

## CLASSIC TASH ARTICLE V

Reprinted from *The Journal of The Association for the Severely Handicapped*, Volume 15(3), Fall, 1990.

# Toward a Technology of "Nonaversive" Behavioral Support

Robert H. Horner  
University of Oregon

Glen Dunlap  
University of South Florida

Robert L. Koegel  
University of California at Santa Barbara

Edward G. Carr  
State University of New York at Stony Brook

Wayne Sailor  
San Francisco State University

Jacki Anderson  
California State University, Hayward

Richard W. Albin and Robert E. O'Neill  
University of Oregon

*Nonaversive behavior management is an approach to supporting people with undesirable behaviors that integrates technology and values. Although this approach has attracted numerous proponents, more adequate definition and empirical documentation are still needed. This article presents an introduction to the nonaversive approach. Important definitions are suggested, and three fundamental elements are presented: (a) an emerging set of procedures for supporting people with severe challenging behavior; (b) social validation criteria emphasizing personal dignity; and (c) a recommendation for prohibition or restriction of certain strategies. These elements are defined in hopes of stimulating further discussion and empirical analyses of positive behavioral support.*

DESCRIPTOR: nonaversives

In recent years, a broad-based movement has emerged in support of nonaversive behavior management. This movement reflects a commitment to the value that people with severe disabilities who exhibit

challenging behaviors should be treated with the same respect and dignity as all other members of the community (Evans & Meyer, 1985; Gast & Wolery, 1986; LaVigna & Donnellan, 1986; McGee, Menolascino, Hobbs, & Menousek, 1987). It also reflects a concern that many people who perform undesirable behavior have been, and are being, subjected to dehumanizing interventions that are neither ethical nor beneficial (Durand, 1988; Guess, Helmstetter, Turnbull, & Knowlton, 1987). Nonaversive behavior management seeks alternatives to the emphasis on behavioral suppression through aversive contingencies and calls instead for a focus on positive procedures that educate and promote the development of adaptive repertoires (Evans & Meyer, 1985). However, defining the critical elements and empirical basis for the nonaversive approach remains a major challenge (Mulick, in press).

An important feature of the current focus on nonaversive behavior management is that the basic concepts are being promoted from several different perspectives. There is no specific technique or procedure that distinguishes the approach. Rather, different proponents offer not only varying procedural recommendations, but different theories of behavior in its support (Carr, 1988; Donnellan, LaVigna, Negri-Shoultz, & Fassbender, 1988; Durand & Crimmins, 1988; Evans & Meyer, 1985; McGee et al., 1987). This article is a response to these varying presentations of nonaversive behavior management. To begin such a discussion, however, it is necessary define critical terms.

Preparation of this manuscript was supported in part by the United States Department of Education, Cooperative Agreement G0087C023488. The opinions expressed herein do not necessarily reflect the position or policy of the United States Department of Education, and no official endorsement by the Department should be inferred.

Requests for reprints should be sent to Robert H. Horner, Ph.D., Specialized Training Program, 135 Education Building, University of Oregon, Eugene, Oregon 97403.

## Defining "Aversive" and "Nonaversive"

The term "nonaversive behavior management" is an unfortunate label. In our view, the term is operationally inaccurate, and functionally misdirected. Of greatest concern is the inconsistency between the technical and ethical standards for labeling an event as aversive. Technically, the term "aversive" refers to a class of stimuli that are followed by escape or avoidance responses (Azrin & Holz, 1966; Bandura, 1969; Johnston, 1988; Van Houten, 1983). A slap or an electric shock is aversive if a person moves away or avoids being slapped or shocked. Similarly, a hug or a brussels sprout is aversive if a person consistently moves away from, or avoids it. In many traditional behavioral programs, aversive stimuli are used as punishers in an effort to decrease targeted behaviors.

The problem with the technical definition is that it does not include a clear mechanism for distinguishing *mildly* aversive events from *very* aversive events. It is practically impossible to provide support or instruction that does not include at least some mildly aversive events. Withholding attention, redirecting from preferred (albeit self-injurious) behavior, making a request to perform a new behavior, and delivering instructional prompts all may be aversive to some degree. If the technical definition of "aversive" is applied, there are few teachers or clinicians who could argue that they implement a totally nonaversive approach.

Nonaversive behavior management, however, has developed less as a response to mild, or potentially mild, forms of aversive stimuli, than as an alternative to the use of more extreme aversive events. The ideological use of "aversive" has become synonymous with procedures that involve the delivery of pain, withholding basic human needs, or social humiliation. From an ethical perspective these procedures are viewed as too extreme to be accepted as "treatment" (Guess, 1988).

