From the Chair

When the Cambridge Center was founded in the early 1980’s we were unique in our effort to bring the benefits of behavior analysis to the culture at large. Over the years, we developed many mechanisms for achieving our mission: conferences, publications, bookstores, accreditation packages, continuing education modules and, of course, our website with all its subdivisions. We also developed many imitators, most of whom concentrate on only one or two of our myriad activities. Not surprisingly, some may now be doing their thing a little better than we are. Some are much larger and better financed. But few have the strength of our commitment to excellence that has characterized the Center since its inception.

I was reminded of this strength in late July when my wife Susanne, our elder daughter Marcy, and I spent 10 days in Cheticamp, a little town on Cape Breton Island, Nova Scotia. We were there to visit my mother’s birthplace and learn something of my Acadian heritage.

One evening at dinner, Marcy asked if I remembered Roxy, a little girl with autism that Marcy had taught to swim using a behavioral system that she had helped develop while a teenager. I said I did. I remembered meeting Roxy and her mother during a visit several years ago. I also remembered borrowing a clicker from Marcy and showing the mother the basics of TAG teaching and that we even played the shaping game. As the mother and daughter were leaving, I suggested visiting www.behavior.org to learn more about behavioral approaches to the treatment of autism. She thanked me, and they left.

I asked Marcy why she was asking. She replied that she had seen the mother recently and mentioned that she would be accompanying us on this trip to Canada. The mother said to be sure to tell me that of all the information she had been able to collect concerning autism, what she found on our web site was by far the most valuable. It guided the family in their search for an effective treatment facility and that Roxy is now doing well. Needless to say, that made my evening!

Now, as the Cambridge Center is facing a period of retrenchment and enforced austerity, I am inspired by that mother’s experience. As we sharpen our focus on the things we do best, we must never compromise our strengths. Our greatest strength is our volunteer rosters of eminent trustees and advisors. We must rely on them to insure that the Center remains the prime resource for those seeking the best applications of our science. Their work justifies assuring the public that our offerings will always meet the highest standards of evidence based practice.

Roxy’s mother expects that of us and we must continue to expect that of one another!

H.S. (Hank) Pennypacker, Ph.D.
Chair, Board of Directors

In this issue...

From the Chair............................................................... 1
How Good Science is used to Promote Bad Treatments:
The Story of Brain Inflammation, Autism, and Hyperbaric
Oxygen Therapy............................................................. 2
News from the UK: Story from the Republic of Ireland.. 2
What is STAMPPP?.......................................................... 2
Built to Last: Certifying Behavior-Based Safety?............ 3
Common Problems with Behavioral Observations........... 4
8th AARBA International Conference -
Embracing Behavioral Approaches to Safety.............. 5
6 Ways to Maintain Your Mental Flexibility................. 6
Keeping Track to Avoid Losing Track......................... 6
Newly Accredited Behavioral Safety Programs!............. 7
2012 Annual Meeting of the Trustees, Nov. 9-11........... 7
Support the Center....................................................... 14

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H.S. (Hank) Pennypacker, Ph.D.
Chair, Board of Directors

Thank you to all of the contributors to this newsletter and, but of course, all of our past contributors as well. Our volunteer trustees, advisors and friends provide the important content and are the news makers. In this issue, we bring you news about autism, behavioral safety and health.
Pseudoscientific treatments are those that have little to no empirical evidence of effectiveness, yet are portrayed as having roots in science. One characteristic of most fad treatments is the use of scientific jargon to make the treatment appear more scientific than it actually is and thus appear to be supported by more evidence than it actually does. For example, advertisements for countless products refer to “scientific testing” or being “thoroughly researched.”

A glaring example of what appears to be a pseudoscientific approach to advance a treatment for autism for which there is currently little to no empirical support is the use of hyperbaric oxygen therapy (HBOT) for children with autism. Hyperbaric oxygen chambers are pressurized containers that increase the atmospheric pressure (e.g., up to 1.3 times normal pressure) and the concentration of oxygen. These chambers originally were designed to treat decompression sickness of deep-sea divers, but they are purported to treat other physical conditions, such as autism and qualified teacher living in Dublin

Prior to 1998 children with autism in Ireland were not recognised as a distinct group for educational provision and were likely to receive a school placement based on an accompanying condition. However, this appeared to change with a government announcement in November 1998 by then Minister for Education and Skills, Micheál Martin which stated that there would now be “formal recognition of the distinct educational needs of all children with Autism whose condition so requires the introduction of a special pupil teacher ratio of 6:1 for such children, together with an automatic entitlement to child care support”.

The Minister noted that the Irish education system had “lacked the flexibility necessary to respond to the individual requirements of special needs children” but that now “up-to-date data will be available to the department to ensure that every special needs child is responded to”.

**What is STAMPPP?**

Parents of children diagnosed with autism face a bewildering range of ‘treatments’ for autism. International reviews, however, consistently point to the importance of using evidence-based practice to educate parents and children. A science of behaviour (Applied Behaviour Analysis) underpins the most effective treatments but there is a severe shortage of training courses across Europe to prepare professionals to meet the needs of parents and children (see BACB).

To address this concern, and the resulting myths about Applied Behaviour Analysis that have sprung up, Leonardo, part of the European Commission’s Lifelong Learning Programme is supporting an innovative multimedia programme first developed in N. Ireland by local charity Parents’ Education as Autism Therapists (PEAT) and Behaviour Analysts from the University of Ulster. Called Simple Steps, this multimedia program uses video material in the form of parental testimonies, animations, demonstrations, and textural material to teach the principles of Applied Behaviour Analysis. The goal is to demonstrate how the practice of science impacts on how one maximises the learning opportunities for children with autism. If we can help parents become proficient in delivering home programs for their children, it will make it easier for them to ensure that their children are receiving the best possible support.
Built to Last
Certifying Behavior-Based Safety?
by Timothy D. Ludwig, Ph.D.

This article appears on www.Safety-Doc.com, July 2012

On a recent trip to Rome for the Cambridge Center my sightseeing partner noted: “These people know how to build things that last.” My colleague Mark Alavosius and I were there for an exciting reason, but one that has me perplexed. This will take some explaining.

