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Don't Wag the Dog: Extending the Reach of Applied Behavior Analysis

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We argue that the field of behavior analysis would be best served if behavior analysts worked to extend the reach of behavioral services into a more diverse range of settings and with more varied populations, with an emphasis on the establishment of new career opportunities for graduating students. This is not a new proposal, but it is a tall order; it is not difficult to see why many would choose a surer route to gainful employment. Currently, the most fruitful career path for behavior analysts in practice is in the area of autism and developmental disabilities. For the continued growth of the field of behavior analysis, however, it is important to foster new career opportunities for those trained as behavior analysts. Toward this end, we identify several fields that seem well suited to behavior analysts and summarize the training requirements and likely professional outcomes for behavior analysts who pursue education and certification in these fields. These fields require relatively little additional formal training in the hopes of minimizing the response effort necessary for individuals who have already completed a rigorous program of graduate study in behavior analysis.

Key words: behavior analysis in practice, careers, employment

Why are we not acting to save the world? B. F. Skinner addressed this question more than 30 years ago (Skinner, 1982, 1987). His answer was that society at large had yet to embrace a natural science of behavior and had made little use of the technology that already had emerged from that science. Some 30 years later, much the same argument can be made. One can read any of Skinner's numerous writings on the importance of behavioral science for addressing the world's most dire problems (e.g., Skinner, 1953) and feel as though the words were written today. This is so despite the fact that the systematic application of behavioral science to problems of social significance emerged as applied behavior analysis almost 50 years ago and as behavior analysis in practice just over a decade ago with the founding of the Behavior Analyst Certification Board (BACB).

This is not to say that applied behavior analysts have not made great strides to save some part of the world. Using the metaphor of a normal statistical distribution of behavior problems, Friman (2010) noted that behavior analysts have successfully addressed many seemingly intractable problems that occupy "one tail of the distribution of human concerns" (p. 19). Autism is one of the biggest parts of that tail, and this is a very good thing for all involved; children and families affected by an autism diagnosis have access to high-quality services provided by skilled professionals. In turn, these skilled professionals are able to make a living providing much needed services to these children and families. However, Friman also made the following point about the successes in the tail:

> Even though these accomplishments are impressive, sometimes to the point of seeming miraculous, they have been achieved with a population whose problems are far removed from the concerns of people in the mainstream of everyday life. To attain mainstream relevance, behavior analysis will have to continue not only to produce results helpful for people in the one tail of the distribution, it will have to produce, more frequently and vigorously, results that are helpful for persons and problems that are under the dome of the distribution. (p. 19)

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We could not agree more. Behavior analysis has much more to offer to many more people. As Skinner (e.g., 1982, 1987) noted, virtually all of the problems facing modern society are problems of human behavior. To solve these problems, we need to foster a natural science of behavior and broadly disseminate the applications derived from that science.

So why is the tail wagging the dog? Of course, it is unlikely that any single variable is responsible. However, it seems reasonable to suggest two important and related influences. First, applied behavior analysts have had great success working with individuals with developmental disabilities. The obvious improvements in what often seem like intractable problems are undoubtedly powerful reinforcers for those responsible for the improvements. It also is worth mentioning that the environments in which individuals with developmental disabilities live and work often are far more controllable than most other education and community settings. The control available most likely leads to more robust behavior change than otherwise possible and, not incidentally, enables more nuanced analyses of behavioral interventions and even translational research on basic behavioral principles.

Second, and most germane to this paper, the most fruitful career path for behavior analysts in practice is in the area of autism and developmental disabilities, due at least in part to the success behavior analysts have had in these areas. The practice of behavior analysis has grown tremendously in recent years for a variety of reasons, including the successful outcomes achieved using behavior-analytic technologies, as well as changes in local, state, and federal legislation (LeBlanc, Heinicke, & Baker, 2012). The swell in practice can be seen in the numbers of people who belong to behavior analysis organizations and attend behavior analysis conferences (e.g., Association for Behavior Analysis International) as well as the number of BACB certificants and BACB-approved graduate programs across the country and, to a lesser extent, the rest of the world (''About the BACB,'' n.d.; LeBlanc et al., 2012; Shook & Favell, 2008).

