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Spreading the News: History, Successes, Challenges and the Ethics of Effective Dissemination

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Spreading the News: History, Successes, Challenges and the Ethics of Effective Dissemination

Abstract

Behavior analysts are responsible for disseminating behavior analysis by making information about the science available to the public, professional peers, and government officials. The purposes of the current paper are to outline the dissemination efforts of professional associations in the field of behavior analysis; to highlight the parallel efforts to disseminate and establish behavior analysis as a profession, including the evolution and growth of certification; to share examples of dissemination successes; to describe some challenges that have been faced when disseminating behavior analysis internationally; and to suggest some strategies for ethical and effective dissemination of behavior analysis.

Introduction

“If a scientific community does not arrange for contingencies that assure its survival, then so much the worse for that community, and for the rest of the culture at large” (Morris, 1985; p. 108).

The key to bridging the research to practice gap is effective dissemination. Dissemination is the “targeted distribution of information and intervention materials” to a specific audience (Schillinger, 2010, p.1). It is imperative that scientists and practitioners participate in explicit, accurate, and unbiased dissemination about their respective areas of expertise to the public, professional peers, and government officials (Morris, 1985). Behavior analysts are responsible for promoting behavior analysis by making information about the science publicly available (Behavior Analyst Certification Board, 2017a).

The gap between clinical research and practice creates a well known and vast challenge for practitioners (Schillinger, 2010). Although there have been many positive achievements due to scientific inquiry and investigation, too often these technological (e.g., personal computers, Skinner, 1984; widespread adoption of electric cars, Khazaei & Khazaei, 2016), medical (e.g., hand washing before surgical procedures, Gottlieb, 2015; antiretroviral therapy, Lange & Ananworanich, 2014), and educational achievements (e.g., precision teaching, Lindsley, 1972; personalized system of instruction, Keller, 1968) are not immediately available for adoption by the general community, with the average time of adoption being 17 years (Morris, Wooding, & Grant, 2011). The most effective scientific achievements are those that instantly improve conditions and have an immediate impact and social significance.

The current paper aims to provide an overview of the dissemination efforts of two professional associations in the field of behavior analysis, the Association for Behavior Analysis International and the European Association for Behaviour Analysis; to share an array of diverse examples of dissemination successes; to describe some challenges

that have been faced when disseminating behavior analysis internationally; and to suggest practical strategies for the ethical and effective dissemination of behavior analysis. The paper begins with an outline of the parallel efforts to disseminate and establish behavior analysis as a profession, including the evolution and growth of certification.

Behavior Analyst Certification Board and Professional Identity

The successful dissemination of a science requires agreed upon terminology, strategies, tactics, standards for training, and an overarching philosophical framework that are nationally and internationally relevant. Efforts to disseminate the science have been in parallel with efforts to establish a professional identity for behavior analysts, and the importance of the development of a professional credential has been the focus of these endeavors for several decades.

The earliest discussions about the development and adoption of a professional credential date back to the 1970s and eventually led to the first certification program – the Minnesota Certification Program – which started certifying individuals for job placements in 1977. Unfortunately, this program was short-lived because of the lack of administrative support necessary to sustain the examination procedures required. The Midwestern Association for Behavior Analysis (MABA), the predecessor to the Association for Behavior Analysis International (ABAI), approved a two-stage procedure for certifying individuals in behavior analysis in 1979. The first stage involved a general examination assessing verbal competency, and the second stage assessed both verbal and practical skills. First stage assessments took place between 1982 and 1985, but a report presented in 1988 raised some serious concerns that led to the suspension of the certification program (Shook et al., 1988). These concerns included the absence of a job analysis for practitioners, poor examination reliability and lack of administrative consistency. No certificates had been issued for those who had completed the first stage assessments.

An early certificate program was developed in Florida that involved an examination based on both short- and long-answer questions and with no eligibility requirements. Only a handful of individuals received a certificate and this program only lasted a few years, however, it set the scene for a professional certification program in Florida and a professional credential – the Certified Behavior Analyst. This program led to the development of a task list and an examination item bank of both free-response and multiple-choice questions. The free-response items were removed in 1991 because of concerns about the subjectivity and response-effort involved in grading such responses. The First Edition Task List was published in 1994 and eligibility requirements for the examination were introduced – a bachelor's degree and 45-hours of behavior analytic coursework. The introduction of the new task list led to the offering of a master's degree level credential – Certified Behavior Analyst – and bachelor's degree level – Certified Associate Behavior Analyst. An update to the task list in 1998 resulted in the publication of the Second Edition Task List. Approximately 2,000 behavior analysts were certified under the Florida credentialing program.

