

Process	Content	Materials
Observation Data Collection Interview Records Review Interaction Test Situations Analysis Report Writing	Referral Information Background Information Functional Analysis Mediator Analysis Motivational Analysis	Assessment Guide and User's Manual Reinforcement Surveys Communication Functions Instrument Report Format

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MEDIATION

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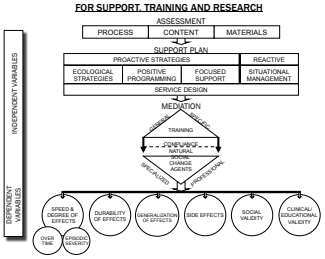
PBS – A VALUES BASED, NON-LINEAR ABA FRAMEWORK FOR SUPPORT, TRAINING AND RESEARCH



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Is PBS Effective with Severe and Challenging Behaviour?

Foxx, 2005; Johnston, Foxx, Jacobson, Green & Mulick, 2006

1. Severe vs. not severe
2. Institutions vs. community
3. High rate vs. Low rate behaviour
4. Specialists needed
5. High cost vs. low cost

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Type III Case Studies (Kazdin, 1981):

Valid inferences:

1. Objective data for multiple behaviours.
2. Continuous assessment.
3. Problems of long standing/stable histories and of the type that would not ordinarily improve without effective intervention.
4. Applied across various ages, diagnoses, and personal backgrounds.

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PBS: Published Evidence

LaVigna, G. W. & Willis, T. J. (in press). The efficacy of positive behavioural support with the most challenging behaviour: The evidence and its implications. *Journal of Intellectual and Developmental Disability*.

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PBS: Published Evidence

Donnellan, A. M., LaVigna, G. W., Zambito, J., and Thvedt, J. (1985). A time limited intensive intervention program model to support community placement for persons with severe behaviour problems. The Journal of the Association for Persons with Severe Handicaps.

16 - Type 3

1. Severe
2. Institutions
3. High rate
4. Cost effective

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PBS: Published Evidence

Berkman, K. A., & Meyer, L. H. (1988). Alternative strategies and multiple outcomes in the remediation of severe self-injury: Going "all out" nonaversively. *The Journal of the Association for Persons with Severe Handicaps, 13(2)*, 76-86.

1 - Type 3

1. Severe
2. Institutions
3. High rate
4. Specialists
5. Cost effective

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PBS: Published Evidence

LaVigna, G. W., Willis, T. J., and Donnellan, A. M. (1989). The role of positive programming in non-aversive behaviour management. In E. Cipani (Ed.) behavioural Approaches to the Treatment of Aberrant behaviour. AAMD Monograph Series, American Association on Mental Retardation.

1 - Type 3

1. Severe

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PBS: Published Evidence

LaVigna, G. W., and Willis, T. J. (1992). A Model for multielement treatment planning and outcome measurement. In D.E. Berkell (Ed.), Autism: Identification, Education, and Treatment. Lawrence Erlbaum Associates, Hillsdale, New Jersey.

1 - Type 3

1. Severe
2. High rate

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PBS: Published Evidence

Hudson, A., Wilken, P., Jauernig, R, & Radler, G., (1995a). Regionally based teams for the treatment of challenging behaviour: a three-year outcome study. *Behaviour Change, 12(4)*, 209-215.

Hudson, A., Jauernig, R., Wilken, P., & Radler, G., (1995b). Behavioural treatment of challenging behaviour: a cost benefit analysis of a service delivery model. *Behaviour Change, 12(4), 216-226.*

124 - Type 3

1. Severe
2. Institutions
3. High rate
4. Specialists
5. Cost effective

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PBS: Published Evidence

Rothwell, N. A., LaVigna, G. W. & Willis, T. J. (1999). A non-aversive rehabilitation approach for people with severe behavioural problems resulting from brain injury. *Brain Injury, 13(7)*, 521-533.

2 - Type 3

1. Severe
2. Cost effective

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PBS: Published Evidence

Willis, T. J. & LaVigna, G. W. (2003). The safe management of physical aggression using multi-element positive practices in community settings. *Journal of Head Trauma Rehabilitation, 18(1)*, 75-87.

