

WHAT IS APPLIED BEHAVIOR ANALYSIS (ABA)?

The field of Behavior Analysis grew out of the scientific study of principles of learning and behavior. It has two main branches: experimental and applied behavior analysis. The experimental analysis of behavior (EAB) is the basic science of this field and has over many decades accumulated a substantial and well-respected research literature. This literature provides the scientific foundation for applied behavior analysis (ABA), which is both an applied science that develops methods of changing behavior and a profession that provides services to meet diverse behavioral needs. Briefly, professionals in applied behavior analysis engage in the specific and comprehensive use of principles of learning, including operant and respondent learning, in order to address behavioral needs of widely varying individuals in diverse settings. Examples of these applications include: building the skills and achievements of children in school settings; enhancing the development, abilities, and choices of children and adults with different kinds of disabilities; and augmenting the performance and satisfaction of employees in organizations and businesses.

Behavior Analysis means the design, implementation, and evaluation of instructional and environmental modifications to produce socially significant improvements in human behavior through skill acquisition and the reduction of problematic behavior. A behavior analysis

program should be based on empirical research, including the direct observation and measurement of behavior, and utilize antecedent stimuli, positive reinforcement, and other consequences to produce behavior change.

Applied behavior analysis is a well-developed discipline among the helping professions, with a mature body of scientific knowledge, established standards for evidence-based practice, distinct methods of service, recognized experience and educational requirements for practice, and identified sources of requisite education in universities. Although there are regulatory definitions of key elements within the practice of behavior analysis, there are additional features of applied behavior analysis that should be clarified in order to even briefly define the field. For the purposes of the Behavior Analyst Certification Board (BACB) certifications and examinations, the content of applied behavior analysis is contained in the BACB Behavior Analysis Task List. This and additional information may be found on the BACB web site (<http://www.bacb.com/>).

What is the Hawai'i Association for Behavior Analysis?

It is an affiliated chapter of ABA whose mission is to expand behavioral knowledge, support service providers implementing behavioral interventions, and to encourage board certification in behavior analysis.

Hawai'i Association for Behavior Analysis 2007 Conference

August 4, 2007

***REINFORCEMENT
and Its Applications***

8 AM TO 4:00 PM

**McKinley Adult
Community
School**

<http://www.hawaiiaba.org>

Psychotropic Medication and Behavior Analysis:

The Resurgence of Biological Explanations for Behavior and What To Do About It

By Thomas Freeman, MS, BCBA, Area Behavior Analyst, State of Florida
ex- and hoping-to-be-future resident of The Big Island of Hawaii

Radical behaviorism has shown that four elements combine to evoke behavior: genetics, organic and/or physiological conditions, learning history, and immediate environmental evocative stimuli (discriminative stimuli and motivational operations). As behavior analysts we mainly focus on the person's learning history and current environmental conditions to discover, describe, and manipulate functional relationships. By so doing, we change what people do in positive and socially significant ways. Forty years of research and clinical practice has shown that this approach is the most effective way of reducing and replacing problem behaviors, despite various underlying DSM-IV diagnoses.

Recently, however, mainly by taking advantage of changes in laws governing the marketing of medication, the pharmaceutical industry seems to have convinced society at large that behavior may be most effectively controlled through the use of various medications. Yet little if any biochemical evidence exists linking most problem behaviors to chemical imbalances, and many diagnoses leading to long term prescriptions turn out to be essentially re-worked explanatory fictions. This topic was covered in detail during two consecutive presentations at the ABA conference in San Diego. {#248, Malott, Mattaini, Salzinger, and Wong, "Behavior and Social Issues: Behavior Analysis, Biological Psychiatry, and the Treatment of Severe Behavior Disorders"; and #291, Harshbarger, Kohlenberg, and Wyatt, "Why is Behavior Analysis used Selectively in Treating Severe Behavior Disorders"} Both presentations were based on the journal, "Behavior and Social Issues", Vol. 15, #2, Fall/Winter 2006, in which the entire issue was dedicated to this topic (arguments both pro and con). Presenters Steven Wong and Joseph Wyatt (co-writing with Donna Midkiff) wrote the journal's two lead articles.

Both presentations laid out a rather disturbing picture. They concluded that ABA has essentially lost the debate, despite all the scientific evidence on its side of the argument. A wealth of studies show that in most cases, problem behaviors are under operant control, and are most effectively reduced by treatments based in operant processes. ABA has been repeatedly shown to be far more effective than medication (in most cases) in reducing such target behaviors as aggression and self-injury. However, in the ancient and ever-continuing quest for a quick fix with little response effort, the medication model has

become almost completely dominant (evidenced, for example, by the over-diagnosis of ADHD in the school systems, with the concomitant use of medication with children who really do not need it).