At present, we do not have an adequate means of assessing operationally the level of aversiveness or intrusiveness of an intervention for a particular individual before its implementation. The result is that nonaversive behavior management is interpreted by some individuals to mean the abolition of all punishers. For others, nonaversive behavior management is associated with rejection of only those punishers that involve pain or physical harm (tissue damage). For still others, a more complex definition of aversive includes presumptions of "physical or emotional distress." A major obstacle to building an effective set of procedures and a coherent support philosophy is the absence of accepted definitions. For the purposes of this article, we will use the term "aversive" in its technical form.

A second, and equally important, reason why the label "nonaversive behavior management" is confusing is that it focuses attention on the negative aspects of this approach. The most important and exciting ele-

ments of the nonaversive avenue to behavioral support lie in the emphasis and precision with which positive intervention strategies are used. We anticipate that history will view these contributions as far more important than the rejection of the aversive procedures that currently dominates efforts to define nonaversive behavior management. For this reason, we join many colleagues in preferring the label "positive behavioral support," and will employ it for the remainder of this article.

A major issue for the positive approach to behavior management is the range of different theoretical and methodological banners that fly under the positive flag. Educative programming, positive programming, functional communication training, gentle teaching, functional equivalence programming, and nonaversive behavior management are all variations on the positive approach to providing behavioral support. We view the differences among these, and other variations, as important and constructive aspects of the movement. As with any developing area, time is needed to explore different strategies and options. An important objective at this time is to define different variations and document their effects. Across the array of discussions and descriptions of positive or nonaversive options, however, we believe three main contributions are dominant: (a) the emerging positive technology; (b) an emphasis on social validation and human dignity in determining the appropriateness of behavioral procedures; and (c) the recommendation for prohibition, or severe restriction, of certain classes of behavioral techniques.

## An Emerging Technology of Positive Behavioral Support

The first contribution of positive programming is an emphasis on specific procedures for managing severe, challenging behavior in community settings. It is important to recognize that the positive/nonaversive approach will be a hollow contribution if it does not include an effective set of procedures for managing challenging behaviors. At this writing, empirical support for a comprehensive, positive technology is developing but is by no means compelling (Carr, Taylor, Carlson, & Robinson, 1990). There are a number of clinical demonstrations in which positive procedures have been associated with a broad reduction in very severe behaviors (Berkman & Meyer, 1988; Donnellan et al., 1988; Donnellan, LaVigna, Zambito, & Thvedt, 1985; Durand & Kishi, 1987; McGee et al., 1987). In addition, there is a growing literature providing empirically rigorous demonstrations that specific techniques can produce important behavior reduction under experimental conditions (Carr & Durand, 1985; Durand & Carr, 1987; Horner & Albin, 1988; Hunt, Alwell, & Goetz, 1988; Koegel, Koegel, Murphy, & Ryan, 1989; Koegel & Koegel, 1990; Mace et al., 1988; Singer, Singer, & Horner, 1987; Winterling, Dunlap, & O'Neill, 1987).

There is not, however, a data base that allows confidence in the ability of available positive programming technology to respond to all severe behavior challenges. The technology of positive programming is still developing and is just beginning to receive adequate empirical support. Among the different efforts to build this technology, however, we believe there are at least nine common themes that are worthy of acknowledgment and encouragement. These are listed here.

#### **An Emphasis on Lifestyle Change**

The positive/nonaversive approach focuses on the lifestyle of the individual, in addition to the frequency, duration, and intensity of the challenging behaviors (Horner, Dunlap, & Koegel, 1988). Behavioral support should result in durable, generalized changes in the way an individual behaves, and these changes should affect the individual's access to community settings, to social contact, and to a greater array of preferred events. Among the most important issues for a technology of behavioral support is recognition that the standards for assessing "success" are changing. An effective behavioral support plan should integrate procedures for building access to activities, places, people, and events in addition to modifying the patterns of specific desirable and undesirable behaviors (Hitzing, 1988; Horner, in press; O'Brien, 1987).

#### **Functional Analysis**

Assessing the antecedents and consequences of a behavior has long been advocated in applied behavior analysis (Baer, Wolf, & Risley, 1968; Bandura, 1969; Kanfer & Saslow, 1969; Ullman & Krasner, 1965). The technology of functional analysis is improving, however, and much greater focus is being given to efficient processes for defining when challenging behaviors are likely to occur and what events are likely to be maintaining the behavior (Carr & Durand, 1985; Durand & Carr, 1987; Durand & Crimmins, 1988; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982; Touchette, McDonald, & Langer, 1985). In addition, there is increasing emphasis on building a direct link between the results from a functional analysis and the actual intervention program that is developed (Carr, 1988; Horner & Billingsley, 1988; O'Neill, Horner, Albin, Storey, & Sprague, 1988).