To be sure, this growth is positive in many ways. The field is more visible, there are more job opportunities for behavior analysts, there are more training opportunities for students, and more people are receiving effective behavioral services that improve their quality of life. However, a great deal of this growth is tied to the delivery of early intervention services for young children with autism (LeBlanc et al., 2012), a sort of tail end of the tail end. Recent data from the BACB indicate that 53% of certificants identify autism as their area of practice. Moreover, 89% of certificants identify autism, developmental disabilities, or special education as their primary area of practice (J. Carr, personal communication, December 19, 2012). The Association for Professional Behavior Analysts reported similar data that were obtained from a recent survey of their membership (Association for Professional Behavior Analysts, 2009).

This disproportionate emphasis on developmental disabilities, and especially autism, poses a serious problem that behavior analysts ignore at their own peril. Consider, for example, what would happen if autism disappeared tomorrow. That is, let us pretend that autism did turn out to be an identifiable neurological disorder—rather than a broad diagnostic category, most likely without a single underlying physical cause—and a drug was developed that abated or reversed the effects of the disorder (cf. Poling, 2010). Alternatively, and perhaps more likely, let us pretend that for various reasons, society determined that allocation of large amounts of money to the treatment of persons with autism was not a viable social strategy or the powers

that be of the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association redefined autism more narrowly. If any of these scenarios played out, what would happen to the field of behavior analysis? Well, it is not too speculative to say that it would change considerably, especially in terms of its size and reach. In the short term, these changes would likely be negative, reducing the opportunities for those trained as behavior analysts to earn a living practicing behavior analysis. Over the long term, such changes would likely erode the growth in university training programs in behavior analysis and thus negatively affect the outlook for behavior analysts in academia, too.

To sustain the field of behavior analysis, it is important to foster myriad career opportunities for those trained as behavior analysts.[1] As of now, the only games in town seem to be academia or autism, if not a combination of both. Even for those who pursue an academic track, it appears that the vast majority of graduate programs and, hence, faculty positions are aimed at research and intervention programs focused on autism. If one wants to work outside the academy, especially with a bachelor's or master's degree, there are few readily available opportunities that do not involve the fields of autism and developmental disabilities. Our personal experiences working with undergraduate and graduate students suggest to us that we also are losing some very bright and motivated individuals who are not interested in working in these areas. Without training programs and career opportunities that suit their interests, they drift to other fields and away from behavior analysis.

Academia still provides some window of opportunity for those who wish to forge new research and career tracks, especially at institutions where securing external funding is not central to promotion and tenure decisions. However, given that the vast majority of graduate programs in behavior analysis are terminal master's degree programs, the vexing problem of where graduates will find work along a newly blazed trail looms large. Graduate programs are not, and should not be, immune to the demands of helping their students secure gainful employment. It seems at least somewhat unethical to take students' money and time as they train for careers that do not actually exist.

At this time, it is obvious that working with young children with autism is the surest way to pay the bills; behavior analysts will need to be very entrepreneurial if they are to establish careers in other areas, although for many, the costs of being entrepreneurial might well outweigh the benefits. There are, of course, success stories that involve behavior analysts who finesse or muscle their way into existing professional systems to the benefit of all of those involved. It seems unlikely, however, that behavior analysts will thrive in practice simply by affecting existing fields (e.g., education, health, organizational management) from the outside. For example, sending behavior analysts to knock on the doors of teachers' lounges, ready to convert the teachers to radical behaviorism, is simply not a viable strategy in the long term as should be apparent after all these years. Behavior analysis is not a profession in and of itself; it is a science of behavior and, hence, should be a foundation of any profession that deals with human

[1] We recognize, of course, that basic research is very relevant to the health of the field as a whole. Moreover, basic researchers face many problems similar to those faced by more applied researchers, as well as a number of problems that differ in substantive ways. However, a discussion of the problems and potential solutions for basic research is beyond the scope of this paper, mostly because we are, by training and practice, applied behavior analysts.

behavior. An ideal approach would be for the vast array of fields that involve human behavior to build from the foundations of the experimental analysis of behavior. Unfortunately, this is unlikely to happen in the near future.