Background: In most of Europe, companies get “certified” in a number of ways. The best known is the ISO9000 criteria where independent auditors evaluate process and policy documents and provide their “stamp” of Certification. Companies enjoy preferred status as suppliers and service providers because of their assumed quality assurance from the Certification. Many companies in the United States pursue these Certifications as well. When it comes to safety, Certifications are not voluntary in many European countries. In Italy, there are laws requiring Certification in a number of safety areas. These Certifications, in contrast to ISO9000, are not optional. When a safety incident occurs and the company contacts their insurance providers to cover medical and workers comp, the insurance provider can ask for their Certifications. If the Certifications are not in order then the insurance provider can deny payment. Hence there is a big incentive for companies to comply with safety Certifications.

The government writes the laws, its ministries convert them to policy, Certification entities convert them into strict criteria, and Certification auditor consultants offer Certifications. Companies put their safety programs in place and seek Certification from these auditors to complete the bureaucratic process.

Opportunity: Behavior-Based Safety (BBS) in Italy has enjoyed a number of successes and has been gaining the attention of people involved in the Certification process. Because of this, a number of scientists have been assembled to help develop a Certification program in BBS. This involved Behavior Analytic (the scientists behind BBS) non-profits in Italy (Association for the Advancement of Radical Behavior Analysis: AARBA; www.aarba.eu) and in the US (Cambridge Center for Behavioral Studies: CCBS; www.behavior.org). Mark and I are commissioners for CCBS and have experience with a voluntary Behavioral Safety Accreditation program that CCBS offers.

The current challenge, however, is to set the criteria for Certification. What will the auditors look for? As Behavior Analysts who research BBS we look for RESULTS. Therefore, we were not satisfied with the normal European Certification only looking for documentation that a process is in place. For a company to claim Certification in BBS, after an initial start-up phase, we would want to see a reduction of injuries. After all, that’s the point right?

So we crafted three levels of Certification based on the common maturity of successful BBS programs:

Stage 1: A company designs its BBS process and stage 1 Certification is granted if these documents meet the BBS definition.

Stage 2: The Company has implemented BBS and must show evidence of successful implementation to be granted Stage 2 Certification (up to one year later).

Stage 3: The Company has a mature BBS process and can receive Stage 3 Certification after demonstrating reductions in injury rates (up to 3-5 years).

The QUESTIONS:

Setting criteria for Stage 1 and Stage 3 are relatively straightforward. Stage 1 involves a checklist of BBS process parts that must be in the design of a company’s BBS program. Stage 3 looks at outcome (injury) data seeking improvement. Obviously there are some statistical issues to work out in Stage 3 but this is doable.

Stage 2 criteria begs a fascinating question that I’ve encountered many times by company leaders and safety managers after implementing a new BBS: How do you show a successful implementation of BBS… before the lagging indicators of injury reduction catch up? There are a ton of issues here: How many observers are needed? How many observations should be done? What is useful feedback? Could you track actionable trends from the resulting data?

I would appreciate if you sent me YOUR potential solution to this question (TimLudwig@Safety-Doc.com). I’ll post them on the website and forward them to the certification task force.

THE PERPLEXITY

It is Stage 2 that also has me perplexed because we will be establishing rules for the Italian Certification auditors. This, of course will lead to compliance of these rules in companies seeking to be Certified. We are talking about government laws… carried out by these auditors… that can impact companies substantially.

Consider a typical leading indicator of BBS success. Within a BBS process, observations are conducted. Therefore, the number of observations conducted is a good indicator that the process is being done, that people are participating, and that the data can be analyzed for trends.

Indeed, research shows that increases in observations are highly correlated with reductions in injuries over time. Observations Lead – Injury reduction Lags. Stage 2 leading to Stage 3.

Case closed: The Certification should simply require a certain number of observations to be done… over a certain period of time, based on the number of workers, hours worked, etc.

CASE CLOSED?

Consider these vexing questions about mandated observations: Will the observations be done according to the BBS design? Will they identify areas of risk with high quality? Will the observations be associated with conversations with the employee about the risks? Will the observations be done at all???

Think about it… if a specified observation count were required to pass Certification… what will happen? My guess is that that observation count will be attained by some method, any method. Mandating observations lead

Continued on Page 5
Common Problems with Behavioral Observations
by Terry E. McSween, Ph.D.

Dr. Terry E. McSween, founder and CEO, Quality Safety Edge discusses common problems with behavioral observations from the latest issue of The Safety Edge.

Last year I had the opportunity to speak with a group of 35 construction and maintenance contractors that were involved in active behavior-based safety (BBS) peer observation processes. I was invited to speak on the topic of improving peer safety observations.

The participants were mostly safety managers from their respective companies with a small number of other managers who worked in the field and had shared responsibility for safety. Also, this was not a random group drawn from the universe of organizations using BBS. They elected to come to a session that was billed as discussing common problems with BBS, so I assumed it was a group representing companies whose BBS programs were struggling with at least some aspects of the BBS process. I was not connected to the participating organizations in any way. I had not met them before nor had QSE worked with any of them. As a result, I had very little background concerning their organizations with which to frame our discussion. Luckily, we have begun using an audience response system that allows us to collect data and receive feedback from our audience, so I decided to solicit some information from the audience on their specific problems with BBS observations.

Those of you who know QSE probably know that we are somewhat obsessed with data, so of course, I found the result of this assessment interesting. While the sample is not statistically random, this group provided insight into what I suspect many organizations struggle with in their BBS initiatives. So, with this data in hand, I plan to do a series of articles addressing each of these concerns, building on the details discussed with the participants of that session and several similar sessions conducted with some of QSE’s clients over the past year.

Poor Quality Information on Observation Checklists

I was frankly surprised that this issue was selected by the most participants as their primary issue. Let me provide additional data on the extent of this issue within our sample population. A full 60 percent (18 of the 30 respondents to this item) either agreed or strongly agreed that getting quality information on the observation checklists was a big problem in their BBS process.