#### **Multicomponent Interventions**

The positive approach to behavior management seldom employs a single intervention to address a single challenging behavior. In most cases, interventions involve the simultaneous manipulation of many variables (e.g., Berkman & Meyer, 1988; Durand & Kishi, 1987). Movement of an individual to a more personal, less segregated setting, ignoring minor inappropriate behaviors, providing multiple opportunities for choice making, systematic instruction on new functional behaviors,

increased access to preferred events, and staff training may all be combined into one intervention plan. As part of the focus on lifestyle change, the nonaversive approach often includes complex (multicomponent) interventions that are designed to increase classes of positive behavior and decrease classes of undesirable behavior simultaneously (Koegel & Koegel, 1988).

#### **Manipulation of Ecological and Setting Events**

Behavior management has long been associated with manipulation of the events that immediately precede and follow targeted behaviors. An exciting area of growth within the field is the recognition that if broad behavior patterns are to be affected, a greater range of variables must be considered. Various authors (Patterson, 1982; Wahler & Fox, 1981) have advocated expanding the range of variables included in behavioral support plans. These recommendations are beginning to be acknowledged in the support of people with more severe disabilities. Diet, eating schedule, exercise options, sleeping patterns, rapport, noise level, density of housing, and predictability of daily events are being recognized as nontrivial variables in both the quality of a person's life and the extent to which undesirable behaviors are manifested (Bailey, 1987; Kern, Koegel & Dunlap, 1984; Rast, Johnston, Ellinger-Allen, & Drum, 1985). The important issue for practitioners and families is that behavioral support plans are beginning to include practical, basic elements that have great promise for both affecting behavior change and improving the likelihood that positive changes endure.

#### **Emphasis on Antecedent Manipulations**

The emerging, positive approaches to behavioral support emphasize the use of antecedent manipulations. This emphasis comes in such forms as (a) modifying events in a setting so that the stimuli eliciting the undesirable behavior are reduced or removed (Touchette et al., 1985) and (b) adding antecedent events that increase the likelihood of positive behaviors (Horner & Albin, 1988; Horner, Day, Sprague, O'Brien & Heathfield, in press). These are not new ideas, but the increased use of functional analysis information permits these approaches to be practical elements in behavioral support plans.

#### **Teaching Adaptive Behavior**

Among the most important elements in a nonaversive approach is attention to teaching individuals adaptive ways of obtaining outcomes that they currently achieve through challenging behaviors (Carr, 1988; Evans & Meyer, 1985; LaVigna & Donnellan, 1986). This approach focuses on defining the behavioral "function" of challenging behaviors and teaching the individual socially acceptable ways of achieving that function. Among the most common examples is the teaching of communication skills. There are a growing number of

clinical and experimental demonstrations in which the development of communication skills has been associated with the reduction in levels of challenging behaviors (Carr & Durand, 1985, Durand & Carr, 1987, Horner & Budd, 1985; Koegel et al., 1989). Challenging behaviors occur as part of a complex behavioral ecology. By attending to the functions of challenging behaviors, clinicians may be able to identify skill deficits. Focusing on the development of the identified skills may be an effective and efficient approach to decreasing challenging behaviors without the use of intrusive interventions.

#### **Building Environments with Effective Consequences**

Positive procedures focus less on the manipulation of consequences than has been typical of behavioral interventions. Nonaversive systems include traditional procedures of consistently rewarding positive behavior and reducing rewards for undesirable behavior. Differential reinforcement of other behavior (DRO) (Luselli, Miles, Evans, & Boyce, 1985; Rose, 1979), differential reinforcement of incompatible behavior (DRI) (Mulick, Schroeder, & Rojahn, 1980; Steen & Zuriff, 1977), and differential reinforcement of alternative behaviors (ALT-R) (Carr, 1988) are cornerstones of all positive behavioral interventions. The positive approach, however, also includes attention to additional consequence variables. One strategy has been to identify a presumed reinforcer that maintains a challenging behavior, and to deliver that reinforcer at a high rate either for desirable behaviors, or noncontingently (LaVigna & Donnellan, 1986).