While enlightening, if somewhat bleak, these discussions seemed to posit a fundamental adversarial and even acrimonious relationship between ABA and Psychopharmacology. But should we be concerned that by taking this approach, we might miss an opportunity to have a profoundly positive effect in this area?

In the face of this increasing and ethically inappropriate use of medication for behaviors maintained by environmental processes, we could easily be tempted to critique and even confront other practitioners for using different, less data-based evaluation and treatment procedures. But this ultimately leads to no effective solution, and we do in fact have an alternative and clinically sound way to approach this problem.

- Behavior analysts must work with prescribing physicians (whether psychiatrists, neurologists, or general practitioners), offering our services as consistent observers and collectors of reliable data.
- We must develop a relationship with the psychiatrist, attending as many medication management meetings as possible, and speaking by phone during crisis or problem periods. They must know we are involved and available.
- We must provide both accurate contextual information and graphical displays of target behaviors for which the medication has been prescribed, and offer to collect data on other behavioral indicators that the doctor would like to track (e.g., sleep). These graphs must include medication-based phase change lines (used for medication introduction/discontinuation) and condition change lines (used for dosage alterations) to allow the doctor to make better (data-based) determinations as to whether the medication has in fact been successful, or not.
- Finally, we must become fully knowledgeable of the various effects of a wide variety of psychotropic ("behavior changing") agents.

Psychotropic Medication and Behavior Analysis (continued)

In essence, we must use all of the skills at our disposal to assist the doctor in making sure that the individuals we serve are receiving the treatments they need, including the absolute least amount of medication necessary to maximize the functionality of the person. Over time, our influence on the decision-making process will grow as trust is built between the CBA and the MD. This approach can (and does) lead to the reduction and discontinuation of unnecessary medications. Doctors are after all even more aware than we are of the devastating side effects and long term dangers associated with the use of neurochemical agents. If we can demonstrate effective monitoring tools, and even more effective alternative treatment strategies, a team approach offers the best chance of discovering

the optimal combination of treatment modalities.

We all strive to serve the best interests of those who seek our assistance. Many are taking medication aimed at suppressing (or otherwise changing) one or more of their behaviors. In these cases, our success in using ABA to provide effective treatment will depend to a significant degree on how well we can work in close collegial concert with the prescribing physician, rather than taking a philosophically sound, but ultimately self-defeating, adversarial stance.

*"We stand on the
shoulders of giants"
Sundberg (2007)*

The Verbal Behavior Milestones Assessment and Placement Program: The VB-MAPP

by Amy Wiech, M.Ed., BCBA

Selected notes from the ABA Workshop (2007) by Mark Sundberg, Ph.D., BCBA

Purpose of Language Assessment

- ✓ Determine operant level of child's verbal and related skills
- ✓ When you are not sure about operant level, that is when you need to start doing some assessment.
- ✓ How does this child's performance compare to typical kids (social comparison)---how old are they when they start doing certain things.
- ✓ Identify language acquisition and learning barriers
 - Important to determine the puka's in a kids repertoire
 - 29 Ways that mands can become DEFECTIVE.
- ✓ If and where to begin intervention/placement
- ✓ Establish IEP goals
- ✓ Design curriculum/intervention program
- ✓ Teaching strategies: inclusion, in-home, iconic exchange.
- ✓ Is the intervention working? Why/why not? Tracking system, analysis.
- ✓ Are they acquiring tacts that are commensurate to what a typical kid would acquire?
- ✓ We like the tacts and mands to be balanced.
- ✓ TOOL: to demonstrate learning, to track progress, make changes, provide outcome measures

Traditional Language Assessment

- ✓ Cognitive and/or biological variables seen as the primary sources of control for verbal responses
 - ✓ Based on expressive/receptive distinctions mediated by cognitive processors
 - ✓ Norm referenced and standardized
 - * Peabody (PPVT)
 - * Expressive One word Vocab Test
 - * WPPSI
 - * CELF
- These give us limited information and leave out some important aspects of verbal language.