1 - Type 3

1. Severe
2. Cost effective

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PBS: Published Evidence

McClean, B., Dench, C., Grey, I., Shanahan, S., Fitzsimons, E., Hendler, J., & Corrigan, M. (2005). Person focused training: A model for delivering positive behavioural supports to people with challenging behaviours. *Journal of Intellectual Disability Research, 49, Part 5*, 340-352.

138 - Type 3

1. Severe
2. Institutions
3. High rate
4. Specialists
5. Cost effective

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PBS: Published Evidence

Grey, I. M. & McClean, B. (2007). Service user outcomes of staff training in positive behaviour support using person-focused training: A control group study. *Journal of Applied Research in Intellectual Disabilities, 20*, 6-15.

60 - Controlled group study

1. Severe
2. Institutions
3. High rate
4. Specialists
5. Cost effective

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PBS: Published Evidence

McClean, B., Grey, I. & McCracken, M. (2007). An evaluation of positive behavioural support for people with very severe challenging behaviours in community-based settings. *Journal of Intellectual Disabilities, 11(3)*, 281-301

5 - Multiple Baseline

1. Severe
2. Institutions
3. High rate
4. Cost effective

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PBS: Published Evidence

Hassiotis, A, Robotham, D, Canagasabey, A, Romeo, R., Langridge, D., Blizard, R. Murad, S., & King, M. (2009). Randomized, single-blind, controlled trial of a specialist behaviour therapy team for challenging behaviour in adults with intellectual disabilities. *American Journal of Psychiatry, 166(11)*, 1278-1285.

63 - Controlled group study

1. Severe
2. Institutions
3. High rate
4. Specialists
5. Cost effective

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PBS: Published Evidence

MacDonald, A., Hume, L., & McGill, P. (2010). The use of multi-element behaviour support planning with a man with severe learning disabilities and challenging behaviour. *British Journal of Learning Disabilities*, *38(4)*, 280-285.

1 - Type 3

1. Severe
2. Institutions

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PBS: Published Evidence

12 studies, including 413 cases.

Type 3 Case Studies, controlled group studies, and multiple baseline studies.

PBS found to be effective, regardless of severity, rate or setting.

Cost savings.

Accessible.

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Ethical Premise

BACB: *The behaviour analyst recommends reinforcement rather than punishment whenever possible.*

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Linear Behaviour Analysis

A ⇒ B ⇒ C

Definition: *behaviour is understood in terms of a three part contingency relationship between the antecedents that precede it and the consequences that follow it.*

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Linear Behaviour Analysis

A ⇒ B ⇒ C

Examples:

1. When teachers are talking with another student, he tantrums and people pay attention to him. "He is doing this for attention."
2. When he is asked to do something, he engages in self injury and staff reactions include withdrawing the demand. "His self injury is his way of avoiding undesired activity."

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NONLINEAR BEHAVIOUR ANALYSIS

(GOLDIAMOND & TOMPSON, 1964; 2004; GOLDIAMOND, 1974; 1975)

Definition: *behaviour is understood in terms of variables beyond the behaviour and its consequences and antecedents, that may themselves differentially affect the three part contingency.*

Potentiating Variables
Rules (instructional/abstractional)
History
Alternative Sets (behavioural repertoires)
Constant Stimuli

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Comprehensive Functional Assessment

Aimed at understanding behaviour within this complex context, concluding with a nonlinear, personal understanding rather than with a linear understanding.

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Nonlinear, multi-element support plans proactively employ:

Ecological Strategies (*Potentiating Variables*), e.g.,
Interactional Style
Density of Preferred Events/Activity Schedule
Visual Schedule
Increased Choice

Positive Programming (*Alternative Sets/Target Repertoire*), i.e.,
General, Functionally Equivalent & Related, & Coping/Tolerance Skills

Focused Support (Nonlinear/Linear) Strategies for Prevention, e.g.,
Schedules of Reinforcement - (*AS:Instructional/Abstractional Rules*)
Stimulus Satiation (*Potentiating Variable*)
Antecedent Control (Linear)

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To resolve an event: nonlinear, multi-element support plans reactively employ, e.g.,:

Stimulus Change (Constant Stimuli)
Redirection (Alternative Sets):
...to preferred events/activities
...to obsessive/compulsive behaviours
Strategic Capitulation (Based on Linear Analysis)

To reduce Episodic Severity

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EPISODIC SEVERITY

A measure of the intensity or gravity of a behavioural incident

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EPISODIC SEVERITY

(LaVIGNA & WILLIS, 2005)

...measures include, e.g.,

- **Duration**
- **Cost of repair and replacement**
- **Degree of harm or injury**
- **Topography**
- **Severity ratings based on categories or scales**

of each incident.