We suggest that a reasonable alternative approach is for well-trained behavior analysts to acquire skills and credentials in areas in which their behavior-analytic skills would be useful. What is needed are people vested in becoming teachers who also happen to be skilled in the application of basic behavioral principles. That is, we need people who are first and foremost teachers, managers, and the like and who have all the skills and credentials pertinent to their chosen field, but who also have a firm foundation in behavior analysis. Said another way, "To achieve mainstream status, behavior analysis needs to compromise neither its principles nor its practices. A much more practical and efficient way to enter the mainstream is to integrate with a field that is already there" (Friman, 2010, p. 20). Perhaps the most likely way to achieve this is for individuals already trained as behavior analysts to continue to train in areas of specialization that interest them.

In the remainder of this paper, we identify several fields that seem to be well suited to behavior analysts and summarize the training requirements and likely professional outcomes for behavior analysts who pursue education and certification in these fields. LeBlanc et al. (2012) provide a series of clear steps for behavior analysts to take to learn about the skills and credentials necessary for a chosen field of practice, with an emphasis on traumatic brain injury and gerontology as case examples. We won't repeat those suggestions here but, rather, we encourage the reader to consult their article directly. Instead, we will focus on a description of the relevance of several fields of some social import and summarize the training necessary to develop the skills and credentials of a recognized professional in those fields. For present purposes, we have selected fields that require relatively little additional formal training, in the hope of minimizing the response effort necessary for individuals who have already completed a rigorous program of graduate study in behavior analysis. We conclude with a discussion of some potential problems likely to result from our suggestions, along with some general strategies for putting our suggestions into practice.

OVERVIEW

There are several options for innovative and entrepreneurial individuals with a master's degree and a certification in behavior analysis (BCBA) who wish to pursue careers outside the field of autism or developmental disabilities but still make use of their knowledge and skills in behavior analysis. Each of these options requires varying levels of additional education, training, and supervised experience, and they include nondegree certificates or credentials that require the passing of an exam or an accumulation of experience without any additional formal education; certificate or credential programs with and without internship and supervision requirements; and master's degree programs with and without internship and supervision requirements. Potential careers exist in the areas of health and fitness, health care, child care, education, animal behavior consultation and training, and management and business. Some of these careers may be best achieved by working as an independent consultant, whereas others require working in settings such as schools, hospitals, and offices. Each of the descriptions below contains the following information: job title and typical responsibilities, reasons the career would be of

interest to behavior analysts, typical work settings or environment, any additional training and continuing education (CE) requirements, and salary range.

HEALTH AND FITNESS

Certified Personal Trainer

Certified personal trainers (CPT) typically work with individuals who require assistance to identify small, incremental health and fitness goals and the daily motivation to achieve and maintain them over time. Behavior analysts have an ideal background to assist individuals with their personal, measurable, and observable fitness goals. CPTs work in a variety of fitness settings including health clubs, spas, cruise ships, hospital-based wellness centers, and recreation centers. CPTs also work with individuals independently as private trainers in home or office settings. CPTs must have current emergency cardiac care (CPR) and automated external defibrillator (AED) certifications, both of which can be obtained at the American Red Cross (American Red Cross, n.d.). They must also pass the CPT exam. Other than the CPR and AED certifications, no additional educational training is required before taking the CPT exam. Course study materials are available for purchase and bundled with the price of the exam, which is offered through different agencies such as the National Academy of Sports Medicine (NASM, n.d.), the National Council on Sports and Fitness (NCSF, n.d.), and the American Council on Exercise (ACE, n.d.). Additional certifications, also earned by passing exams, can be obtained (e.g., ACE offers a Lifestyle and Weight Management Coach certification); however, the added value of these certifications is unclear. In order to remain certified, CPTs must earn a minimum number of CE units over a varying period of time, and different certification agencies maintain different requirements that can range from as few as 2 CE units once per year to 10 CE units over a 2-year cycle (NCSF, n.d.).

