

QUARTER I, 2015

INTERNATIONAL CONNECTIONS AND
ACTIVITIES BY B. F. SKINNER

Has lectured in:

Ireland
Scotland
England (about 40 times)
Norway
Sweden (about six times)
France (in French)
Germany (in German)
Switzerland (in French)
Czechoslovakia
Russia (three times and on television)
Venezuela
Mexico

Honorary Member:

Swedish Psychological Society
Spanish Psychological Society
British Psychological Society

Honorary Degrees:

McGill University (Canada)
Exeter University (England)

Overseas Fellow:

Churchill College, Cambridge
University

Fellow of the Royal Society of Arts:

London
B. F. Skinner Research Institute in
Japan

TODAY OUR CORRESPONDENTS
ARE DRAWING A NEW MAP OF
SKINNER'S INFLUENCE
AROUND THE WORLD

OPERANTS

THE B. F. SKINNER FOUNDATION REPORT

from
the
president



Your support in 2014 helped the Foundation expand the worldwide behavioral community.

In 2014, the red and white Foundation newsletter became a report. For the first time, features were published in languages other than English. The day the first non-English article went out, the Foundation received requests to add more dual-language articles and offers to translate the materials.

Operants has recently added international correspondents in Japan, Israel, and Turkey.

If you live outside the USA, purchasing physical books from the US can be a nightmare. Electronic versions solve the problem. E-Book formats are half as expensive as paper formats. They can be downloaded immediately. E-books save all shipping costs. In 2014, the Foundation converted three of Skinner's books into e-Book formats, thanks in part to support from the Behavior Analysis Certification Board. The first orders came from Italy, Australia, and Japan.

The B. F. Skinner Foundation's international spread is continuing in 2015 with translations of *Science and Human Behavior*. The book is already downloadable without charge in English (bfskinner.org/product/science-and-human-behavior-pdf/). The Foundation plans to offer it free on the Foundation website in as many languages as possible. If you are a bilingual behavioral scientist interested in working with the Foundation on this translation project, please contact operants@bfskinner.org.

Wherever in the world you live, your support makes our behavioral community prosper.

Julie S. Vargas, Ph.D.

President, B. F. Skinner Foundation

Chinese Traditional Translated by Coco Liu

您在2014年的支持，幫助基金會擴展了全世界的行為社會。

在2014年，基金會的紅白期刊變成了報告的形式。這是第一次，專欄發表使用了英語之外的語言。從第一份非英語文章發佈的那天起，基金會便接獲增加更多雙語文章的請求和對此提供的協助。

Operants 最近更新增來自日本、以色列和土耳其的國際通訊記者。

如果您居住在美國以外的地區，要從美國購買實體的書本可能會是一場噩夢。相較於紙本的書，電子書的價格大約便宜了一半，而且可以被立即下載。電子書更是節省了所有的運費。基金會在2014年，將三本Skinner的著作書籍轉換成電子書的形式，這部分也要歸功於行為分析師認證委員會的支持。首批的訂單來自於義大利、澳洲和日本。

B. F. Skinner基金會的國際傳播，在2015年持續進行科學與人類行為一書的翻譯工作。這本書的英文版本已經可以免費下載 (bfskinner.org/product/science-and-human-behavior-pdf/)。基金會計劃能在自己的網頁上免費提供此書更多不同的語言版本。如果，您是一位雙語的行為科學家，且有興趣與基金會一起參與此翻譯工作，請與我們聯繫 operants@bfskinner.org。不論您身處在世界的任何地方，您的支持將使我們的行為社會更繁榮。

Chinese Simplified Translated by Coco Liu

您在2014年的支持，幫助基金會擴展到全球范围的的行为科学社区中。

在2014年，红色和白色基金事实通讯成为了报告。这是第一次，内容发表在英语以外的语言。第一个非英语文章出版的那一天，基金会收到的请求增加双语翻译的文章，以及更多的原意帮助双语翻译的提议。

Operants最近增加的国际记者，包括在日本，以色列和土耳其

如果你住在美国以外，从美国购买实体书可以是一个噩梦。电子版解决了这个问题。电子书格式是实体书的一半价钱。它们可以立即下载。电子书节省所有运费。在2014年基金会改装三本Skinner的书到电子书格式，这部分归功于行为分析师认证委员会的支持。第一个订单来自意大利，澳大利亚和日本

在BF斯金纳基金会在2015年继续国际传播和翻译人类行为一书。这本书已可下载免费的英语版本 (bfskinner.org/product/science-and-human-behavior-pdf/)。该基金会计划提供它自由基金会的网站上尽可能多的语言越好。如果你是一个双语的行为科学家并有对该基金会对这个项目的翻译工作有兴趣，请联系 operants@bfskinner.org。无论在世界上哪个国家，你的支持，使我们的行为社会繁荣。

French Translated by Genevieve Roy-Wsiaki

Votre soutien en 2014 a permis à la fondation d'élargir la communauté comportementale dans le monde entier.