Behavioral Language Assessment

- ✓ Verbal operant is the functional unit (form and function)
- ✓ Environmental variables are viewed as relevant sources for verbal responses rather than cognitive or behavior variables.
- ✓ Each verbal operant involves separate sources of control
- ✓ More complex verbal behavior (VB) is comprised of various combinations of Verbal Operants
- ✓ Chomsky tried to take Skinner on with syntax and grammar
- ✓ Speaker/Listener as separate repertoires

The Verbal Behavior Milestones Assessment and Placement Program (continued)

Components of VB-MAPP

- ✓ Important to have milestones
- ✓ Developmental Language Charts: (millions on the internet)
 - Ranges from 300-300 tacts for 2-year olds - how is that useful information?
 - No chart for mands or intraverbals
- ✓ Conceptual Foundation-Skinner 1957
- ✓ Based on typical developmental milestones
 - By identifying milestones as opposed to task analysis of individual skills, the focus can be sharper and direction clearer
- ✓ Field test from at least 60 typically developing kids and 100 children with Autism
- ✓ Body of empirical research that provides the foundation for BA, i.e.) stimulus control transfer, shaping, do you have true stimulus control?
 - 500 studies on stimulus control
 - Make use of this basis and apply it to verbal repertoire
- ✓ Empirical research on Skinner's VB
 - Can have 100's of tacts and still can't talk about things.

VB-MAPP 4 Components

1. Skills Assessment contains 165 milestones across 3 developmental levels and 16 different verbal operants and verbal skills:
 - 0-18mo, 18-30mo, 30-48mo
 - Skills to teach first mands are different skills needed to teach conversation-----teacher skills
2. Skills Task Analysis provides further breakdown of different areas in form of checklist for skills tracking.
 - What are steps between tacting nouns and tacting noun verb combinations
 - Task Analysis breaks it down
3. Barriers Assessment examines 22 common learning and language barriers faced by children with ASD
 - Sorts out stimulus control vs. motivation control, schedules
 - Complicated stuff to analyze with just one course in ABA
 - More training you have the more you will get out of this tool
4. IEP Goals: provides over 200 IEP objectives that match....directly linked to skill and barrier assessment and VB intervention program (In preparation).

Overall this was a gathering place for Mark Sundberg groupies. I was one of them I am proud to say. He always makes his presentations well worth the money, given the handouts and well organized presentation, full of video examples, graphs to illustrate his points, not to mention the humor he surprises us with. A plethora of great information on the cusp of VB research and practice.

Application of Principles:

"Bubble Gum Machine"

Trina Smith, Grade 4 Teacher: "I have a rather big hand drawn bubble gum machine hanging on the front chalk board. My students are encouraged to fill the machine in order to receive a class reward. I stick paper gumballs onto the machine when the class is caught doing something good....proper line up, good listening etc. I also take away gumballs when the class is overly noisy etc. The kids love seeing the machine fill up with gumballs. When they achieve a full machine, I give them a popcorn party with a movie, extra gym time, or any other appropriate reward. It works for me!"

Training Paraprofessionals to Facilitate Social Interactions between Children with Autism and Typically Developing Peers: Elementary School Playground Setting

by Lawrence Tatekawa, Ed. S. NCSP and Brianna Tatekawa, MA, CFY-SLP
Selected notes from the ABA Workshop (2007) by Eileen Klein, Ph.D.

Dr. Eileen Klein presented a study that assessed whether paraprofessionals could be trained to use a motivation-based social facilitation procedure for promoting social interactions between children with autism and their typically developing peers.

Children with autism are increasingly being educated in general education classrooms and schools have turned to paraprofessionals to help support these children. Although paraprofessionals are intended to assist children in a positive direction, research suggests that paraprofessionals have not received adequate training and at times can inadvertently hinder the social interactions between children with disabilities and their typically developing peers. Therefore, this finding is of particular concern because children with autism display deficits in social interaction. In addition to displaying social impairments, research suggests that children with autism seem to demonstrate a lack of motivation or learned helplessness. However, interventions that focus on pivotal areas of motivational components are effective in improving peer related social behaviors in these children.

This study investigated three paraprofessionals hired by local school districts to support elementary-school age students with autism. During the first training session, the manual *How to Teach Pivotal Behaviors to Children with Autism: A Training Manual* (R.L. Koegel et., 1989) and the application of motivational procedures to facilitate social interaction were presented. The remaining training sessions occurred across three days for natural length of the school activity, which was approximately 15 – 20 minutes a day. During this phase of training, the paraprofessionals were instructed to provide children with autism with 2 activities (that were previously determined to be mutually reinforcing) to choose from and then prompt the child with autism to ask a peer to play. The paraprofessionals received feedback on their implementation of the social interaction techniques and as they monitored the children's social interaction to ensure that the children were contingently reinforcing each other's comments and requests with natural reinforcers.