The median salary for CPTs in 2010 was $31,000, but can range up to $59,000 depending on years of experience, level of education, and job region (ACE, n.d.). Individuals with master's degrees who also have a BACB credential are likely to earn salaries at the upper end of the range. In addition, BCBAs can choose to become consultants or operate their own health and fitness companies. The employment outlook for CPTs is good, with an expected growth rate of 24% between 2010 and 2020 (U.S. Bureau of Labor Statistics, 2012).

HEALTH CARE

Occupational Therapy Assistant

Occupational therapy assistants work with individuals with injuries, illnesses, or disabilities to recover or regain as much independence and mobility as possible through a variety of behavior changes, modifications, and exercises, all of which should be well within a behavior analyst's repertoire (e.g., stimulus prompts, fading, shaping, chaining). Occupational therapy assistants work in hospitals; nursing care facilities; offices of physical, occupational, and speech therapists; and in school settings. Individuals who seek to become occupational therapy assistants must be accepted into specialized American Occupational Therapy Association accredited programs, often housed in 2-year colleges, and earn an associate's degree in occupational therapy, making them eligible to sit for the National Board for Certification in Occupational Therapy exam. Occupational therapy assistants are required to earn continuing education credits, with the specific requirements varying by state (American Occupational Therapy Association, Inc., n.d.; U.S. Bureau of Labor Statistics, 2012).

The median 2010 salary for occupational therapy assistants was $47,490, ranging from a low of $33,000 to a high of about $70,000. This field is expected to grow 41% between 2010 and 2020, particularly given the aging of the American population (U.S. Bureau of Labor Statistics, 2012). At this time, individuals who wish to become licensed occupational therapists must earn a master's degree in occupational therapy from an accredited program.

Certified Alcohol and Drug Counselor

Certified alcohol and drug counselors (CADCs) work with individuals to identify and modify behaviors, typically termed *addictions,* that have become markedly problematic, such as alcohol or drug abuse and excessive gambling. CADCs may work with groups or individuals in inpatient or outpatient hospital settings, state or local government agencies (including prisons, juvenile justice centers, parole agencies), employee assistance programs, halfway houses, residential treatment centers, substance abuse and mental health treatment facilities, or in private practice (U.S. Bureau of Labor Statistics, 2012). Although few interventions are successful in assisting all individuals with substance abuse problems, current research suggests that behavioral interventions show some of the best results in terms of maintenance of abstinence and relapse prevention (e.g., Higgins, Silverman, & Heil, 2007).

Although requirements vary somewhat from state to state (http://www.naadac.org), the typical minimum criteria for becoming a first level CADC are approximately 1 year of course work, supervised practicum experience, and passing the certification exam; in many states, there are no degree requirements at Level 1. Those who seek to attain the next level of CADC certification must fulfill all the first level CADC requirements, have a bachelor's degree, specific alcohol and drug education training (e.g., minimum of 300 hr in Oregon), and provide documentation of approximately 2 years of full-time supervised work experience. Those who seek to attain the third level of CADC certification must fulfill all the previous CADC requirements, have earned a master's degree, and provide documentation of roughly 3 years of supervised work experience (e.g., Addiction Counselor Certification Board of Oregon, n.d.; California Association of Alcoholism and Drug Abuse Counselors, n.d.). Many programs with approved course work can be completed online, although the supervised hours must be completed live at an approved agency and supervised by an approved supervisor. For example, the Center for Professional and Continuing Education at the University of the Pacific has both an online and a live CADC certificate program; students who successfully complete this program and the required supervised hours are then able to go on to take the CADC Level 1 certification exam. CADCs are required to earn CE units to maintain their certification, although the specific number of units varies state to state. Full-time salaries for CADCs range between $24,000 and $50,000 per year, depending on the state in which they are employed, their level of education, and their years of experience (Payscale. Human. Capital., 2012).