The discussion that followed brought clarity to the scope of the issue that the audience was responding to. Generally they had two concerns: (1) pencil-whipping or completed observations reporting 100% safe behaviors and (2) poor use of comments to clarify the situation and risks. I’d like to discuss both of those in the remainder of this article.

First, I’d like to make a few comments on “pencil-whipping” observation forms. I’ve heard the horror stories, such as original observation forms left on the copy machine, people filling out large stacks, and so on. In my experience, this is rarely a problem. Most people will do the job right and not lie or fabricate information to complete an observation—and if they do so, typically it is because they have a poorly designed process with the threat of significant penalties or significant rewards associated with submitting completed observations.

Not one person in the group of 35 people in my audience reported this kind of abuse as a problem.

Now, I have seen an occasional person who uses an observation form to document something they saw earlier when they were not formally doing an observation. While this is not a typical observation, if the issue is important enough, I consider this a valid way to ensure the item is reviewed by the safety committee, or if the company has more appropriate avenues, the safety committee or leadership should simply coach the employee on the more appropriate process for raising safety issues.

The more common issue is observations that report 100% safe behavior. Almost always, an organization with broad employee involvement in safety observations will have a group of observers that regularly report that every

Continued on Page 9
to LOW QUALITY observations... in the worst cases mandates lead to false observations.

Every time I’ve been asked to help “fix” a “broken” BBS program I’ve seen mandated observation quotas. Employee incentives for doing observation can lead to the same problem. In these cases, sites typically boast large numbers of observations but these “observations” have had little impact on injury rates.

I see the need for clear based criteria in Certification showing that BBS is in place and is working correctly. I think I’m leaning toward the observations count. However, I’d pair it with two other criteria to ensure that data are being used to guide decisions and actions that lead to safety results.

a) An increase (yes increase) in at-risk behaviors identified along with increases in near-miss and minor injury reports;
b) Action plans that successfully addressed the risks and increased the percentage of safe behaviors in that area.

So what would you list as criteria to demonstrate that your BBS process has been implemented correctly? I’d love to hear your take on this challenge (TimLudwig@Safety-Doc.com).

I’m generally skeptical of certification – It tends to lead to bureaucracies that self-sustain and grow with limited value. However, this BBS Certification can positively impact the lives of millions of Italians... if we do it right.

And build something that lasts. (Go to Safety-Doc.com to read discussion.)

8th AARBA International Conference
Embracing Behavioral Approaches to Safety
by Mark P. Alavosius, Ph.D.

Rome, Italy, Pontifical Urbaniana University - In June 2012 an international conference with over 300 attendees was sponsored by Association for the Advancement of Radical Behavior Analysis (AARBA) and the Associazione Nazionale fra Lavoratori Mutilati e Invalidi del Lavoro (ANMIL). The Cambridge Center and University of Nevada, Reno (UNR) were scientific partners.

The conference followed two themes: (1) Evidence-Based Safety in business and industry, and (2) Development of Verbal Skills in classroom, clinic, and office settings. Presenters associated with the Cambridge Center included Trustee Mark Alavosius (Chair of Commission on Behavioral Accreditation – Behavior-Based Safety), Advisor Doug Greer, Trustee Ramona Houmanfar (Chair of Behavior in Organizations web section), Trustee Tim Ludwig (Commission on Behavioral Accreditation – Behavior-Based Safety), and Advisor Fabio Tosolin (President of AARBA). Also presenting was Lori Diener (performanceblueprints.com and Chair of the OBM Section for ABAI Conference). Invited talks considered behavioral science foundations of safety management, best-practices in industry and service organizations, examples of effective behavioral safety programs in industry (Whirlpool, Heineken, Embraco), plans for certifying best-practices, and leadership of continued advancement of behavioral science and applications.

During the conference the combined efforts of AARBA and CCBS to write standards defining behavior-based safety were celebrated and announced to the Italian press. This accomplishment reflects the collaboration of researchers, consultants, business leaders, civic leaders, and CCBS Commissioners (RP to link to list elsewhere)

Continued on Page 7
6 Ways to Maintain Your Mental Flexibility
Learn to Roll with the Punches and Dodge Life’s Wrenches

by Megan Coatley, M.A., BCBA, as published online at www.sparkpeople.com

When you first start making room for healthy habits in your busy life, being a stickler can be beneficial—setting a workout schedule, planning your meals in advance, saying no to things that get in the way of your goals. Without giving yourself some rules—and being a little inflexible—at the beginning, you’ll be likely to fall off the wagon much more quickly.

But as you build your habits, you’ll eventually discover that things don’t always go according to your plan. There will undoubtedly be road bumps (an unexpectedly long work day), detours (your favorite body sculpting class gets cancelled) and setbacks (birthday cake!). If you rigidly follow your plan instead of being a little flexible once in a while, you could do more harm than good.

Experts in behavior science view mental flexibility not as a personality trait or a state of mind, but as a set of behaviors that can be changed. Everyone is flexible about some things and inflexible about others. When you think about flexibility as “something I do” and not “who I am,” you will start to realize that you can make lasting, positive changes that may open up opportunities for some relaxation, laughter and joy amid the daily grind. If you feel like you’ve become a bit of a stickler about strict schedules and perfect plans, it may be time to loosen up and become more flexible. Here’s how.

Accept Your Behavioral History

People often talk about Type-A characteristics as if they are inherent personality traits. But most people didn’t become inflexible and perfectionistic overnight. There have probably been many times in your past when your perfectionism paid off: You led study groups (complete with mock quizzes) for your middle school friends. You hosted an impromptu bachelorette party for a girlfriend when the maid of honor’s venue fell through. You volunteered for your kindergartener’s dance recital and ended up coordinating the whole production (which received a standing ovation). The science of behavior holds that we will continue doing those things that get recognized, revered and rewarded. The reason that you’ve developed so many take-charge tendencies is because, throughout your life, you’ve received lots of powerful praise for taking the reins.

Identify Places Where You Can Compromise

Perhaps you’re always the first to speak your mind in important meetings or you have a habit of jumping to point out grammatical errors in company communications. Maybe you’re “that parent” on the field, making playbook suggestions to your child’s soccer coach while the other parents simply cheer from the bleachers. None of these habits are inherently wrong in and of themselves, but there’s a fine line between being assertive and being domineering.