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RESOLUTION

The reactive presentation or withdrawal of a stimulus or event which results in the immediate reduction of the the likelihood of response continuation or escalation.

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Can nonlinear procedures lead to resolution w/o reinforcement when a preferred event is introduced reactively?

A ⇒ B ⇒ C
A ⇒ B ⇒ ~~C~~
A ⇒ B ⇒ R

This is the biggest challenge from a linear ABA perspective.

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Nonlinear procedures preventing reinforcement using counterintuitive reactive strategies:

- **Potentiating Variables - Jack Michaels, 1993;**
- **Alternative Sets (Density of Preferred Events) - Diorio and Konarski, 1989;**
- **Noncontingency;**
- **History; etc.**

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COMPETING CONTINGENCIES:

$A_1 \Rightarrow B_1 \Rightarrow C_1$

$A_2 \Rightarrow B_2 \Rightarrow C_2$

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THE APPARENT (LINEAR) PROBLEM:

$A_1 \Rightarrow B_1 \Rightarrow C_2$

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THE NONLINEAR SOLUTION:

$A_1 \Rightarrow B_1 \Rightarrow C_2$

$A_2 \rightarrow B_2 \rightarrow C_2$
Non-contingency

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THE NONLINEAR SOLUTION:

$A_1 \Rightarrow B_1 \Rightarrow C_2$

$A_2 \rightarrow B_2 \rightarrow C_2$
Non-contingency

$A_2 \rightarrow B_2 \rightarrow C_2$
Alternative sets - FP
GS
FES
FRS
C/T

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THE NONLINEAR SOLUTION:

$A_1 \Rightarrow B_1 \Rightarrow C_2$

$A_3 \rightarrow B_3 \rightarrow C_3$
Non-contingency

$A_4 \rightarrow B_4 \rightarrow C_4$
Alternative sets - PP
GS
FRS
FRS
C/T

$A_5 \rightarrow B_5 \rightarrow C_5$
Alternative sets - PE
Density

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THE NONLINEAR SOLUTION:

$\rightarrow \rightarrow$

$A_4 \rightarrow B_4 \rightarrow C_4$
History

$A_4 \rightarrow B_4 \rightarrow C_4$
History

$A_1 \Rightarrow B_1 \Rightarrow C_2$

$A_3 \rightarrow B_3 \rightarrow C_3$
Non-contingency

$A_4 \rightarrow B_4 \rightarrow C_4$
Alternative sets - PP
GS
FRS
FRS
C/T

$A_5 \rightarrow B_5 \rightarrow C_5$
Alternative sets - PE
Density

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THE NONLINEAR SOLUTION:

$\rightarrow \rightarrow$

$A_4 \rightarrow B_4 \rightarrow C_4$
History

$A_4 \rightarrow B_4 \rightarrow C_4$
History

Focused Support, e.g., DROP

$A_1 \Rightarrow B_1 \Rightarrow C_2$

$A_3 \rightarrow B_3 \rightarrow C_3$
Non-contingency

$A_4 \rightarrow B_4 \rightarrow C_4$
Alternative sets - PP
GS
FRS
FRS
C/T

$A_5 \rightarrow B_5 \rightarrow C_5$
Alternative sets - PE
Density

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THE NONLINEAR SOLUTION:

$\rightarrow \rightarrow$

$A_4 \rightarrow B_4 \rightarrow C_4$
History

$A_4 \rightarrow B_4 \rightarrow C_4$
History

Focused Support, e.g., DROP

$A_1 \Rightarrow B_1 \Rightarrow R$

$A_3 \rightarrow B_3 \rightarrow C_3$
Non-contingency

$A_4 \rightarrow B_4 \rightarrow C_4$
Alternative sets - PP
GS
FRS
FRS
C/T

$A_5 \rightarrow B_5 \rightarrow C_5$
Alternative sets - PE
Density

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INSEPARABLE

Applied Behaviour Analysis

and

Social Role Valorization