CHILD CARE

Director or Owner of a Child-Care Center

Child-care center owners and directors work directly with children and staff either in their own homes or in commercial office buildings, providing care to children for periods of less than 24 hr at a time. Many behavior analysts have worked extensively with children even before earning their degrees, and often have

significant experience in the assessment and management of young children's behavior through the arrangement of environmental consequences that are conducive to appropriate behavior. Requirements for running a child-care program, either in a home or commercial building setting, vary from state to state. However, the minimum requirement in most states include course work in child development, home or business inspections, and a licensing exam (e.g., Commonwealth of Pennsylvania, n.d.; State of California, Department of Social Services, 2007); these criteria also fulfill most or all of the requirements set forth by the Council for Professional Recognition's Child Development Association Certification, also required by many states (Council for Professional Recognition, 2012).

The 2010 median salary of child-care directors was $42,960, with a range from $27,210 to $85,110. This is an area of employment that is expected to grow in the next 10 years (U.S. Bureau of Labor Statistics, 2012). Given BCBAs' specialized training, there might be opportunities to operate specialized child-care centers (e.g., for children diagnosed with ADHD or other behavior problems) that serve populations that might otherwise be too challenging for child-care providers without such training.

EDUCATION

Special Education Teacher

Special education teachers typically work in classrooms with students who exhibit some combination of mild to severe physical, developmental, emotional, and academic disabilities, with the focus of the work being the design and implementation of curricula tailored to these students' skill levels. Few special education teachers receive behavior-analytic training in behavioral assessment and intervention; thus, behavior analysts are in a unique position to improve the lives of children in special education classes. Special education teachers often are called on to develop or inform individualized education plans and to develop curricula specific to an individual student's needs and skill deficits. Some special education teachers work in classrooms that are exclusively special education classrooms, others work in inclusion settings (e.g., some special needs students are integrated into regular classrooms), and others serve as consultants across different schools, residential facilities, child-care facilities, or institutions; all of these activities may occur in public or private school settings.

All schools require special education teachers to have at least a bachelor's degree. Private school settings typically do not require teachers to be licensed by the state in which they work. Teachers who work in public schools, however, must be licensed by the state (sometimes called a certification) and have completed a teacher preparation program (typically 1 to 2 years in length). Some states require additional course work in special education for those who seek to become special education teachers. For example, California provides a number of ways to become a special education teacher, but all options require individuals to pass the California Basic Educational Skills Test and fulfill the subject-matter requirement, typically by passing a subject-matter competency exam by either taking courses or by participating in state-approved intern programs (State of California, Commission on Teacher Credentialing, 2012a, 2012b). Along with traditional teacher certification programs, there are alternative certification routes that vary by state and city (National Center for Education Information, National Center for Alternative Certification, 2012). The 2010 median salary of special education teachers was $53,220, with a range from

$35,580 to $83,410 (U.S. Bureau of Labor Statistics, 2012).

ANIMAL BEHAVIOR CONSULTATION AND TRAINING

Animal behavior consultants or trainers typically work with pets (often dogs) and their owners in home, classroom, or outdoor settings with the goal of improving the animals' behavior and teaching the owners how to maintain this behavior change. Among the myriad of people who call themselves animal behavior consultants, behavior analysts are uniquely positioned to understand the environmental contingencies that shape and maintain (or discourage) animal behavior, thus putting them at an advantage. There are no specific degree requirements, although some organizations suggest that a graduate degree is required (Humane Society University, 2011), and many certificate programs and certification organizations exist. However, because animal owners who seek assistance often have animals that exhibit aggression or other dangerous behaviors, individuals who wish to become animal behavior consultants or trainers should have extensive knowledge and understanding of behavior typical of the animals with which they plan to work. That knowledge, combined with master's level behavior analysts' understanding of behavioral principles, lends itself well to becoming a competent animal behavior consultant.