Keeping Track to Avoid Losing Track
by Darlene E. Crone-Todd, Ph.D.

Today in the United States, 35.7% of the population is classified as being obese (Ogden, Carroll, Kit, & Flegal, 2012). The percentages in Canada (24%; Shields, et al, 2010) and Mexico (30%; Organization for Economic Co-operation and Development, 2012) are not far behind. Some of the reasons for these numbers lie in terms of the availability of relatively higher-calorie food, larger serving sizes, and a population that is increasingly sedentary. Whatever the reasons, the health risks associated with obesity are serious and cost millions in health-care related expenses each year (cf. Birmingham, Muller, Palepu, Spinelli, & Anis,1999; Long, Reed, & Lehman, 2006). Clearly, gaining control of our eating and exercise habits is an important key to changing both the obesity statistics and reducing health care costs.

The good news is that these are exciting times in terms of methods being made more readily available for people to gain control over their healthy behaviors. For example, you may notice that there has been a fair bit of interest in mobile phone apps for keeping track of what you eat (Melnick, 2012; van Grove, 2012), how much you exercise, and your blood sugar levels (“Glucose Buddy”, 2011). These apps provide a source for good usability, and can be more or less seamlessly integrated into one’s life. As many of our habits concerning eating and activity tend to get away from us precisely because they are mindless habits (Coatley, 2012), these apps can help you to become more mindful and develop new habits. As mentioned in a recent article by Freedman (2012), these apps have really made the science of behavior as described by Skinner more immediately available to everyone.

Why is our Eating Out of Control?

Why should we keep track of what we eat, and how much we exercise? As a species, humans have evolved into a mainly tertiary society in which food is readily available, and we exercise less. In past generations, food was less readily available and the caloric output was much higher. All of our labor-saving devices and modern work have made this evolution in our culture possible, while at the same time reducing our need for caloric density. However, as humans evolved to prefer historically scarce food containing fat and fructose (sugar), we essentially have a difficult time resisting these very foods even when they are readily available.

So it is that we need to change our eating and exercise habits. Simply stated: We need to eat less and exercise more. To maintain weight, the caloric intake must equal the caloric output (or, what we eat and drink has to equal what we burn off). To lose weight, the caloric intake must be lower than the caloric output. There are several ways to achieve this balance: (1) via reducing intake, and keeping output the same; (2) keeping intake the same, and increasing output; or (3) both reducing intake and increasing output.

One other thing that we know is that we tend to underestimate the caloric content of what we eat, and overestimate how many calories we burn (Lichtman, et al, 1992). It is for this reason that weight...
in newsletter) who crafted the BBS standards. These will serve as the foundation for a national certification scheme to identify and recognize best safety practices within Italian industries. The conference included presentations recognizing the value of behavioral science by prominent Italian leaders including Maurizio Sacconi, former Minister of Labor and Cesare Damiano, current Minister of Labor.

Italy has embraced behavioral approaches to safety with vigor and is launching a comprehensive and sophisticated effort to disseminate BBS applications across the country. Efforts include training practitioners in behavioral approaches to safety, support of university programs, development of a B-BS certification scheme, organization of certifying bodies, and continued engagement with leading researchers to advance behavior science applications to improve work safety and community well-being.

Consistent with the CCBS mission to advance behavioral science and applications to issues of social importance, this conference illustrates the value of collaborative international efforts to improve the human condition.

Newly Accredited Behavioral Safety Programs!

The Commission on Behavioral Accreditation – Behavior-Based Safety has had a busy summer reviewing 10 behavioral safety programs for Accreditation. Congratulations to programs achieving Accreditation and other programs of note. All will be recognized during Behavioral Safety Now 2012 to be held October 9-11 in Jacksonville, Florida.

Achieving Accreditation
September 2012

Bay Industrial Safety Services
Workforce at the Robinson Illinois Marathon Refinery

Brand Energy Services
Workforce at the Robinson Illinois Marathon Refinery

Gribbins Insulation Company, Inc.
Workforce at the Robinson Illinois Marathon Refinery

Lytle Electric Company, Inc.*
Workforce at the Robinson Illinois Marathon Refinery

Marathon Petroleum Company LLC*
Illinois Refining Division

SENCO Construction Inc.
Workforce at the Robinson Illinois Marathon Refinery

Advantage Logistics Southeast – a Division of SUPERVALU*

SDR Coating Company
Workforce at the Robinson Illinois Marathon Refinery

*Re-accredited companies

Silver Certification
FreitagWeinhardt, Inc.
Workforce at the Robinson Illinois Marathon Refinery

White Construction, Inc.
Workforce at the Robinson Illinois Marathon Refinery

Bronze Certification
Stewart Security Patrol Incorporated
Workforce at the Robinson Illinois Marathon Refinery

Hotel Accommodations: Our hotel this year is the DoubleTree Hotel next door to ADI and a block from MARTA (mass transit). Call (800) 222-8733. Group name: Cambridge Center for Behavioral Studies. No special code is required. Our group rate is $99.00 (+ tax) per night for a standard room. Rate includes high-speed internet access and a full breakfast buffet. For online reservations: http://doubletree.hilton.com/en/dt/groups/personalized/A/ATLBHDTCCB-20121108/index.jhtml?WT.mc_id=POG

A bit about costs...The meeting costs per person will be $260. (This includes reception, meeting refreshments, lunch and dinner.) Attendees are responsible for personal hotel accommodations and meeting costs for themselves and their guests.

Registration for attending the annual meeting will be found online through the CCB Store. Questions? Please contact Rebekah at pavlik@behavior.org.
Continued from Page 6 ~ 6 Ways to Maintain Your Mental Flexibility

In order become more flexible, it helps to first recognize and record situations where you most frequently try to steer the ship. Observing your own inflexible behavior lets you notice those situations where you could sometimes stand back a bit and let others take the lead. At this point, you’re not trying to change your behavior; you’re simply becoming aware of the points in your day where you could opt to be less rigid. Jot down these situations for future reference.