En 2014, le bulletin de la Red and White Foundation est devenu un rapport. Pour la première fois, des articles étaient publiés dans des langues autres que l'anglais. La journée où le premier article dans une autre langue est sorti, la fondation a reçu des demandes et des offres d'aide relatives à l'ajout d'articles en format bilingue.

Operants a récemment ajouté des correspondants internationaux au Japon, en Israël et en Turquie.

Si vous habitez à l'extérieur des États-Unis, l'achat de livres américains en format papier peut être un cauchemar. Les versions numériques règlent ce problème. Les livres numériques sont offerts à la moitié du prix de ceux en format papier. Ils peuvent être téléchargés immédiatement. Les livres numériques sont exempts de frais d'expédition. En 2014, la fondation a converti trois des livres de B. F. Skinner en format numérique, en partie grâce au soutien du Behavior Analyst Certification Board. Les premières commandes sont venues d'Italie, d'Australie et du Japon.

L'essor international de la Fondation B. F. Skinner se poursuit en 2015 avec la traduction de Science and Human Behavior. La version anglaise peut déjà être téléchargée gratuitement (bfskinner.org/product/science-and-human-behavior-pdf/). La fondation prévoit l'offrir gratuitement sur le site Web de la fondation dans autant de langues que possible. Si vous êtes un spécialiste bilingue du comportement qui souhaite travailler avec la fondation sur ce projet de traduction, veuillez contacter operants@bfskinner.org. Où que vous habitez dans le monde, votre soutien fait prospérer notre communauté comportementale.

Hebrew Translated by Shiri Ayvazo

תמיכתכם במהלך 2014 סייעה לקרן להתרחב בקהילה ההתנהגותית ברחבי העולם.

ב 2014, עלון האדום ולבן של הקרן הפך לדיווח. בפעם הראשונה, טורים פורסמו בשפות אחרות מאנגלית. ביום שבו יצאה הכתבה הראשונה בשפה שאיננה אנגלית, הקרן קיבלה בקשות והצעות לסיוע בהוספת כתבות נוספות דו לשוניות. אופרנטים (*Operants*) הוסיף לאתרונה כתבים ביופן, ישראל וטורקיה.

אם אתם גרים מחוץ לארצות הברית, רכישת ספרים בעותק קשיח יכולה להיות סיוט. גרסאות אלקטרוניות פותרות את הבעיה. גרסאות אלקטרוניות זולות כמעט בחצי מאשר עותקי נייר. ניתן להורידן מיידית. ספרים אלקטרוניים חוסכים את כל עלויות המשלוח. ב 2014 הקרן המירה שלושה מספריו של סקינר לגרסת ספרים אלקטרוניים, תודות, באופן חלקי, לתמיכה מהועד המנהל של הסמכת מנחתי התנהגות (Behavior Analyst Certification Board). ההזמנות הראשונות הגיעו מאיטליה, אוסטרליה ויפן.

הפריסה הבינלאומית של קרן ב. פ. סקינר ממשיכה ב 2015 עם תרגומים של מדע התנהגות בני אנוש (*Science and Human Behavior*). הספר כבר ניתן להורדה ללא תשלום באנגלית (bfskinner.org/product/science-and-human-behavior-pdf/). הקרן מתכננת להציע אותו ללא תשלום באתר הקרן בכמה שפות שאפשר. אם אתם אנשי מדע התנהגות דו לשוניים המעוניינים לעבוד עם הקרן על פרויקט התרגום הזה, אנא צרו קשר עם operants@bfskinner.org. בכל מקום אשר אתם גרים בו בעולם, תמיכתכם מביאה לשגשוג הקהילה ההתנהגותית שלנו.

Italian Translated by Anna Luzi

Il vostro sostegno nel 2014 ha aiutato la Fondazione ad espandere la comunità comportamentista in tutto il mondo.

Nel 2014, la newsletter in rosso e bianco della Fondazione è diventata una rivista. Per la prima volta, i vari articoli sono stati pubblicati in lingue diverse dall'inglese. Il giorno in cui uscì il primo articolo non in inglese, la Fondazione ha ricevuto richieste e offerte di collaborazione, potendo così aggiungere ulteriori articoli in altre lingue. Operants ha acquisito recentemente corrispondenti internazionali in Giappone, Israele e Turchia.