Most animal behavior consultants belong to one or more professional organizations (e.g., International Association of Animal Behavior Consultants, 2012) that provide important information regarding insurance policies and state laws, as well as professional support in the form of referral sources and conferences. Salaries can range from $17,000 to $52,000 (Dovbish, 2011), although these numbers may not reflect the salaries of self-employed individuals.

MANAGEMENT AND BUSINESS

Human Resources

Human resource (HR) specialists, managers, and directors have a wide range of responsibilities within an organization, including recruitment, hiring (and firing), performance management (e.g., the identification and measurement of specific target goals for employees), making policy recommendations, and training. Each of these responsibilities would benefit from behavior analysts' skills in the areas of operationalizing goals, identifying and assessing measurable behaviors, understanding the contingencies that drive individual behavior, and designing effective interventions to motivate behaviors at both the organizational and individual levels. HR specialists tend to work in offices, can be found in nearly every industry, and often attend college recruitment and job fairs. Some organizations employ HR specialists full-time, whereas others hire on a contractual basis. No specific bachelor's degree or major is required, although some employers may prefer to hire individuals with prior HR experience. A Professional in Human Resources certification also is available; to be eligible to earn this certification, one must have a master's degree, at least 1 year of demonstrated professional HR experience under one of 133 job titles, and pass the certification exam (Human Resource Education Institute, n.d). Universities also offer certificates in HR management and related fields (e.g., University of California Berkeley Extension, n.d.), which may help individuals with less experience in the field bolster their resumes.

In 2007, HR assistants' salaries averaged approximately $36,000 per year; midcareer HR managers' and directors' salaries averaged between $55,000 and $80,000 per year, and senior level HR professionals earn upwards of $170,000 (Stroud, 2008). Master's in business administration

(MBA) degrees may be desirable or required at the HR management level (see more about the MBA degree below). The employment outlook for HR specialists is good, with an expected growth rate of 21% (U.S. Bureau of Labor Statistics, 2012). This employment opportunity might be especially suited for individuals with master's degrees who are also BCBAs and have course work or practicum or internship experience in the area of organizational behavior management (OBM).

Master's in Business Administration

An MBA can be earned in one of several different types of programs: 2-year full-time (also requires summer business internships), 1-year full-time, part-time, and full-time or part-time online (see Stilwell, 2011, for a discussion of the pros and cons of online MBA degrees). There exist several types of MBA degrees, including a general MBA degree as well as more specific degrees such as master's of health or hospital administration (e.g., http://www.usc.edu/schools/price/programs/masters/mha/), master's in leadership (http://www.usfca.edu/soe/programs/leadership/ol_ma/), and master's of science in management (http://warrington.ufl.edu/graduate/academics/msm/), although these often require some prior work experience in business or related fields along with the required course work. Behavior analysts with an interest in OBM and experience in organizational settings may be particularly suited to earning an MBA. Individuals with an MBA tend to work at the higher end of their chosen field (e.g., hotel, marketing, or HR manager) and have more involvement with the manner in which an organization treats its employees (e.g., incentive structures, scheduling, performance evaluations, etc.) and markets itself (e.g., advertising, marketing, focus groups, and public relations).

Students who seek to earn an MBA should consider obtaining employment, usually at a starting level, within an agency that values this degree, because this will also aid in obtaining the experience required by the various programs (http://www.mbaprograms.org). Salaries for those with MBA degrees range widely, with a median salary of approximately $70,000, although this varies based on the job description, hours worked, and industry of focus (U.S. Bureau of Labor Statistics, 2012).