The success of the Florida certification program encouraged others to pursue professional credentialing, and due to the response effort involved in starting a new program, and the resources that had already been poured into the Florida program, other US states simply used the Florida program. These included California, Texas, Pennsylvania, New York and Oklahoma. It became clear that a national professional body was needed in the United States to further develop and disseminate professional credentials for behavior analysts, and the Behavior Analyst Certification Board®, Inc. (BACB®) was founded in 1998. From 1999 to 2004, Florida partnered with the BACB and systematically transferred all responsibilities over to the BACB such that by 2005, all the existing state programs had transferred their certificants over to the BACB and ceased operating.

The BACB is an independent non-profit corporation rather than a membership organization. It was founded in May 1998 and the first round of BACB examinations took place in May 2000 using the Florida certification examinations. The BACB certification programmes meet rigorous and stringent quality control standards (Shook, 2005) and they are accredited by the National Council for Certifying Agencies, the accreditation body of the Institute for Credentialing Excellence (2010). Details about the BACB's credentials and eligibility requirements for each of these credentials may be found via the BACB's website (www.bacb.com).

The BACB's Global Mission is to protect consumers of behavior analysis services worldwide by systematically establishing, promoting, and disseminating professional standards. The BACB's Global Vision is to solve a wider variety of socially significant problems by increasing the availability of qualified behavior analysts around the world. To further the mission and vision, the BACB has (as of August 2017) made its Board Certified Behavior Analyst (BCBA) and Board Certified Assistant Behavior Analyst (BCaBA) examinations available in English, Spanish, Chinese (both simplified and traditional), Hebrew, Italian, Brazilian Portuguese, Korean and Russian. Further translations are planned for Polish, Japanese, French, Arabic and Hindi. The Registered Behavior Technician (RBT) examination will also be translated into all these languages. As of October 2017, there are over 26,000 BCBA and BCaBAs distributed across 78 different countries and over 32,000 RBTs across the world. BACB verified course sequences (VCSs) are housed within 284 separate institutions across 35 countries (BACB, 2017b).

Association for Behavior Analysis International and Dissemination

“International dissemination, especially in areas where trained behavior analysts are few, requires the sustained work and commitment of many individuals.” (ABAI, 2017a).

The Association for Behavior Analysis International (ABAI; www.abainternational.org) was established in 1974 and is the primary membership organization for behavior analysts around the world. As well as hosting annual conventions in the United States, ABAI also hosts bi-annual international conferences around the world, including in Italy (2001), Brazil (2004), China (2005), Australia (2007), Norway (2009), Spain (2011), Mexico (2013), Japan (2015), with forthcoming conferences planned for France (2017) and Sweden (2019). ABAI has sent international

delegations to Russia in 2000, China in 2001, the Gulf region in 2003 (cf. Kelly et al., 2016), Jordan in 2005 and India in 2016. A delegation consists of a small group of experienced behavior analysts who have expertise in one of the areas needed in the host country, such as organizational behavior management, basic and applied research, developmental disabilities, or education, and they engage in multiple activities (e.g., seminars and presentations, meeting with media representatives) to promote and disseminate behavior analysis.

ABAI affiliated chapters are membership organizations that are usually defined by a geographical boundary, and chapters commonly hold conferences, sponsor lectures, produce newsletters, and offer continuing education opportunities. As of [October 2017](#), there were 50 affiliated chapters in the United States with almost 13,000 members and [44](#) non-US chapters spanning six continents with more than 10,000 members – membership in ABAI affiliated chapters has nearly doubled in the past decade (ABAI, 2017b). The first non-US chapter to be affiliated with the ABAI was ‘Behavior Analysis in Ireland’ in 1983. The most recently affiliated non-US chapters include ‘ABA Australia’, ‘Alberta ABA’ and ‘Kenya ABA’ in 2016 and ‘Lebanese ABA’ in 2017.

ABAI provides financial support for dissemination initiatives via the Society for the Advancement of Behavior Analysis (SABA, 2017). SABA was established in 1980 as a non-profit corporation with the mission to devote support to the welfare and future of behavior analysis and three of its awards are relevant to the current paper. The SABA *International Dissemination of Behavior Analysis* award is given to individuals or organizations that have demonstrated a significant contribution to international development outside of the United States. There have been 21 recipients since Professor Murray Sidman was given the first award in 1996. The most recent recipient, in 2017, was the New England Center for Children which serves children with autism across nine countries. The SABA award for *Enduring Programmatic Contributions in Behavior Analysis* is given to an agency, department, journal or publisher that through its work inevitably contributes to the dissemination of behavior analysis. Since 1998, there have been 19 recipients of this award, the majority of which were based in the United States. That said, the SABA Board encourages award recommendations for those operating outside the United States and in languages other than English. The SABA *International Development Grant* is awarded annually to individuals or organizations whose work both implicitly or explicitly involves the dissemination of behavior analysis in their region. The first annual SABA International Development Grants were awarded to individuals in Canada, Colombia and New Zealand in 1999. [Grants in 2017 were awarded to individuals working in Sierra Leone, Nigeria, China, Brazil and Canada as well as for a project to develop a smartphone application.](#) A total of [59](#) individuals or organizations [have been awarded grants since 1999.](#)