A second, and more complex, contribution of positive procedures has been to focus on the development of the individual's reinforcement history. People with challenging behaviors who have lived in highly restrictive settings may have very limited reinforcement histories. Very few events function as reinforcers, and the relationship between a person's behavior and positive events is not clear. One approach to this situation is to create a setting in which an array of potentially positive events are made available at a high, predictable rate as long as undesirable behaviors are not performed. The objective is, in part, to allow some of these events to develop into effective reinforcers. Only with the development of effective reinforcers (including social contact with staff) is programmatic success anticipated.

#### **Minimizing the Use of Punishers**

Although there is considerable debate about the use of punishers, a general theme of the positive programming approach is that the delivery of punishers for challenging behaviors is not desirable. The most common alternative is to minimize the reinforcement of challenging behaviors, redirect the person to more appropriate behaviors, and combine this procedure with other instructional and environmental manipulations

(Evans & Meyer, 1985; Koegel & Koegel, 1989; LaVigna & Donnellan, 1986; McGee et al., 1987). Many advocates of positive behavior management recognize, however, that a typical array of events (frowns, reprimands, etc.) can be viewed technically as punishers and yet provide critical learning information.

#### **Distinguish Emergency Procedures from Proactive Programming**

An effective technology for supporting people with severe challenging behaviors must provide families and staff with specific strategies for responding when these behaviors occur. It is not sufficient simply to recommend how to ignore or avoid undesirable behaviors. Many behaviors place the person with a disability, or others, at such severe social or physical risk that both of these options are unacceptable. It is equally important, however, to recognize that many times the preferred response to dangerous situations is not to deliver a behavioral intervention designed to change the behavior, but just to provide sufficient temporary control to ensure that no one gets hurt. An effective technology of positive behavioral support must include specific procedures for providing support in dangerous situations. It is critical, however, that a clear distinction be made between crisis intervention strategies for infrequent use in emergency situations and ongoing proactive programming designed to produce substantive positive change. Crisis intervention procedures must not be allowed to turn into on-going restraint, or be used as a defense for the absence of effective programming.

The development of a well defined technology of positive behavioral support will take time. There is too little information currently available to assert that positive approaches are capable of solving all behavior problems or documenting that one approach is superior to any other. Both well controlled empirical analyses and less controlled clinical analyses are needed. The objective for the near future should not be to force consensus among those developing positive strategies, but to increase the precision with which a wide array of approaches are evaluated empirically.

#### **Social Validation and the Role of Dignity in Behavioral Support**

The second defining element of positive behavioral support is the addition of a social validity standard (Wolf, 1978) for determining the appropriateness of any intervention. Defining the appropriate use of the technology within an ethical context has long been accepted within applied behavior analysis (Kazdin, 1980). Two professional criteria often have been defined. The first is that any behavioral intervention must be justified in balance with the benefit anticipated for the person with disabilities (Irvin & Singer, 1984). Any intervention, no matter how benign, intrudes into a person's life to some degree. The level of intrusiveness should be in propor-

tion to the magnitude of the anticipated gain. The second standard is that clinicians should use the least intrusive intervention option that can logically be expected to be successful in a reasonable time period (Foxy, 1982; Matson & DiLorenzo, 1984). This second standard often has led to guidelines requiring that less intrusive interventions be documented as ineffective before implementing significantly intrusive actions (Foxy, 1982; Katz bill, 1988; Lovaas & Favell, 1987). An important nuance of this standard is that the demand is *not* that all less intrusive interventions be tried, but that all less intrusive strategies that logic and current research indicate *may have an effect* should be attempted.

A positive approach to behavior management fully endorses these traditional criteria. In addition, however, the positive approach adds a "dignity" standard. *Behavioral interventions should maintain and support the personal dignity of the individual.* Procedures that typical members of a community find excessive should be viewed with extreme caution. Because the purpose of behavioral interventions is to assist people in becoming full participants in society, the procedures used to achieve this goal should be within the standards set by society. Requiring behavioral interventions to be socially valid recognizes that it is not just the type of intervention that is important, but also the manner in which that intervention is implemented. By its nature, behavioral technology involves continuous on-site technical and ethical judgement. Even mildly intrusive, or reinforcement-based, interventions can be used in an inhumane, undignified manner that is disrespectful and stigmatizing to the individual with challenging behaviors. As a result, the following are recommended:

1. *The appropriateness of all behavioral interventions should be evaluated in terms of three criteria.* (a) Is the level of intrusiveness logically balanced by the value of the anticipated behavior change for the person with challenging behavior? (b) Is the proposed intervention evaluated by competent professionals as the least intrusive intervention likely to be successful? (c) Is the intervention judged by community members not to be dehumanizing, degrading, or disrespectful to the individual receiving support?