POTENTIAL PROBLEMS THAT FACE OUR PROPOSED SOLUTIONS

For all actions there are consequences, and heeding our suggestions might well lead to a few untoward ones. To start, emboldening behavior analysts to work their skills in new arenas will likely ruffle a few feathers. An influx of outsiders from a common training ground is certain to attract attention. If behavior analysts take away job opportunities from (and perhaps even prove more effective than) those who already work in a given area, some countercontrol is likely. However, consider that a range of professional groups work every day to push back against behavior analysts who work with young children diagnosed with autism. This has not been a fatal circumstance for behavior analysts, by any stretch. Just the same, it stands to reason that integration with already established professional groups demands some tact and humility. Such tact and humility are genuinely warranted, because behavior analysts who move into new arenas must learn the rules of new games.

No matter, the risk of offending current stakeholders in other fields does not seem to be reason enough to do nothing. If anything, making the effort to obtain the same kinds of training experiences others have

should make inroads easier to establish. Above all, it seems to be evident that behavior analysis cannot continue to beat on the door from the outside. As mentioned above, behavior analysis is not a profession in and of itself. Few if any existing programs train students to work in any particular system (e.g., business, health care) except autism. Instead, the focus of undergraduate and graduate training programs is rightly on the ways one might apply the basic principles of behavior to a limited set of social problems. It is arrogant to assume that behavior analysts have all of the answers and the skills necessary to solve the varied problems in the many areas of society that need attention simply as a result of extensive training in behavior analysis. This arrogance most probably is a factor that has kept behavior analysis in the tail of the distribution. We have much to learn about other systems and the problems therein, just as others have much to learn about the basic principles of behavior. The road runs both ways.

Moving into uncharted territory also raises an interesting problem of behavioral economics: Will behavior analysts choose the sooner-smaller-probable reward or the delayed-larger-improbable reward? We have a wealth of research that tells us to bet on the former even if we hope for the latter. Indeed, we anticipate that our suggestions will be most appealing to those enamored with behavior analysis but not at all enamored with the tail of the distribution. Finding opportunities for undergraduate and graduate students to ask questions about new problems from a behavior-analytic perspective is a necessary focal point. We expect that many readers of this journal have secure jobs in rewarding careers, most likely in academia or autism. For those people, working to establish a new career is no doubt on the losing end of a cost-benefit analysis. However, we would like to note that the second author regularly teaches a course in our university's substance-abuse certification program, a program in which the enrolled students often have bachelor's, master's, and doctoral degrees. The response effort required for the certification seems, then, to be acceptable to some already established professionals. Still, to influence the behavior of larger numbers of aspiring behavior analysts, we will need to improve the response-to-reinforcer ratio for those who work under the dome of the distribution. We suggest that academics are in the best position to do this.

THE ACADEMY IN PRACTICE

The ivory tower is no longer available at most colleges and universities. Increasingly, higher education is a consumer-driven enterprise, and not always for the worse. Colleges and universities—to say nothing of students—are increasingly interested in questions of practical skills and job placement. We certainly do not believe that these are the only considerations relevant to higher education; however, they are important, especially in terms of motivating students and administrators. It is getting ever more difficult to justify academic programs that do not have some relevance to the real world and, more specifically, that do not offer a real promise of gainful employment for graduates. It is difficult to attract students to a program if they do not believe they will be employable when they are finished. And, not surprisingly, unemployed graduates tend not to donate money to their alma maters. Creating a demand for students is a sure way to help the cause of establishing new or more varied undergraduate and graduate programs in behavior analysis. It almost goes without saying that there is a strong relation between the growth of behavior-analytic services for children with autism and the growth of

graduate programs in applied behavior analysis (cf. Schlinger, 2010).