‘Dissemination of Behavior Analysis’ is a special interest group (DBA-SIG) of ABAI and provides services and support to members by hosting forums for information exchange. The mission of this SIG is to “disseminate the science of human behavior to the public at large, through the use of easy to understand explanations... to promote behavior analysis in a positive and accurate light, to help society realize the potential of our science” (DBA-SIG, 2017). The DBA-SIG has created several initiatives to promote the international dissemination of behavior analysis

including: the development of a website with regular blog posts and extra resources for members (<http://aboutbehavior.webs.com>); a presence on social media via Facebook, Twitter, and Instagram; the offering of two dissemination grants in 2017; the Skinner Journalism Award to encourage journalists and authors to write books and articles targeted at the general population which focus on behavior analysis; the Behavior Analysis Digest International (BADI) which provides an exchange of news and information about behavior analysis; the coordination of the translation of presentations and instructional material into other languages.

European Association for Behaviour Analysis and Dissemination

The European Association for Behaviour Analysis (EABA; www.europeanaba.org) was established in 2003 and aims to promote and disseminate behavior analysis in Europe and to “provide an international forum within Europe for the study and discussion of matters relevant to behavior analysis”. EABA has individual members as well as affiliated chapters comprised of other national or regional associations in Europe. EABA runs bi-annual European conferences: Italy (2003, 2006, 2016), Poland (2005), Spain (2008), Greece (2010), Portugal (2012), Sweden (2014), with the next planned for Germany (2018). EABA also runs bi-annual summer schools, [with past sessions hosted in](#) Greece (2015) and Spain (2017). These events focus on the dissemination of findings from research and their implications for the practice of behavior analysis. EABA membership benefits include receiving a subscription to the European Journal of Behavior Analysis (www.ejoba.org), a journal established in 2000 and published in collaboration with the Norwegian Association for Behavior Analysis.

Dissemination Successes

Insurance Legislation

In the USA, the adoption of applied behavior analysis (ABA) as the basis of effective treatments for autism has been expansive, with 46 States (as of June 2017, with a recent annual increase of 3-4 states) now providing ABA-based therapy as a covered health benefit for individuals with autism (Autism Speaks Inc., 2017). Indiana was the first state to pass autism insurance legislation in 2001 and 16 years later, due to parental pressure and demands, most states have adopted similar legislation. Such widespread adoption and acceptance of ABA and its inevitable accompanying dissemination, at least within the US, will likely serve as an important precedent for other countries as they start to recognize and, ultimately, regulate the practice of behaviour analysis.

International Parent Training

Across Europe, despite major problems related to the dissemination of misinformation about ABA (Keenan et al., 2014), there have been some advances. The STAMPPP Project (www.stamppp.com) was a European initiative to develop *Simple Steps* (www.simplestepsautism.com), an online teaching resource for parents of children with autism. Simple Steps was developed by behavior analysts, in collaboration with parents of children with autism from Northern Ireland, from eight other European countries. The package has been translated into nine European

languages to date (with more translations in progress), and includes animations and video vignettes that illustrate behavior analytic principles in a fun and easy to understand way. Simple Steps has been used as the basic teaching tool for a successful online course to prepare students to become RBTs.

Legal Recognition within the Czech Republic

Since 2015, the dissemination of ABA has been particularly fast and successful in the Czech Republic, notwithstanding the effort required and the overcoming of many obstacles. This was predominantly as a result of a very small group of parents who, faced with a diagnosis of autism for their children and having looked at the evidence base, realized that local provision of behavior analytic services was almost non-existent. In 2015, there were no Czech BACB certificants and only two certificants in neighboring Slovakia. The parent group established a relationship with several universities – Queen’s University Belfast (UK), the University of Ulster (UK), and Masaryk University Brno (Czech Republic) – and organized a conference in Brno to raise awareness of ABA (Gandalovicova, 2016). This conference was attended by over 400 parents and professionals and was covered by a Czech television news channel. The foundation of the Czech Society for Applied Behavior Analysis (CSABA) and the society’s affiliation to the Czech Medical Association (a highly respected institution with over 20,000 members) followed. The goal of CSABA is to establish education and training in behavior analysis, to create a new non-medical allied health profession based on BACB certification, and to get ABA-based treatment reimbursed through the public health system. A hearing/seminar at the Czech Parliament in Prague was organized by CSABA in February 2016 and was attended by over 120 politicians, professionals and parents. This event culminated with a further meeting at the Ministry of Education and resulted in their commitment to fund a number of ABA initiatives, including funding for 15 Czech students to study with an international BACB VCS. In the middle of 2016, the first Czech BACB VCS was created at Masaryk University, with the first student intake planned for October 2017. In 2017, a graduate from Queens University Belfast became the first Czech BCBA. Legislation to create the new non-medical professionals of Behavior Analyst, Assistant Behavior Analyst, and Behavior Technician was passed by the upper house of the Czech parliament on 8th June 2017 and is to be signed into law by the President of the Czech Republic.