Paraprofessional behavior was assessed using videotape probes as well as direct observations during baseline, interventions and generalization probes. Dr. Klein recorded duration of paraprofessional engagement over 10-minute probes in which their behaviors were classified into five categories. They are as follows:

1. *Social facilitation.* The paraprofessional prompted the child to join into a social game or to engage in reciprocal social interactions. This cycle began when the paraprofessional prompted the child to engage in social interaction through verbal or nonverbal behaviors and ended when the paraprofessional stopped prompting for more than 3 seconds.
2. *Monitoring.* The paraprofessional observed the child's social interactions or waited for 30 seconds to see if the child re-engaged once their interactions had terminated. The cycle began again when the paraprofessional stopped providing instructions to interact and ended 30 seconds after the last reciprocal interaction or if the paraprofessional engaged in activities consistent with another category.
3. *Active hovering.* Paraprofessional's attention was focused on the child. This cycle begins when the paraprofessional began instructing the child and ended when the paraprofessional either stopped instructing or stopped observing the child to ensure that the instructions given were carried out by the child.
4. *Passive hovering.* The paraprofessional was physically present within 3 feet of the child yet the paraprofessional's attention was not on the child and the child was not engaged in any reciprocal interactions with peers. The cycle began when the paraprofessional moved within 3 feet of the child and remained in that proximity for at least 5 seconds and ended when the paraprofessional was no longer within 3 feet or if the paraprofessional engaged in activities consistent with another category.
5. *Noninvolvement.* This cycle began when the paraprofessional was located more than 3 feet away and was not interacting with the child and the child was not engaged in any reciprocal interactions with peers and ended when the paraprofessional moved within 3 feet of the child or engaged in activities consistent with another category.

The findings of Dr. Klein's study support the efficacy and effectiveness of training paraprofessionals to facilitate social interactions between children with autism and typically developing peers utilizing pivotal areas of motivation. This research also indicates that paraprofessionals can learn to use the motivation-based social facilitation techniques with fidelity with in-vivo training to increase both social facilitation and monitoring and decrease active and passive hovering and noninvolvement. Finally the paraprofessionals learned to generalize social facilitation skills to untrained social activities.

Using Signs Rather than Picture Selection as the Primary Communication Response Form for Hearing Children & Adults with Developmental Disabilities Including Autism

by Justin Kyriannis, M.A., BCBA

Selected notes from the ABA workshop (2007) conducted by Patrick McGreevy, Ph.D.,

Vocal speech should be the ultimate goal of a verbal behavior program; however, sometimes augmentative communication must be used when the child or adult does not exhibit echoic language. Sign language most closely resembles vocal speech in that it is considered topography based rather than selection based. It is much faster to sign than to select a picture, especially when children have severe challenging behavior. For example, before a tantrum occurs, signing 'break' can occur in less than a second whereas walking across the room to a break card or picture board may require more response effort leading to tantrum behavior. Signs are made using one's hands; therefore, the child is not stigmatized by carrying equipment with them (electronic devices, picture exchange, etc.). The child has their communication with them everywhere their hands go which is an advantage in cases where a device may be left behind accidentally. Additionally, there is a natural community of signers (i.e., the deaf community) but not a natural community of people who use pictures to communicate. Most importantly, an entire conversation can be translated verbatim using sign, whereas pictures cannot properly represent more abstract concepts or attributes. Vocal speech may be easier to obtain using signs rather than picture exchange. However, this may not be the case for learners that do not have an echoic repertoire and have substantial impairment in sensory and/or motor skills.

Mands (requests) should be taught first which should be specific to the learner – preferred foods, drinks, toys, activities, etc. It is necessary to capture or contrive motivation when teaching the child to make a request (e.g., give the learner a cookie then close the bag, give a highly preferred item to another peer, etc.) The most powerful procedure used to teach a mand is called the echoic to mand transfer. It involves having the child echo (repeat) the word and switching it to having the child using that word to make a request. A mimetic to mand transfer can also be chosen to teach a sign mand. It always begins with a motivation check to see which item interests the child. It looks something like this:

Teacher: holds out two preferred items to child – a cookie and juice (motivation check).

Child: goes to grab cookie.

Teacher: quickly removes juice leaving only cookie.

Holding up the cookie, the teacher says "cookie."

Child: echoes "cookie."

Teacher: gives cookie while repeating the word 'cookie.'

Note: do not say 'good job' or anything similar. The reinforcer is the cookie and not verbal praise, and only the word cookie should be used during the pairing.

When using sign instead of the echoic, the same steps are used with the motivation check, holding of the item and saying the vocal word 'cookie' to the child. The teacher does hand over hand with child to sign for cookie. Quickly give the child the cookie. Repeat the vocal word 'cookie' following the sign "cookie. The teacher will continue to fade the physical prompt using most to least prompts (errorless teaching) pairing the sign with the word cookie.