2. *The more intrusive an intervention, the greater the need for continuous public monitoring.* The more intrusive an intervention, the more important it is that members of the community (e.g., human rights committee) both approve the written plan for the intervention and observe the plan being implemented. Written descriptions and the labels applied to behavioral intervention strategies can be ambiguous. Repeated direct observation of the intervention implementation by community members is critical for maintaining the social validity of more intrusive interventions.

3. *The more intrusive an intervention, the greater the*

*need for procedural regulation.* The greater the social or physical intrusiveness of an intervention, the more appropriate are procedural regulations that restrict (a) who may use the intervention, (b) when the intervention may be used, and (c) the conditions for monitoring the intervention. For example, such interventions as overcorrection, psychotropic medications, or time out may be used with minimal intrusiveness, or they may involve severe social and physical restriction. While it would be inappropriate to eliminate all forms of these interventions, it is appropriate for regulatory agencies to specify restrictions defining when more restrictive forms may be used, and to limit the use of these forms by people who do not have adequate training in the implementation of effective, ethical interventions (Lovaas & Favell, 1987; Van Houten et al., 1988).

### Recommendations to Prohibit or Restrict Classes of Behavioral Interventions

The most hotly debated element of positive programming has been the recommendations that aversive behavioral procedures be banned or restricted (Iwata, 1988; Matson & Taras, 1989; Mulick, in press). At one extreme has been a call that all interventions that (a) deliver physical pain, (b) result in harm (medical attention), or (c) are judged to be disrespectful or dehumanizing should be legally and morally prohibited. Multiple recommendations to this effect have been made in texts (Donnellan et al., 1988; Evans & Meyer, 1985; LaVigna & Donnellan, 1986; McGee et al, 1987), newsletters (Sobsey, 1987), resolutions by professional organizations (TASH, AAMR, ASA), and proposed state regulations/laws (Katz bill, 1988). In response has been the argument that in a small number of severe situations it is more immoral to withhold an effective, though painful, intervention (e.g., electric shock), or to use less effective interventions that require extended time to be effective, than to use a painful yet immediately effective procedure (Mulick, in press). Of equal importance, it has been argued that to impose prohibitions on a science as young and ill-defined as behavioral support is damaging to the development of practical, effective procedures.

The debate surrounding the prohibition or restriction of interventions that use severe, aversive stimuli will not be settled soon. An unfortunate aspect of the debate is that it focuses attention away from the more important contributions of positive behavioral support in developing technology and social validation standards. The positive aspects of the debate are that (a) it is forcing an in depth evaluation of acceptable, professional procedures, and (b) it is adding a strong voice from families and consumers of behavioral support in addition to the longstanding discussions of clinicians and ethicists. In addition, there is a growing acceptance within the field that the use of aversive stimuli must be

regulated (either by professional organizations or by legal mandate). Lovaas and Favell (1987), for example, have provided a set of guidelines for using aversive stimuli that precludes use of these procedures in all but the most extremely unusual situations, and then only by a very small number of very well trained and monitored clinicians. The functional difference between the professional guidelines recommended by Lovaas and Favell (1987) and a total prohibition of all procedures that involve pain or harm is minimal in terms of the number of people who would receive aversive stimuli. Clearly, the time has come for limiting the use of stimuli and procedures that are painful, damaging, and dehumanizing. The debate should be not on whether to limit our use of the most severe forms of behavioral intervention, but on *how* that limitation should occur.

A consistent message for families, teachers, and community service providers is that positive programming is the expected technology. The routine use of procedures that deliver pain (shock, pinching, slaps), procedures that result in harm (bruises, cuts, broken bones), and procedures that are disrespectful or dehumanizing (facial sprays, shaving cream in mouth, foul smells) are no longer acceptable. Families, teachers, and community service personnel should turn toward (a) developing competence in the technology of positive programming and (b) addressing internal policies and procedures to prevent the abuse of severe, intrusive procedures.

The resolution to the debate surrounding the use of aversive stimuli is to develop and rigorously document positive support procedures that produce consistent, rapid, durable, generalized changes in challenging behaviors while facilitating the development of broad lifestyle changes. This is a tall order, but there must be effective strategies for creating alternatives to the use of behavioral procedures that are painful, harmful, or dehumanizing. The critical question is how to do this and to ensure that all individuals gain access to the best, most humane, most effective support possible. The marriage of ideology and science must be in the delivery of effective, positive alternatives.