Online Successes

Other examples of successful dissemination efforts can be found online. Behaviorbabe (www.behaviorbabe.com) is a particularly user-friendly resource that employs a variety of social media platforms to offer frequent and fun examples of dissemination. Free webinars are presented on topics such as ADHD and anxiety, vocational skill development, active student responding, practical strategies for parents, behavior analysts' role in public policy, and sustainable applications of the science. Behaviorbabe’s mission is to promote the “ethical and accurate application and dissemination of behavior analysis” by making information about the science readily available and easily digestible. Behaviorbabe provides an excellent model for future dissemination efforts and continues to increase the ABA consumer base with more than 26,500 followers on Facebook and over half a million website views.

Another useful resource which provides consumers access to the science is Behavioral Science in the 21st Century

(bSci21; www.bSci21.org). bSci21 produces online publications encouraging diversity of practice (e.g. applications to trauma treatment, employee performance, and cultural change). These thoughtful and engaging blog posts aim to disseminate behavior analysis to the world. In addition, bSci21 offers continuing education opportunities, as well as media and consultation services for companies across the globe.

bSci21 has also sponsored the “Behavioral Observations Podcast” (www.behavioralobservations.com) which offers the opportunity to hear detailed interviews with behavioral scientists and experts in the field of behavior analysis. On this audio podcast, the invited guests discuss a wide range of topics including Acceptance and Commitment Therapy (Moran, Session 6), organizational behavior management (Rodriguez, Session 9), obesity and food insecurity (Rasmussen, Session 11), remote consultation (Miller, Session 13), depression, anxiety and stress (Friman, Session 16), behavioral economics (Reed, Session 17), behavioral gerontology (LeBlanc, Session 22), behavioral treatment of tic disorders (Carr, Session 25), and telemedicine (Machalicek, Session 26).

Behaviorbabe, bSci21, and the Behavioral Observations Podcast highlight how the sustained work and commitment of a few entrepreneurial individuals can help lead to the “acceptance of our worldview in other circles” (Lattal, 2017).

Challenges Faced when Disseminating [Nationally and Internationally](#)

One of the key problems with the dissemination of behavior analysis is the fact that its subject matter, *behavior*, is open to public inspection by anyone, whether trained in the science or not. Thus, most people think that they understand behavior and do not require further training. This has led to widespread misunderstanding and a degree of bias referred to as the *Dunning-Kruger effect*, where individuals are unable to reliably and objectively assess their own level of competence and, just as importantly, their level of *incompetence*. Consequently individuals frequently consider themselves much more competent than they really are (Schlösser, Dunning, Johnson, & Kruger, 2013). [Of course, behavior analysis is not the only discipline that experiences this phenomenon, however, the paucity of adequately trained professionals exacerbates the problem.](#) Short courses in behavior modification or the introduction of behavior analysis within general psychology courses (undergraduate and graduate) may have further intensified the problem and led to some health care professionals (e.g. clinical psychologists) wrongly thinking that they know all there is to know about behavior analysis and its applications (Noone & Chaplin, 2017) because of the limited, and often inaccurate, coverage within such courses. [Behavior analysts who teach short courses to para-professionals should be aware of the truism: 'a little knowledge can be a dangerous thing'.](#)

The relative paucity of appropriate training courses internationally (BACB, 2017b) has also led to the widely circulated and unchallenged dissemination of erroneous and fallacious information about behavior analysis and ABA, especially with regard to children on the autism spectrum (cf. Jordan, 2015). The lack of behavior analytic training within professional associations and institutions at national level that are charged with supporting

individuals with autism provides additional challenges. There is ample evidence that staff working within this field are not knowledgeable about ABA (Dillenburger, McKerr, Jordan, & Keenan, 2016; Fennell & Dillenburger, 2016), and because of the lack of adequate training, misperceptions of behavior analysis abound (Dillenburger & Keenan, 2009).