Practice Flexible Actions

You know that practicing yoga, stretching after workouts and getting regular massages can all help your body become more flexible. Of course, we’re not talking about physical flexibility in this instance, but many of the same philosophies apply to your mental behaviors.

In yoga, if you want to really get a good stretch and build strength, you’ve got to come to class regularly and practice your postures, continuously pushing yourself a little further. Similarly, if you want to maintain a mellow attitude, you’ve got to practice stretching beyond the normal limits of your mental flexibility. For example, if you’re constantly cleaning up the kitchen and bathroom before you leave for work, you can practice your flexibility a few mornings a week by leaving the breakfast dishes in the sink and the bathroom counter a mess. If you’re the one that always makes the weekly date night plans, let your hubby know that you’re leaving this week’s reservations up to him. Each time you stretch and try a new way of interacting with your environment, you become more flexible and it becomes easier to let go. Again, as it is in yoga, so it can be in life!

Set Small Goals for Mental Stretching

Once you’ve spent some time observing and tracking your inflexible behaviors and you’ve started to practice being flexible in certain situations throughout your day, the next step is to set small goals for mental stretching. Great runners set weekly mileage goals when they’re training for a marathon. Successful dieters set reasonable targets for steady weight loss each week. If you want to keep up your motivation and see change quickly, choose how many times you’ll be flexible throughout your day or week, write down your goal and post it where you can see it.

How will you know whether your habits are really improving? Make sure to track your practice. Jot it down in your planner. Text or email yourself a quick note. Make a chart and stick it on the fridge (after all, you love charts!). As you see your behaviors moving toward that goal line each week, you’ll know that you’re moving toward a lasting change.

Reward Your Choice to Retreat

Because patterns of inflexible behavior develop over long periods of time, changing them is a big challenge. For a while, you’re likely to feel uncomfortable practicing your flexibility in everyday situations. It will be tough to bite your tongue when things (like laundry, planning, creating employee schedules, packing lunches, following up on emails, etc.) aren’t being done to your exacting standards.

During this transition, you can make use of some extra incentives to keep you motivated to mellow out. Do you like back massages, nights at the theater, and bouquets of fresh cut flowers? Well, here’s your chance to have them all! Using the goals you’ve set for your mental stretching, build in rewards like these for sticking to your program each week. If you let a co-worker field those nonessential group emails today, give yourself a pat on the back and a piece of dark chocolate. If you chose to sit silently in the passenger’s seat instead of navigating aloud each time your daughter was at the wheel this week, get your nails done over the weekend.

Adding in incentives will help you start to rewrite your own behavioral history. You’ll be earning the things you like for being flexible instead of being perfect. You can use rewards to grow your flexibility until going with the flow starts to become a more natural reaction. And, the best part is you can come back to this strategy whenever you notice yourself slipping into those stale, old patterns of rigidity.

Learn that Failure is Functional

Becoming more flexible is a great wellness goal, especially for busy women, wives and moms, who often shoulder a heavy load. It takes time to learn to let go and to share some of your burdens with others.

As you attempt more flexible actions each day, notice some of the stress being lifted from your life. Sure, there will be days when that pesky perfectionism bug comes back to sting you. Perhaps you’ll fall back into control while preparing an important work project or planning a family vacation.

When you fail to be flexible, you can come to realize your most menacing triggers. The next time you’re faced with a similar situation, you can try to manipulate the circumstances in your favor (e.g., ask for extra time on big projects or recruit someone to help make travel plans). Just remember that falling into inflexible habits for a little while is OK, because now you’ve got the strategies to go back and...

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Megan Coatley earned a master’s degree in behavior analysis from Western Michigan University (WMU) and obtained her BCBA in 2005. Her clinical work in the field of autism and developmental disabilities and her personal passion for health and wellness prompted her to found SPARK Behavior Solutions, LLC, a company that utilizes behavioral solutions to spark healthy lifestyle change.

The Cambridge Center - Sloan Century Series in Behavior Analysis

This series encompasses a variety of scholarly formats and works intended to present the field to a wide audience. Buy in CCBS Store!

- At My Own Pace: The Autobiography of Fred S. Keller ~ Edited by Jon Bailey, Mary Burch, A. Charles Catania & Jack Michael
- Behavior Analysis for Lasting Change, Third Edition ~ G. Roy Mayer, Beth Sulzer-Azaroff, and Michele Wallace
- Behavioral Foundations of Effective Autism Treatment ~ Erik A. Mayville and James A. Mulick, editors
- Conceptual Foundations of Radical Behaviorism ~ Jay Moore
- Learning, Fifth Edition ~ A. Charles Catania
- Time, Space, and Number in Physics and Psychology ~ William R. Uttal
behavior they observed was safe, and sometimes the only safety issues that they report on are related to safety conditions rather than behaviors. Several members of my audience reported problems of this nature.

**Addressing 100% Safe Observations**

Generally the Safety Committee (or BBS Steering Committee) has responsibility for addressing this issue. Most of the commercial databases for tracking observations simplify the process of finding observers who routinely turn in completed 100% safety observation checklists. Once those individuals are identified, the next step is for the Committee Members to conduct “calibration observations” with those observers. Calibration Observations involve going along with the employee and then comparing notes on what was observed and coaching the observer on recognizing and recording hazardous behaviors. As they are doing calibration observations, Steering Committee members need to analyze the factors that have contributed to the 100% safe reporting. In some cases, employees have trouble recognizing the hazard, which means the organization has a skill issue that needs to be addressed. If your observers are not recognizing one of the critical behaviors, probably other employees have that same problem. Addressing this hazard recognition deficit can often be done in a simple and effective way by taking pictures or videos that show both examples and non-examples of the target behavior.