### Summary

This article describes aspects of positive behavioral support. Our effort has been to further define this technology and emphasize three main elements: (a) an emerging set of procedures, (b) the addition of social validation standards for acceptability, and (c) the prohibition or regulation of procedures viewed as excessively aversive or disrespectful. Through these three elements, positive behavioral support is an integration of technology and values. At this time, the values are more well defined than the technology. Our hope is to refocus attention on the discussion, analysis, and application of those powerful positive procedures that will be critical for raising positive behavioral support from

a debated approach to the established technology in our field.

### References

- Azrin, N. H., & Holz, W. C. (1966). Punishment. In W. R. Honig (Ed.), *Operant behavior: Areas of research and application*, (pp. 380-447). New Jersey: Prentice Hall.
- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, *1*, 91-97.
- Bailey, J. S. (1987). *Functional analysis*. Presented at ABA Symposium, Nashville, TN.
- Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart, and Winston.
- Berkman, K. A., & Meyer, L. H. (1988). Alternative strategies and multiple outcomes in the remediation of severe self-injury: Going "all out" nonaversively. *Journal of The Association for Persons with Severe Handicaps*, *13*, 76-86.
- Carr, E. G. (1988). Functional equivalence as a mechanism of response generalization. In R. H. Horner, G. Dunlap, & R. L. Koegel (Eds.), *Generalization and maintenance: Life-style changes in applied settings*. (pp. 221-241) Baltimore: Paul H. Brookes.
- Carr, E. G., & Durand, V. M. (1985). Reducing behavior problems through functional communication training. *Journal of Applied Behavior Analysis*, *18*, 111-126.
- Carr, E. G., Taylor, J. C., Carlson, J. I., & Robinson, S. (in press). Reinforcement and stimulus-based treatments for severe behavior problems in developmental disabilities. *Proceedings of the Consensus Conference on the Treatment of Severe Behavior Problems and Developmental Disabilities*. Washington, D.C.: National Institute of Health.
- Donnellan, A. M., La Vigna, G. W., Negri-Shoultz, N., & Fassbender, L. L. (1988). *Progress without punishment: Effective approaches for learners with behavior problems*. New York: Teachers College Press, Columbia University.
- Donnellan, A. M., La Vigna, G. W., Zambito, J., & Thvedt, J. (1985). A time limited intensive intervention program model to support community placement for persons with severe behavior problems. *Journal of The Association for Persons with Severe Handicaps*, *10*, 123-131.
- Durand, V. M. (1988). Towards acceptable and effective intervention for severe behavior problems. In R. H. Horner & G. Dunlap (Eds.), *Behavior management and community integration for individuals with developmental disabilities and severe behavior problems* (pp. 83-96). Eugene: Specialized Training Program, University of Oregon.
- Durand, V. M. & Carr, E. G. (1987). Social influences on "self-stimulatory" behavior: Analysis and treatment application. *Journal of Applied Behavior Analysis*, *20*, 119-132.
- Durand, V. M., & Crimmins, D. M. (1988). Identifying the variables maintaining self-injurious behaviors. *Journal of Autism & Developmental Disorders*, *18*(1), 99-117.
- Durand, V. M., & Kishi, G. (1987). Reducing severe behavior problems among persons with dual sensory impairments: An evaluation of a technical assistance model. *Journal of The Association for Persons with Severe Handicaps*, *12*, 2-10.
- Evans, I. M., & Meyer, L. H. (1985). *An educative approach to behavior problems: A practical decision model for interventions with severely handicapped learners*. Baltimore: Paul H. Brookes.
- Foxx, R. M. (1982). *Decreasing behaviors of severely retarded and autistic persons*. Champaign, IL: Research Press.
- Gast, D. L. & Wolery, M. (1986). Severe maladaptive behaviors. In M. E. Snell, (Ed.), *Systematic instruction of persons with severe handicaps* (3rd ed.) (pp. 300-332). Columbus, OH: Merrill Publishing.