The use of technical behavior analytic terms is a significant consideration with regard to international dissemination. Non-experts do not feel informed by this technical language and regard such scientific jargon as “abrasive, harsh, and unpleasant” (Critchfield et al., 2017; p. 97). Critchfield and colleagues used the phrase ‘functionally abrasive repurposed terms’ (FRTs) to denote verbal topographies (e.g. extinction, deprivation, discrimination) that have unpleasant connotations for everyday communication and that may elicit unpleasant emotional responses in the listener (see Foxx, 1996 for a discussion on the use of the term ‘punishment’). Critchfield et al. (2017) found that behavior analysis terms have a tendency to register as more aversive than other English words, including other professional terms. Foxx (1996) suggested that behavior analysts have been arrogant and deaf to the feedback about the use of jargon, and the continuing rigid adherence to the use of technical language may, ultimately, impair wider dissemination efforts. While this is, of course, an important point to consider, as with any other science, behavior analysis requires terms that are clearly defined when communicating with other scientists. However, this necessary scientific ‘jargon’ needs to be adjusted accordingly when talking to the general public.

The [global](#) dissemination of ABA can be a difficult task, and one not made easier by the inevitable Anglo-American perspective that follows from an evolutionary history of the science in the United States (Skinner, 1938; Baer, Wolf, & Risley, 1968). Dissemination within [and across](#) countries with significantly different cultures can be an increased challenge, [especially given the wide range of stimulus and response classes that occur in cultures including race, nationality, socioeconomic class, age, sexual orientation, and disability \(Fong, Catagnus, Brodhead, Quigley & Field, 2016; Sugai, O’Keeffe, & Fallon, 2012\)](#). Whilst the basic science should remain conceptually coherent, [assessment](#), implementation and application can differ significantly across cultures. Culture and religion may impact decisions around pursuing intervention as *fate* and/or a *higher being* may be more relevant variables (beliefs) in the justification for a certain course of action (Olsen, 2015). A range of specific skills were identified by Arab-Muslim mothers of children with autism that would assist their children fit into their culture more effectively. These included skills related to specific prayer movements and vocalizations, attending to the Imam, and reciting the Quran (Olsen, 2015). Eye-contact is another example where cultural norms differ considerably (Akechi et al., 2013). Familiarity with relevant socially and culturally significant skills are required in order to develop proficient repertoires for successfully achieving culturally-sensitive behavior change.

ABA is best known as a basis of interventions for individuals diagnosed with autism spectrum disorders and are viewed by many as the Gold Standard (e.g. United States Surgeon General, 1999). It would be disingenuous to suggest that financial contingencies and professional remuneration play no part in the behavior of a scientist, but the lack of acknowledgement of the science on which some commercialized packages are based has led to a ‘science for

sale' mentality that has been heavily criticized (Freeman, 2003; Keenan, Dillenburger, Moderato, & Röttgers, 2010). Authors of such packages could do much to promote and disseminate ABA by acknowledging the philosophical and scientific underpinning of their programs and it is relatively easy to see where professional and ethical boundaries have been breached (e.g. Howlin, 2013).

Even in the USA, where ABA is widely accepted, barriers to treatment still exist: unnecessary delays in terms of access to health plans (Hawai'i Association for Behavior Analysis, 2017); prohibition of ABA services during the school day (Hawai'i Medical Service Association, 2016; Peterson, 2017); lack of service providers in certain areas (Kelly, 2016); lack of diagnosis preventing the prescription and implementation of health plans (Sheldrick, Maye & Carter, 2017); and numerous other factors (J.E. v. WONG, 2016; Kelly, Koba-Burdtd, Kornack, & Unumb, 2017). As of May 2017, access to ABA services for individuals under the Affordable Care Act (ACA) is in jeopardy (Kelly et al., 2017). Although the ACA does not require ABA to be listed as an "essential health benefit", 26 states have chosen to include ABA in their state plans, but a "repeal and replace" health care bill could undermine access to services. The current inconsistencies and disruptions of access to care could slow or halt the growth of behavior analysis in the USA.

Despite the fact that early intensive behavioral intervention for autism leads to optimal outcomes (Orinstein et al., 2014) and consequently incurs significant cost savings (Jacobson, Mulick, & Green, 1998; Motiwala, Gupta, Lilly, Ungar, & Coyte, 2006), such interventions have not been recommended widely across Europe. A UK government report stated that ABA was not supported by research (NICE, 2013) and some UK practitioners have simply ignored the entire concept of evidence-based practice, with some stating unequivocally that research is of little relevance to their working practices regarding autism (Hughes, 2008). This is in spite of other governments, for example in United States and Australia (Perry & Condillac, 2003; Prior, Roberts, Rodger, & Williams, 2011), who have accepted a considerable number of large-scale systematic reviews and meta-analyses that suggest that virtually all established interventions for autism are behavior analytic in nature (e.g., National Autism Center, 2015). According to the Applied Behavior Center for Autism (2016), ABA-based interventions have been recommended widely by prestigious organizations including the United States Surgeon General, American Academy of Pediatrics, American Psychological Association, National Institute of Mental Health and American Academy of Neurology. Furthermore, although international research has demonstrated the relative ineffectiveness of other treatment approaches for individuals with autism, this evidence base is also widely ignored in the UK (Dillenburger, McKerr & Jordan, 2014).