In some cases, the 100% safe observations are not caused by a failure to recognize the hazard, but rather by a failure to accurately record what they see, more of a motivation issue. Again, the Steering Committee members need to listen closely to what the observers say about why they recorded only safe behaviors. Perhaps the most common cause for an employee to hesitate to record an unsafe practice is the fear of getting their coworker in trouble. In our group, several participants thought this was a factor that impacted on the accuracy of recording in their organizations. The way that we typically address this issue with our clients is to create a policy statement or leadership commitment statement that assures employees that the data from observations will not be used against employees. None of the participants reporting this problem had such a statement. Further, when I put the question to my audience, 100% (of the 32 people who responded) thought that such a statement, signed by management and communicated through all levels of the organization, would help address this problem.

One other important factor that impacts on observer’s motivation to accurately record both safe and unsafe practices comes from the Safety Committee’s use of the data to develop action plans. Not only do they have to develop and execute such action plans, they also have to communicate progress on those plans throughout the organization. Observers need to know that the data are important for supporting the organization’s safety improvement efforts.

**The Lack of Useful Comments**

When considering the lack of useful comments, the Safety Committee once again needs to analyze whether the root cause of this issue in their organization is related to skill or motivation. Often, being able to objectively describe the task and circumstances of an unsafe act is a pinpointing skill that needs to be taught and practiced in both observer and refresher training. More often however, a failure to record detailed comments is a motivation issue. First, the natural consequences work against getting good comments—writing good comments simply takes more effort than leaving the page blank. The only way to offset this natural consequence is by counteracting it with other positive consequences. The most important natural consequence for writing a good description is for the employee to see the Safety Committee use detailed information to help create effective action plans that get the causes of the unsafe act addressed. Often that is not enough however, as addressing the causes of unsafe practices often takes time. For this reason, the Safety Committee should try to provide positive feedback for good comments, and even provide regular recognition to observers who provide exemplary comments that clearly describe the task, the at-risk behavior, and the factors contributing to it. Such efforts by the Steering Committee provide the reasons employees need to take the time to provide good comments and thus are an important part of an effective BBS process.

In this case, “the lack of useful comments” is interrelated with one of the other problems experienced by our session participants, though it was the least frequent concern. If your process does not result in meaningful action plans, employees will not remain motivated to provide good comments. Each of the elements of BBS are inter-related; sometimes a weakness in one area contributes to a more obvious weakness in other areas. In the worst cases, you have observations that lack meaning and make no contribution to safety.

I look forward to discussing some of the other challenges experienced by my meeting participants in the next installment! Go to Common Problems Part 2: Low Participation at www.qualitysafetyedge.com

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**Second Edition Available**

*Applying Behavior Analysis Across the Autism Spectrum, Second Edition* is appropriate for use in training programs designed to prepare personnel for working with children with autism, and which conform to the BACB’s Guidelines in terms of course coverage and the required hours of field experience for graduate and undergraduate certification.

In this second edition, Beth Sulzer-Azaroff is joined by co-authors Kathleen Dyer, Susan Dupont, and Dianne Soucy, who have added rich programmed applications from their actual practice settings. Each unit begins with a running narrative that provides a human-interest context for learning and practicing a set of basic instructional pre-programmed packages for students to master during their initial introduction to practice in the field. The narrative is then is followed by a set of well-structured materials to guide and support students as they more independently design and functionally analyze the impact of individually tailored programs.
loss programs tend to ask clients to keep a food diary. Food diaries require one to write down everything that they eat and drink, and then the dietician or nutritionist will help you to estimate how many calories are consumed per day. Keeping track of exercise can also be done, with estimates calculated based on the duration and type of activity. The research shows that people start consuming less merely by keeping track, and that those who keep track are more successful in the long run (Kong, et al., in press). It is also likely that keeping track of exercise leads to a similar increase in physical activity. The problem was that information about daily caloric intake and exercise caloric output was not immediately available. Having that feedback immediately available is one of the key benefits of using a mobile phone app of this sort.

Essentially, keeping track through the convenience of your cell phone provides an opportunity to obtain a real-time, ongoing record of daily intake. There are several apps from which one can choose, such as myfitnesspal (myfitnesspal.com) and livestrong (livestrong.com) or Weight Watchers (weightwatchers.com), and these apps provide users with various types of feedback and information, such as the exercise output subtracted from caloric intake, nutritional intake, and graphs of your weight over time.

Why is Feedback Useful for Gaining Control?

Peterson (1982) reminded us that “feedback” is not really a precise term. While we use it every day in many situations, feedback itself takes many different forms. For example, it might cue us to engage in some behavior (calories over limit = more exercise), or even elicit an immediate reflex from us (calories over limit = emotional response). Feedback can also serve to reinforce our behavior, or even punish it. Speaking from the point of view of having used myfitnesspal to lose 40 pounds over the past two years, here is how the feedback that I experienced appears to work (it should be noted that this review does not constitute medical, nutritional, or exercise output subtracted from caloric intake, nutritional intake, and graphs of your weight over time.

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• **Goals:** The program goals are tailored to the individual in that the program takes into account one’s gender, age, height, weight, current physical activity, and goals for weight loss. This initially sets up a goal for each day in terms of caloric intake and weekly exercise activity. As one loses weight, the program adjusts the daily caloric intake accordingly.

• **Caloric Intake:** If one stays within the caloric intake limit, the immediate feedback (after entering my food) provides reinforcement for meeting my daily goal. If one is near or above their limit at lunch, the feedback acts as a cue to either slow down eating, engage in more exercise than usual, or both. (For example, if I see that I went over my carbohydrate limit, I might go out for a 20 minute walk; or, if I see that I overate at lunch, then I plan to have a smaller supper.)

• **Nutritional Information:** This section provides feedback on the nutritional intake, based on the reported food that you have per day. This type of feedback provides both reinforcement for keeping within recommended daily intakes, and can serve as a cue to make different food choices for the remainder of the day. (For example, when I see that my carbohydrates are met, but that I still need to fill in some protein and fat, then I will make a choice to snack on nuts or seeds to round out my daily intake.)

**• Exercise Calories:** Once a cardiovascular or strength activity has been entered, the calories burned are subtracted from the intake calories, resulting in a “net calorie” report. These values are prominently displayed on the screen, and again provide immediate reinforcement for staying within one’s goal. This is also true when one has consumed more calories than the daily goal, and the exercise calories burned now result in a net caloric intake that is consistent with the daily goal.