- Guess, D. (1988). Problems and issues pertaining to the transmission of behavior management technologies from researchers to practitioners. In R. H. Horner & G. Dunlap (Eds.), *Behavior management and community integration for individuals with developmental disabilities and severe behavior problems* (pp. 19-46). Eugene: Specialized Training Program, University of Oregon.
- Guess, D., Helmstetter, E., Turnbull, H. R., & Knowlton, S. (1987). *Use of aversive procedures with persons who are disabled: An historical review and critical analysis*. Seattle: The Association for Persons with Severe Handicaps.
- Hitzing, W. (1988). *Community support for people with challenging behaviors*. Presentation at Oregon Developmental Disabilities Conference, Eugene.
- Horner, R. H. (in press). The future of applied behavior analysis for people with severe disabilities. In L. Meyer, C. Peck, & L. Brown, (Eds.), *Critical issues in the lives of people with severe disabilities*. Baltimore: Paul H. Brookes.
- Horner, R. H., & Albin, R. W. (1988, September). *Functional Analysis*. Presentation at the Research and Training Center on Community-Referenced, Nonaversive Behavior Management National Conference, Santa Barbara, CA.
- Horner, R. H., & Billingsley, F. F. (1988). The effect of competing behavior on the generalization and maintenance of adaptive behavior in applied settings. In R. H. Horner, G. Dunlap, & R. L. Koegel (Eds.), *Generalization and maintenance: Life-style changes in applied settings* (pp. 197-220). Baltimore: Paul H. Brookes.
- Horner, R. H., & Budd, C. M. (1985). Teaching manual sign language to a nonverbal student: Generalization of sign use and collateral reduction of maladaptive behavior. *Education and Training of the Mentally Retarded*, 20, 39-47.
- Horner, R. H., Day, M., Sprague, J., O'Brien, M., Heathfield, L. T. (in press). The effects of interspersed requests on challenging behavior during instruction. *Journal of Applied Behavior Analysis*.
- Horner, R. H., Dunlap, G., & Koegel, R. L. (1988). *Generalization and maintenance: Life-style changes in applied settings*. Baltimore: Paul H. Brookes.
- Hunt, P., Alwell, M., & Goetz, L. (1988). Acquisition of conversation skills and the reduction of inappropriate social interaction behaviors. *Journal of The Association for Persons with Severe Handicaps*, 13, 20-27.
- Irvin, L. K., & Singer, G. S. (1984). *Human rights review manual*. Eugene: Oregon Research Institute.
- Iwata, B. A. (1988). The development and adoption of controversial default technologies. *The Behavior Analyst*, 11, 149-157.
- Iwata, B. A., Dorsey, M. F., Slifer, J., Bauman, K. E., & Richman, G. S. (1982). Toward a functional analysis of self-injury. *Analysis and Intervention in Developmental Disabilities* 2, 3-20.
- Johnston, J. M. (1988). Regulating the delivery of behavioral technology. In R. H. Horner & G. Dunlap (Eds.) *Behavior management and community integration for individuals with developmental disabilities and severe behavior problems* (pp. 6-18). Eugene: Specialized Training Program, University of Oregon.
- Kanfer, F. H., & Saslow, G. (1969). Behavioral diagnosis. In C. M. Franks (Ed.), *Behavior therapy: Appraisal and status* (pp 417-444). New York: McGraw-Hill.
- Katz bill, State of California Proposed Legislation, AB520, 1988.
- Kazdin, A. E. (1980). *Behavior modification in applied settings (2nd ed.)*. Homewood, IL: Dorsey Press.
- Kern, L., Koegel, R. L., & Dunlap, G. (1984). The influence of vigorous vs. mild exercise on autistic stereotyped behaviors. *Journal of Autism and Developmental Disorders*, 14, 57-67.
- Koegel, R. L., & Koegel, L. K. (1988). Generalized responsivity and pivotal behaviors. In R. H. Horner, G. Dunlap, & R. L. Koegel (Eds.), *Generalization and maintenance: Life-style changes in applied settings* (pp. 41-66). Baltimore: Paul H. Brookes.
- Koegel, R. L., & Koegel, L. K. (1989). Community-referenced research on self-stimulation. In E. Cipani (Ed.), *The treatment of severe behavior disorders: Behavior analysis approaches* (pp. 129-150). American Association on Mental Retardation, Washington, D.C.
- Koegel, R. L., & Koegel, L. K. (1990). Extended reductions in stereotypic behavior of students with autism through a self-management treatment program package. *Journal of Applied Behavior Analysis*, 23, 119-127.
- Koegel, R. L., Koegel, L. K., Murphy, C., & Ryan, C. (1989). *Assessing the effect of different teaching paradigms on disruptive behavior*. Manuscript submitted for publication.
- LaVigna, G. W., & Donnellan, A. M. (1986). *Alternatives to punishment: Solving behavior problems with non-aversive strategies*. New York: Irvington Publishers.
- Lovaas, O. I., & Favell, J. E. (1987). Protection for clients undergoing aversive/restrictive interventions. *Education and Treatment of Children*, 10, 311-325.
- Luselli, J. K., Miles, E., Evans, T. P., & Boyce, D. A. (1985). Reinforcement control of severe dysfunctional behavior of blind, multihandicapped students. *American Journal of Mental Deficiency*, 90, 328-334.
- Mace, F. C., Hock, M. L., Lalli, J. S., West, B. J., Belfiore, P., Pinter, E., & Brown, D. K. (1988). Behavioral momentum in the treatment of noncompliance. *Journal of Applied Behavior Analysis*, 21, 123-141.
- Matson, J. L. & DiLorenzo, T. M. (1984). *Punishment and its alternatives: A new perspective for behavior modification* (Vol. 13). New York: Springer Publishing.
- Matson, J. L., & Taras, M. E. (1989). A 20 year review of punishment and alternative methods to treat problem behaviors in developmentally delayed persons. *Research in Developmental Disabilities*, 10, 85-104.
- McGee, J. J., Menolascino, F. J., Hobbs, D. C., & Menousek, P. E. (1987). *Gentle teaching: A non-aversive approach to helping persons with mental retardation*. New York: Human Sciences Press.
- Mulick, J. A. (in press). The ideology and science of punishment in mental retardation. *American Journal on Mental Retardation*.
- Mulick, J. A., Schroeder, S. R., Rojahn, J. (1980). Chronic rumination and vomiting: A comparison of four treatment procedures. *Journal of Autism and Developmental Disorders*, 10, 203-213.
- O'Brien, J. (1987). A guide to lifestyle planning: Using the Activities Catalog to integrate services and natural support systems. In B. Wilcox and G. T. Bellamy (Eds.), *A comprehensive guide to The Activities Catalog* (pp. 175-189). Baltimore: Paul H. Brookes.
- O'Neill, R. E., Horner, R. H., Albin, R. W., Storey, K., & Sprague, J. (1988). *Manual for the functional analysis of challenging behaviors*. Unpublished manuscript. Eugene: Specialized Training Program, University of Oregon.
- Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia Publishing.
- Rast, J., Johnston, J. M., Ellinger-Allen, J. A., & Drum, C. (1985). Effects of nutritional and mechanical properties of food on ruminative behavior. *Journal of the Experimental Analysis of Behavior* 44, 195-206.
- Rose, T. L. (1979). Reducing self-injurious behavior by differentially reinforcing other behaviors. *The American Association for the Education of the Severely/Profoundly Handicapped* 4, 179-186.
- Singer, G. H. S., Singer, J., & Horner, R. H. (1987). Using