Entrenched positions provide huge challenges to the dissemination of behavior analysis. Prior to 1998, children with autism in Ireland were not recognized as a distinct group for educational provision and were likely to receive a school placement based on co-occurring conditions, such as having an intellectual disability. However, a government announcement in November 1998 acknowledged the distinct educational needs of all children on the autism spectrum, the introduction of a special pupil teacher ratio of 6:1 for these children, and funding for a pilot school which educated children with autism through employing the principles of ABA (McCormack, 2012). By

2004, the number of funded ABA-based pilot schools in the Republic of Ireland had grown to twelve and was expected to increase. However, despite ample evidence for the efficacy and cost-effectiveness of the pilot ABA schools, the Department of Education and Science discontinued their funding (National Council for Special Education, 2011). The new policy for the education of these children was to adopt an eclectic model, for which there was, and still is, no evidence of effectiveness, despite ample evidence of comparative ineffectiveness for this approach (Dillenburger, 2011; Howard, Stanislaw, Green, Sparkman, & Cohen, 2014; McMahon & Cullinan, 2016). The last of the original twelve pilot schools was maintained independently by a group of dedicated parents and professionals, but it ran out of funds and closed its doors in July 2011.

Strategies for Ethical Dissemination of Behavior Analysis

The BACB's Professional and Ethical Compliance Code for Behavior Analysts (the "Code"; BACB, 2017a) provides a starting point for those who wish to ethically disseminate the science of behavior analysis. Section 6.02 of the Code, "Disseminating Behavior Analysis" requires BCBA's to make information about behavior analysis available to the public – achieved through discussions, presentations, or other media – in a way that promotes the science of behavior analysis whilst adhering to all applicable aspects of the code. However, ethical dissemination of information about behavior analysis goes beyond promotion of the science. Individuals must ensure they are relying on scientific knowledge (Code, Section 1.01). An individual who has expertise in providing performance management and OBM services to large businesses, but does not have experience in providing behavior analytic care in group homes, should focus on disseminating information related to their area of expertise and refer the manager of a group home to a colleague with experience in that setting.

Additionally, when disseminating information to the public, it is important to reference research on the specific topic (Code, Section 2.09) to connect the science of behavior analysis to the evidence that supports its effectiveness. This also minimizes the likelihood of misconceptions about the field and the topic. Of course, if the dissemination efforts involve the disclosure of personal information or individual data related to client outcomes, then appropriate consent must also be obtained (Code, Section 2.08).

The more an individual makes themselves public, the less privacy they can expect for themselves and their clients. This is particularly true when disseminating private and personal information on social or other media. One may use personal examples as illustrations to help the public understand the science of behavior analysis but this needs to occur with due consideration about what and how much to share. For example, a story about your child not sleeping well at night is probably acceptable but discussing an embarrassing social event that happened between two colleagues is unlikely to be appropriate. It is advisable to utilize privacy settings on social networking sites and routinely monitor one's presence online to ensure the information is accurate and appropriate (McMahon, 2010).

Individuals who are in a supervisory, leadership, or faculty position should train their supervisees, staff, and/or

students in ethical dissemination (Brodhead & Higbee, 2012). One aspect of this training should include guidelines on when to notify others if content posted by colleagues appears unprofessional or contradictory to promoting the science of behavior analysis. For example, if a BCBA attends an educational conference presentation where a presenter (also a BCBA) engages in negative rhetoric about behavior analysis and other professions, the attendee should approach the presenter after the event to professionally discuss the content of the presentation, before taking further action.

Effective and ethical dissemination of behavior analysis must occur in parallel. Biased, inaccurate, unprofessional or combative attempts at dissemination [of our science amongst other disciplines](#) are unlikely to result in positive outcomes or provide credible face validity, irrespective of the mode of dissemination (Morris, 1985). It may be tempting for some to engage in confrontational or even argumentative interactions with [professionals](#) who repeatedly misrepresent behavior analysis, however this would do very little to promote the science, and may function to the contrary. When dealing with [professionals](#) engaged in behaviors that include misrepresentations of the science, behavior analysts should remember what their science teaches them with regard to understanding and addressing problem behaviors. [Attempts should be made to develop a strong rapport with professionals outside of behavior analysis such as clinical psychologists and educators by communicating professionally, allowing time for them to share their expertise, and finding common ground to work from.](#)

Strategies for Effective Dissemination of Behavior Analysis

An ethical, dissemination strategy will only be effective as long as it is an evolving and constantly developing process (Harmsworth, Turpin, Rees, & Pell, 2001). Mistakes can offer valuable lessons for moving applications of the science forward. [Albeit subjective in nature](#), the following suggestions aim at improving the behavior analyst's skills as a successful disseminator of the science.