Broadening the scope of our graduate programs also promises to attract more students with more diverse interests. We both have had a number of experiences with students who inquire about graduate programs in applied behavior analysis, only to end up disappointed that almost all of the programs focus on developmental disabilities. The problem is even greater for students who want to earn a PhD, as we also know firsthand from our master's level students. There are far fewer doctoral programs in behavior analysis than there are master's programs, with an even smaller number of those offering training in areas other than developmental disabilities. There are students who want to save the world with behavior analysis, but they need people who can teach them how to do it.

Fortunately, academics, especially those without considerable pressures to secure external funding and to publish or perish, are in a strong position to extend the reach of behavior analysis by teaching these students how to save the world. For those whose position is secure (e.g., tenured), a steady paycheck is not dependent on work in any specific area of scholarship, and the opportunity to explore new research and application is available. An examination of the past 5 years of the *Journal of Applied Behavior Analysis* reveals a small group of researchers who are already exploring diverse topics of popular interest. Existing graduate programs are home to lines of programmatic applied research on drug use and abuse (Dallery, Meredith, & Glenn, 2008; Raiff & Dallery, 2010; Reynolds, Dallery, Shroff, Patak, & Leraas, 2008), education (e.g., Critchfield & Fienup, 2010; Fienup & Critchfield, 2010, 2011; Hanley, Tiger, Ingvarsson, & Cammilleri, 2009; Heal & Hanley, 2011; Heal, Hanley, & Layer, 2009; Luczynski & Hanley, 2009; Rehfeldt, Walker, Garcia, Lovett, & Filipiak, 2010; Walker & Rehfeldt, 2012; Walker, Rehfeldt, & Ninness, 2010), and health and fitness (e.g., Fogel, Miltenberger, Graves, & Koehler, 2010; Hustyi, Normand, & Larson, 2011; Hustyi, Normand, Larson, & Miller, 2012; Shayne, Fogel, Miltenberger, & Koehler, 2012), to cite just a few examples related to the professions identified in this paper.

Conceivably, these seeds might grow more formal programs of emphasis in undergraduate and graduate programs. To encourage this, we suggest that faculty explore partnerships with other relevant programs at their home institutions to develop joint degree or certificate programs, as well as develop community partnerships that might provide practical training experiences for students. Success at one institution can serve as a model and a motivator at other institutions. The establishment of these kinds of programs can serve a number of functions, including reducing the response effort required of students, increasing the visibility of behavior analysis, and diversifying our membership.

CONCLUSION

In summary, we argue that the field of behavior analysis would be best served if behavior analysts worked to extend the reach of behavioral services into a more diverse range of settings and with more varied populations, with an emphasis on establishing new career opportunities for graduating students. This is not a new proposal, but it is a tall order and it is not difficult to see why many would choose a surer route to gainful employment. There are ways to proceed with minimal risk, however. We propose that behavior analysts consider continuing education (i.e., education beyond their formal training in behavior analysis) in fields that promise some fertile ground for behavior-analytic assessment and intervention.

Moreover, we propose that behavior analysis faculty with interests in new fields actively work to establish certificate and degree programs that involve these professions, as well as internships that will help students to enter these fields. For this to be a viable strategy, it probably is best to focus on those fields for which somewhat minimal response effort is necessary to secure continuing education and, if possible, for which such education results in recognized professional certification. Doing so is one possible way to extend the reach and maximize the impact of behavior analysis research and practice. At the same time, such actions might serve to foster continued growth of the field within and beyond the walls of academia.

Extending the reach of behavior-analytic research and practice is a worthwhile endeavor, but one that will take considerable effort. We need more research into diverse areas of the human (and nonhuman) condition, more training programs to produce the next generation of researchers and practitioners, and more career paths for these highly skilled professionals. No one strategy can accomplish all of this, but at the end of the day money matters a great deal. Although the problem is something akin to the chicken and the egg, without career opportunities for behavior analysts interested in working under the dome of Friman's (2010) distribution, it will be difficult to grow the field and to help to ameliorate many of the problems our society faces. The tail can't continue to wag the dog.

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