- pretask requests to increase the probability of compliance for students with severe disabilities. *Journal of The Association for Persons with Severe Handicaps*, 12, 287-291.
- Sobsey, D. (1987, November). Non-aversive behavior management: The verdict is in. News & Notes, *American Association on Mental Retardation* newsletter
- Steen, P. L., & Zuriff, G. E. (1977). The use of relaxation in the treatment of self-injurious behavior. *Journal of Behavior Therapy and Experimental Psychiatry*, 18, 447-448.
- Touchette, P., McDonald, R., & Langer, S. (1985). A scatter plot for identifying stimulus control of problem behavior. *Journal of Applied Behavior Analysis*, 18, 343-351.
- Ullman, L. P., & Krasner, L. (Eds.). (1965). *Case studies in behavior modification*. New York: Holt, Rinehart & Winston.
- Van Houten, R. (1983). Punishment: From the animal laboratory to the applied setting. In S. Axelrod and J. Apsche (Eds.), *The effects of punishment on human behavior*, (pp. 13-44). New York: Academic Press.
- Van Houten, R., Axelrod, S., Bailey, J. S., Favell, J. E., Foxx, R. M., Iwata, B. A., & Lovaas, O. I. (1988). The right to effective behavioral treatment. *The Behavior Analyst*, 11(2), 111-114.
- Wahler, R. G., & Fox, J. J. (1981). Setting events in applied behavior analysis: Toward a conceptual and methodological expansion. *Journal of Applied Behavior Analysis*, 14, 327-338.
- Winterling, V., Dunlap, G., & O'Neill, R. (1987). The influence of task variation on the aberrant behavior of autistic students. *Education and Treatment of Children*, 10, 105-119.
- Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis*, 11, 203-214.

Received: February 8, 1990

Final Acceptance: April 11, 1990

Editor in Charge: John Nietupski



A vertical bar on the left side of the page, consisting of a series of horizontal segments in shades of yellow and orange, with a small red diamond at the top.

COPYRIGHT INFORMATION

TITLE: Toward a Technology of “Nonaversive” Behavioral Support

SOURCE: Res Pract Pers Severe Disabil 30 no1 Spr 2005

WN: 0510507516001

The magazine publisher is the copyright holder of this article and it is reproduced with permission. Further reproduction of this article in violation of the copyright is prohibited.

Copyright 1982-2005 The H.W. Wilson Company. All rights reserved.