1. Consider cultural contexts

As previously discussed, it is imperative that behavior analysts consider the cultural context and sensitivities in the communities where they are working. It is difficult to effectively disseminate information if one does not understand the culture in which one is promoting behavior analysis. [Behavior analysts need to “develop an awareness of a client’s personal cultural values, preferences \(i.e., learned reinforcers\), characteristics, and circumstances” \(Fong et al., 2016, p. 84\).](#) Having a thorough understanding of the culture will assist the behavior analyst to connect with their audience, providing examples that are meaningful to them, and lowering the probability that the information will be misunderstood, offensive, or negatively interpreted. [Although no behavior analyst can learn everything about every culture, Fong and colleagues \(2016\) suggest practical strategies for behavior analysts to increase their cultural awareness, beginning with developing a cultural awareness of self. A suggestion is also make to develop graduate training programs that teach cultural awareness and to develop continuing education opportunities to assure continued competency for behavior analysts.](#)

2. *Know your audience and use appropriate verbal behavior*

Audience awareness is another relevant consideration as one must be mindful of the recipients of the information and their background and history with regard to behavior analysis. Whilst it is important to be technological and conceptually systematic, talking to groups of parents, teachers, professional peers, or government officials, and adhering to behavior analytic terminology may run counter to successful dissemination efforts. Friman (2017) advises behavior analysts in academia to “teach students to be bilingual” so that students can speak about behavior analysis using both technical and non-technical language. Becoming a good behavioral translator is not always easy (Foxy, 1996). Some behavior analysts need to learn the skill to tailor their efforts individually, customize their message, and use appropriate vernacular (Bockenfeld & Brown, 2016). For example, Johnson (2017) recommends that the language of dissemination for behavior analysts working within the education setting should occur within the context of the current jargon, buzz words, and practices of education, such as *response to intervention*, *common core standards* and *executive functioning*. Critchfield et al. (2017) advise behavior therapists to avoid using FRTs when establishing a relationship with a client, and wait until the behavior analyst becomes a conditioned reinforcer before introducing technical terminology.

3. *Keep it simple but keep it accurate*

“Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple. But it's worth it in the end, because once you get there, you can move mountains.” (Jobs, 1998)

Using technical language and “laboratory jargon” (Lindsley, 1972) may create misconceptions about the field given the propensity of others to misunderstand or confuse some behavior analytic terms such as “punishment” and “extinction” or “positive” versus “negative”. One should strive to be technically accurate, whilst being understood unambiguously. Be specific, brief, and concise (Harmsworth et al., 2001). Speak clearly, accurately and positively about the field (Johnson, 2017). Use words or terms that the audience knows, while remaining scientifically correct. Disseminators should become fluent in explaining the concepts of behavior analysis to a variety of audiences and using examples that are meaningful to those audiences (Friman, 2014). Making information, which has been published in journals, available to consumers in a logical and understandable way brings the rigor and science to the layperson, while steering clear of unnecessary confusion.

4. *Be professional and polite*

Behavior analysts should always be cognizant that everything they do includes dissemination. It is important to identify any wrong information that needs to be dispelled, whether *in vivo* or online. It is equally important to know where to draw the line, and this could depend on several factors such as the forum, the audience, what was stated, what is at stake, and what could be accomplished through discussion. Professionals should avoid arguing and bickering with others, particularly online, where correspondence is permanently recorded. Dissemination is a bi-directional interaction (Harmsworth et al., 2001). Behavior analysts should maintain open lines of communication,

and be willing to discuss and promote the science. In other words, a behavior analyst should “be a dialoguer, not just a speaker” (Johnson, 2017).

5. Be proactive

Behavior analysts should be proactive, rather than reactive disseminators (Morris, 1985). Connect with your community and show people how you can help (Kelly & Koba-Burdt, 2016). [If you want to affect public policy, learn more about your legislative system \(e.g., cycle term, election process, process for submitting testimony etc.\), find out who your legislators are and where they stand on relevant issues, and ensure to use the data available to you \(Kelly et al., 2017\).](#) The use of appropriate video snippets, iconographs, podcasts, presentations, or publications allows for information about the science of behavior analysis to reach a mass audience. [Be sure to provide small, consumable, and accurate sound bites \(Kelly & Koba-Burdt, 2016\).](#) Miltenberger (2017) offers the following advice for researchers trying to disseminate behavior analysis: (i) focus on research topics that have broad appeal (e.g., child safety, see Miltenberger 2008; workplace performance, see Daniels, 2009); (ii) publish in non-behavior analytic journals (Morris, 2014); (iii) send press releases about your research to the media; (iv) respond to media inquiries; and (v) talk to the media in everyday language. Furthermore, to be a successful disseminator via research, Miltenberger’s (2017) advice is to “follow your passion”. Incorporate your knowledge of the science and develop behavioral interventions within the field of sport or music or wherever your passions may lie.