Every trial begins with the motivation check. After several trials, the teacher will hold up the cookie and delay for 2 seconds. The child will say "cookie" (or sign 'cookie' independently) indicating a transfer from simply echoing the word "cookie" when the teacher says it, to actually requesting the cookie vocally or independently using sign. The last step is to do trials whereby the item is removed (no visual cue) so the child is manding without the prompt.

Spoken word language should be taught to children with Autism or other developmental disabilities if the child exhibits a strong echoic response. Otherwise, an alternative method of communication should be used (e.g., signs). The mand is the most functional, powerful, and easiest category of language to teach because the child receives direct and immediate reinforcement (e.g., the item being requested) compared to simply labeling an item (e.g., that is a table). Therefore, mands should be taught first. Signs have the most advantages and fewest disadvantages when compared to other augmentative forms of communication and can be an effective communication response form for hearing children and adults with developmental disabilities.

We're on the Web!

See us at:

<http://www.hawaiiaba.org/>



101 Ways to Praise a Child

Wow, Way to go, Super, You're special
 Outstanding, Excellent, Great
 Good, Neat, Well done, Remarkable
 I knew you could do it, I'm proud of you
 Fantastic, Super star, Nice work
 Looking good, You're catching on
 Now you've got it, You're incredible
 Bravo, You're fantastic, Hooray for you.

You're on target, You're on your way
 How nice, How smart, Good job
 That's incredible, Hot dog, Dynamite
 You're beautiful, You're unique
 Nothing can stop you now, Good for you
 I like you, You're a winner
 Remarkable job, Beautiful work
 Spectacular, You're spectacular
 You're darling, You're precious,
 Great discovery
 You've discovered the secret
 You figured it out, Fantastic job
 Hip Hip hooray, Bingo, Magnificent
 Marvelous, Terrific, You're important
 Phenomenal, You're sensational
 Super work, Creative job
 Super job, Fantastic job
 Exceptional performance
 You're a real trooper, You are
 responsible
 You are exciting, You learned it right

What an imagination
 What a good listener, You are fun
 You're growing up, You tried hard
 You care, Beautiful sharing
 Outstanding performance
 You're a good listener, I trust you
 You're a good friend, You're important
 You mean a lot to me, You make me
 happy
 You belong, You've got a friend
 You make me laugh, You brighten my day
 I respect you, You mean the world to me
 That's correct, You're a joy
 You're a treasure, You're wonderful
 You're perfect, Awesome, A+ job
 That's the best, A big hug, A big kiss
 I love you!

PS. Remember, a smile is worth 1,000 words!

UP COMING EVENTS

Pacific Educational Conference

July 9-12, 2007

McKinley HS

<http://www.prel.org/pec2007/2007.asp>

81st Annual American School Health Association Conference

July 9-13, 2007

Ala Moana Hotel in Honolulu, HI

http://www.ashaweb.org/annual_conferences.html

Autism Society of America 38th

National Conference

July 11-14, 2007

Phoenix, AZ

<http://autism-society.org/conference>

Hawai'i Association for Behavior Analysis Conference

August 4, 2007

McKinley Adult Community School
Honolulu, HI

<http://www.hawaiiaba.org>

USAA 2007 Autism and Asperger International Conference

August 8-11, 2007

Denver, CO

http://www.usautism.org/usaaa_conference_overview_2007.htm

ABA International Conference

August 12-14, 2007

Hilton Sydney, Australia

<http://www.abainternational.org/sydney/index.aspx>

American Psychological Association (APA) Annual Convention

August 17-20, 2007

San Francisco, CA

<http://www.apa.org/convention07/>

2007 Disability Access Conference: A Design for Everyone

September 6, 2007 Ala Moana Hotel in Honolulu, HI

<http://www.hawaiipublichealth.org/PDF/2007DACconf.pdf>

Florida ABA 27th Annual Conference

September 19-22, 2007

Jacksonville, FL

<http://fabaworld.org/>

FABA monthly podcasts

The FABA Monthly Podcast is a monthly broadcast of the Florida Association for Behavior Analysis (FABA) and is hosted by Dr. Matthew Normand of the Florida Institute of Technology. Each podcast episode contains information pertaining to behavioral science in general and behavior analysis in particular, including news, information about upcoming events, and featured interviews.

<http://www.theskinnerbox.com/Podcasts/FABA/>

CalABA

February 21-23, 2008

Hyatt Regency Orange Country Garden Grove, CA

<http://www.calaba.org/>

***Newsletter of the
 Hawai'i
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 for Behavior
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