**• Newsfeed:** On the home screen, there is a newsfeed that reports things like how many calories you have burned today, and whether there is any weight loss; however, it does not report weight gain or lack of exercise. Thus, this type of feedback can be viewed as praise when one engages in desired behavior, and for results that are consistent with one’s goals. The lack of commentary when one gains weight or does not exercise can be perceived as non-judgmental, which can be useful in a weight loss regime.

**• Social Networking:** The program allows you to share your newsfeed with a friend. Myfitnesspal claims that doing so usually results in greater weight allowing you and your friends to view successes in weight loss and exercise; however, the newsfeed will also report when a person has not logged in for several days. (For example: “…has not logged in for 3 days. She might need some encouragement.) At any point, friends can leave comments on the newsfeed to provide additional praise or encouragement. (Some examples include “Way to go!” in response to logging in for some number of days or for weight loss, and “Man…what a slacker – get back on it!” in response to someone not logging in for a week.)

The above points are only the main features used in Myfitnesspal, but are the most important ones for why it may be effective. All of the online apps have somewhat similar features, and if you are planning to use one, explore their features to determine which one is the best choice for you. Keeping track, especially with one or more friends, is a great way to change the mindless habits that lead to losing track and defeating our goals into mindful habits that keep us on track.

**References:**


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*Continued from Page 2 ~ How Good Science is used to Promote Bad Treatments*

carbon monoxide poisoning and wound healing (e.g., Leach, Rees, & Wilmhurst, 1999; Feldmeier, 2003).

Dan A. Rossignol and colleagues have conducted several studies on the effect of hyperbaric oxygen chambers on different symptoms of autism (e.g., Rossignol & Rossignol, 2006; Rossignol, Rossignol, James, Melnyk, & Mumper, 2007; Rossignol, et al., 2009). In reviews of the literature provided in these studies, the author(s) cited neuroinflammation of the brain of children with autism as one of the main reasons for using HBOT with children on the spectrum. For example, during an interview discussing how HBOT might improve autism symptomology, Rossignol noted that “a recent study” (no citation provided) found neuroinflammation of studied children with autism (Rossignol & Small, 2006). The danger of neuroinflammation, as described by Rossignol, is “hypoperfusion” (i.e., decreased blood flow to the brain), which could possibly have the negative effects of limited cognition, poor attention, and other behavioral manifestations associated with autism spectrum disorders. Rossignol pointed out that HBOT has been shown to increase the amount of oxygen that is carried via the plasma and thus infused into the tissues. He referred to at least one animal study that showed that HBOT reduced inflammation; thus, possibly the same results could be obtained using HBOT with children with autism. He assumed that if the brains of children with autism were inflamed with reduced blood flow, this could be causing some of the autism symptoms, so by using HBOT, one could increase oxygen flow to the brains and thus alleviate these negative conditions. Rossignol ends his interview by saying,

…the thing that excites me so much about hyperbaric oxygen therapy, is the anti-inflammatory effects, which I think is going to help a lot of conditions, not just autism… Certainly, it seems like a lot of people talk about increase in oxygenation of the brain as being the mechanism of improvement with autism (p. 951).

All three studies by Rossignol and his colleagues (Rossignol and Rossignol, 2006; Rossignol, et al., 2007; 2009) iterated the same point about neuroinflammation. The general hypotheses by proponents of HBOT are that the brains of children with autism show evidence of neuroinflammation; HBOT might reduce this inflammation; and the result could be improved functioning. As hypothesized by Rossignol and Rossignol (2006), “…autism is… characterized by… neuroinflammation………HBOT… has potent anti-inflammatory effects and reduces oxidative stress.” (p. 217).

To support the belief of neuroinflammation of the brain of autistic subjects, and thus the use of HBOT that they promote, Rossignol and colleagues cited Vargas, Nascimbene, Krishnan, Zimmerman, and Pardo (2005), who were one of the first to find evidence of neuroinflammation. Vargas and colleagues conducted brain autopsies on 15 persons diagnosed with autism, ranging in age from 5-44 years. A control group of nine individuals with no diagnosis was studied as well. Brain tissues from the subjects were collected and the researchers conducted numerous detailed medical analyses (i.e., immunocytochemistry, cytokine protein arrays, enzyme-like immunosorbent assays). One of the major findings was “…an active neuroinflammatory process…” mostly in the cerebellum of the patients with autism (2005; p. 67).

However, Vargas and colleagues were very circumspect in their conclusions and implications. In fact, they published a “Frequently Asked Questions” primer (http://www.neuro.jhmi.edu/neuroimmunopath/autism_faqs.htm) so that they could more easily explain the limitations of their research as it applied to clinical practice. Their concerns were several. First, they emphasized that it was not certain, based upon their study, that all persons with autism would in fact be found with neuroinflammation; some persons may not in fact show any sign of this condition. They explained that some of their subjects exhibited other neurological disorders (such as epilepsy and mental retardation), and thus the neuroinflammation might have been associated with those conditions instead of the autism.

They also acknowledged that such inflammation was not necessarily harmful to the brain. Although the inflammation could be a cause of brain injury or dysfunction, Vargas and colleagues asserted that another equally plausible explanation might be that the inflammation was protecting the brain – “…there is strong evidence from experimental models that in some situations, both microglia and astroglia also contribute to the repair and restoration of neuronal connections and produce growth factors to maintain normal CNS function” (p. 1).

Lastly, the authors asked this question in their FAQ: “If there is neuroinflammation in the brain of some autistic patients, is treatment with anti-inflammatory or immunomodulatory medications indicated?” (p. 3). Their answer was clear – “At present, there is no indication for using anti-inflammatory medications in patients with
One indication of this new flexibility was the Minister’s decision to sanction funding for a pilot ABA school which would educate children with autism through employing the principles of Applied Behaviour Analysis (ABA). By 2004 the number of funded ABA ‘pilot’ schools in the Republic of Ireland had grown to twelve, this number was expected to increase and the future looked promising for educational provision for children with autism.