6. Be savvy with social media

In the digital age, much dissemination and discussion of information happens on online platforms. These platforms can offer efficient, cost effective, and interactive way to disseminate scientific discoveries and important health messages (Gholami-Kordkheili, Wild, & Strech, 2013; O’Leary, Miller, Olive, & Kelly, 2015) that help behavior analysts reach millions of people easily (McMahon, 2010). [In an online world, a simple way to get your point across is to create and consistently use short, informative hashtags \(e.g, #stickwithscience, #behaviorchange\) \(Kelly & Koba-Burdt, 2016\).](#) Social media services are widely utilized by companies, local environment and by individuals in private lives (Ahlqvist, Bäck, Halonen, & Heinonen, 2008). “Persistence, searchability, replicability, and invisible audiences” are unique characteristics of the social media platforms that create a “permanent digital fingerprint and online reputation” (Gholami-Kordkheili et al., 2013, p.2). Many social media sites and applications are free and easy to use, which increases the accessibility of information for consumers and the number of voices in the conversation, across topics and generations (O’Leary et al., 2015). It places scientists and practitioners in contact with one another, fostering camaraderie within the profession, and expanding possibilities for cross-continental collaborations (McMahon, 2010). However, during a momentary lapse of reason, expressing one’s opinion on a social media platform could have unintended and irreversible consequences (O’Leary et al., 2015).

7. Establish online boundaries

The online environment should be viewed and treated with at least the same level of respect and consideration as everyday interactions between consultants and clients. It is important to separate personal beliefs and experiences

from professional image and maintain professional boundaries. Although it can be uncomfortable to explain to a client why their Facebook friendship requests are denied, using various antecedent strategies, setting company policies, and communicating these to employees and consumers at the onset of services is recommended and allows the retention of professional credibility when disseminating important information.

8. Verify legitimacy

It is essential to scrutinize all information, irrespective of the medium of presentation, to verify the credentials of those who claim to be colleagues or experts, and to maintain healthy professional and philosophic skepticism. Consumers can be easily misled by how a person represents themselves or their profession and it is not always easy to detect the misuse of credentials. Checking the BACB register of certificants (BACB, 2017c) offers a good way to verify the legitimacy of individuals making claims about the science.

9. Create sustainable systems

The most effective system is one that sustains itself over time. Behavior analysts should take precautions to prevent burnout to maintain a strong, long-lasting mechanism for ongoing dissemination. Avoid tackling everything individually and create partnerships and strategic alliances for collaboration and dissemination. Consider the frequency of online posting, in-person presentations, journal submissions, and how a high volume of these might compromise quality. Always choose quality over quantity when it comes to effective dissemination (Harmsworth et al., 2001) and maximize the use of available tools (e.g., those available with various social media). Avoid using only one avenue and use multiple effective strategies to increase the reach of dissemination efforts (Bockenfeld & Brown, 2016).

10. Network, network, network!

Johnson (2017) advises to “behave like a behavioral ambassador”, to speak out about the behavioral worldview, principles, services and research. The aim of a behavioral ambassador is to effectively translate the behavior-analytical model to other circles (Foxx, 1996). Whilst it is important to promote this worldview to the public, government officials and professional peers outside the field of behavior analysis, it is also necessary to continue to network with fellow behavior analysts across the globe. Effective disseminators of the science should provide training and mentorship to those who are not maximizing their efforts to promote effective applications of behavior analysis.

Conclusion

This paper outlined the historical context of the dissemination of behavior analysis, dating from the 1970s to its current status, and in terms of professional identity and certification. The dissemination efforts of ABAI, EABA, and specific European examples were described, as examples to motivate those eager to disseminate but not knowing how to get started. Several challenges faced by international disseminators of behavior analysis were also described

and the importance of the need to be familiar with cultural and religious values and beliefs was also highlighted. The current paper concluded with strategies for the ethical and effective dissemination of behavior analysis- with the appropriate tools and protections in place, behavior analysts can be effective, and ethical, disseminators of the science behind behavior change.

In order for the breadth of the science of behavior analysis to be recognized, one must continue to advocate, collaborate, and participate on [the global](#) stage, whether this relates to behavioral intervention for autism, organizational management, sustainability initiatives, public policy or any other area that could/should benefit from the field of behavior analysis. If behavior analysts do not engage with this discussion, others may determine what to disseminate about [the science](#). It is the responsibility of every behavior analyst to arrange for contingencies to assure its survival. [To achieve this, there is a growing need for behavior analysts to conduct empirical analyses of dissemination issues and develop a technology of dissemination.](#)

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