However, rather than grow from this point the ABA schools came under fire as the Department of Education (DES) adopted a policy of ‘eclectic’ provision for children with autism, a provision with no research evidence of effectiveness delivered by teachers not required to have any understanding of or any qualifications in the area of autism spectrum disorders. This was particularly driven through by the 2004-2008 Education Minister Mary Hanafin who decided that there was no evidence available to suggest that ABA was more effective than other interventions for children with autism. Although the Minister’s assertion was robustly challenged at the time and there is no peer reviewed research evidence in publication to support the assertion that an ‘eclectic’ approach to the education of children with autism is equal or superior to approaches based upon the principles of behavioural analysis the Minister maintained her position, a position maintained by the Department of Education to this day.

Despite spending over €70m on the pilot ABA schools, the DES decided to shut them down, with no evaluation carried out, no report produced.

Why would the DES not want to evaluate a system that it had spent so much money on? What might the evidence have said? Was it fearful of what the evidence might say?

Why would it get rid of evidence based provision for children with autism and replace it with a model that is unproven, not evidence based? Was this done in the interests of vulnerable children or vested interests?

Speaking in February 2008 former Minister for Education Mary O’Rourke said she would like to see an open approach to the greater provision of Applied Behaviour Analysis for children with autism and she accused her former Department of having a “lingering anachronism” towards ABA and that “the door is not fully open within the Department of Education to the idea of embracing ABA, as I said, in a full blooded way.”

Speaking in that same month Brian Hayes, Minister of State for Public Service Reform in the current government, said that he believed that the Government was obliged to provide the model of education identified as most suitable for each pupil and that “if it shows on a professional basis that ABA is the model for that particular child, I believe we have a constitutional responsibility to provide that model of education.”

Speaking in that same month Ireland’s current Minister for Education Ruairi Quinn, in defence of the right of children with autism to professional ABA provision stated:

“The Department of Education and Science’s refusal to recognise the merit of the ABA method has more to do with institutional rigidities and conservativism within the civil service than a real honest and open evaluation of the effectiveness of the ABA method...We urge the Minister for Education [Mary Hanafin] to recognise the error of her ways and to take courage in her personal judgement and not be bullied by teachers' interests and civil service conservatism.”

As parents of children with autism fought to keep the ABA schools open with over 4,000 supporters signing a petition the current Minister for Health, Dr. James Reilly, rallied to their side claiming that parents were “being bullied” by the State and that they were right to fight. When in opposition the current Deputy Prime Minister of Ireland, Eamon Gilmore, said that he would support the right of children with autism to ABA.

However, now that Mssrs. Quinn, Reilly, Hayes and Gilmore are in government they have abandoned their support of children with autism and today, Quinn now quotes the ‘official line’ that he criticised so heavily when in opposition.

Why have they abandoned children with autism and denied them the right to ABA? Why has Ireland, when it stood on the cusp of making a great advance, turned back the clock? Why, almost twenty years after we had a Minister for Education stressing the need for “up to date data” is the current government following the example of its predecessor and pointedly ignoring the “data”, the depth of international research that supports the effectiveness of ABA as an intervention for children with ASD as reflected in reports such as Maine and the National Standards Project?

Why was Minister for Education Ruairi Quinn right? Has he sold out children with autism and become an evidence denier, wilting in the face of “civil service conservatism” and “bullied by teachers’ interests”?

Ireland’s last ABA school, kept going by a group of dedicated parents and ABA professionals, ran out of funds and closed its doors on July

http://www.labour.ie/press/listing/1202840740302355.html
ix  www.gopetition.com/petition/38966.html
x  http://www.irishtimes.com/newspaper/ireland/2011/0730/1224301619198.html
xv  http://www.labour.ie/press/listing/1202840740302355.html
Continued from Page 11 ~ How Good Science is used to Promote Bad Treatments

autism” (p.3). In addition, Pardo, Vargas, and Zimmerman (2005) argued that treatment of neuroinflammation in children with autism was not yet clinically indicated. They asserted that there was not yet a clear understanding of the role of neuroinflammation in autism, and it could possibly be the case that neuroinflammation was in fact part of the healing process (Neuhaus, Archelos, & Hartung, 2003). Thus, researchers who were instrumental in discovering the presence of neuroinflammation in the brains of persons with autism provided very clear and public limitations of how their research might be applied to possible clinical interventions. Further, they cautioned against assuming that neuroinflammation should automatically be considered a debilitating condition. If there is a possibility that neuroinflammation may not be a condition of autism, then using the findings of Vargas and colleagues to support the use of HBOT to reduce inflammation is questionable. However, Rossignol and others have been conducting research on the effect of HBOT on various symptoms of ASD assuming that neuroinflammation is harmful and its elimination (through the mechanisms of increased atmospheric pressure in the chamber) will lead to reduced inflammation of tissue and improvement. Although Rossignol cited the Vargas and Pardo work on their finding of neuroinflammation, Rossignol never included, in his research papers, the strong precautions disseminated by these authors. At the very least, the proponents of HBOT should more formally repeat the cautions described by Vargas and colleagues.

At this time, HBOT does not have strong empirical evidence of effectiveness in alleviating symptoms of autism (e.g. Granpeesheh, Tarbox, Dixon, Wilke, Allen, & Bradstreet, 2010; Lerman, Sansbury, Hovanetz, Wolever, Garcia, O’Brien, & Adedipe, 2008). Thus, it must be considered at this time to be a fad treatment. However, its proponents invoke the trappings of science to make the treatment seem more effective than it actually has been proven to be. A little bit of good science (i.e., presence of neuroinflammation) seems to be used inappropriately to promote an unproven therapy (HBOT) as effective. Unfortunately, this is a strategy used by advocates of pseudoscience, but a strategy that will ultimately fail with more knowledge of what comprises real scientific method and the development of a skeptical attitude.

References


Continued from Page 12 ~ Story from the Republic of Ireland

29th 2011. xvi xvii xviii What a shame. What a shame if that proves to be the last word, that ignorance prevails over evidence and children with autism are denied that most basic of human rights, the right to an appropriate education.

xvi http://www.labour.ie/press/listing/1202840740302355.html
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