Per chi vive al di fuori degli Stati Uniti, l'acquisto di libri in formato cartaceo provenienti dagli USA può diventare un incubo. Il formato Elettronico risolve il problema. Gli E-Book infatti costano la metà delle edizioni cartacee. Inoltre possono essere scaricati immediatamente. Infine, gli E-books fanno risparmiare costi di spedizione. Nel 2014 la Fondazione ha convertito in E-book tre libri di Skinner, in parte grazie al supporto del Behavior Analyst Certification Board. I primi ordini sono arrivati da Italia, Australia e Giappone.

L'espansione internazionale della B. F. Skinner Foundation continuerà nel 2015, con la traduzione di Science and Human Behavior. Il volume è già scaricabile gratuitamente in inglese dal nostro sito (bfskinner.org/product/science-and-human-behavior-pdf/).

La Fondazione ha in previsione di offrirlo gratuitamente attraverso il proprio sito, tradotto in quante più lingue possibile. Se sei uno studioso comportamentista di madrelingua diversa dall'inglese e sei interessato a collaborare al nostro progetto di traduzione, per favore contattaci attraverso operants@bfskinner.org. In qualsiasi parte del mondo tu viva, il tuo supporto sarà fondamentale per lo sviluppo della comunità comportamentista.

Japanese Translated by Kanako Otsui

2014年、皆様からの支援によって、この財団は国際的な行動主義コミュニティを発展させることができました。

赤と白の財団ニュースレターは、2014年に広報 (report) になりました。初めて、いくつかの記事が英語以外の言語で出版されました。それが発行されると、ふたつの言語で書かれた記事をさらに増やす要望や、その手助けの申し出が財団に寄せられました。

Operantsには最近、新たに日本、イスラエル、トルコの国際特派員 (correspondents) が加わりました。

アメリカ合衆国以外に住んでいる人にとって、紙の書籍をアメリカから購入するのは悪夢かもしれません。電子書籍はその問題を解決します。電子書籍は紙の書籍の半額です。そしてすぐにダウンロードできます。送料も節約できます。2014年に財団はスキナーの3冊の書籍を電子書籍にしました。一部について行動分析士認定協会 (BACB) から支援を受けたことを感謝しています。最初の注文は、イタリア、オーストラリア、日本からのものでした。

B. F. スキナー財団の国際的な展開は、2015年も続きます。「科学と人間行動」の翻訳です。この本の英語版はすでに無料でダウンロードできます (bfskinner.org/product/science-and-human-behavior-pdf/)。財団では、無料で、できるだけ多くの言語でこの書籍を提供することを計画しています。この翻訳企画について財団と一緒に仕事することに興味をもった、バイリンガルの行動科学者がいらしたら、下記までご連絡ください (operants@bfskinner.org)。あなたがどこにお住まいでも、ご支援いただくことで行動主義コミュニティが豊かになります。

Korean Translated by Theresa Yunhee Shin

2014년 여러분의 지원이 전세계 행동에 관한 커뮤니티를 확산하는 본 재단을 돕습니다.

빨간색과 흰색표지였던 재단의 뉴스레터가 2014년 보고서가 되었습니다. 처음 영어보다 다른 언어로 발행되었습니다. 이날은 첫 비영어권의 기사가 발행되었던 날이고, 재단에서는 이중언어로 된 더 많은 기사들을 추가해 줄 것을 요청받기도 했고, 또한 도와줄 것을 부탁하기도 했습니다. "Operants"는 최근 일본, 이스라엘, 터키의 세계적 교신자들을 추가하였습니다.

만약 여러분들이 미국지역 외에 살고 있다면, 미국에서 발행되는 실제 책들을 구입하는 것이 악몽일 것입니다. 이 문제를 전자책이 해결해주었습니다. E-Book 형태는 종이형태보다 비용이 반값입니다. 또한 즉시 다운로드 받을 수 있습니다. E-Book은 배송비용도 모두 절약됩니다. 본 재단은 Skinner의 책 세권을 e-Book 형태로 2014년 변환하였습니다. 행동분석가자격위원회 (BACB)의 지원에 대해 감사의 인사를 전합니다. 첫번째 주문은 이태리, 호주, 그리고 일본에서 왔습니다. B. F. Skinner 재단의 세계적인 확산은 과학과 인간행동 (Science and Human Behavior)의 번역과 함께 2015년에도 지속될 것입니다. 이 책은 이미 영어로 비용없이 다운로드 할 수 있습니다 (bfskinner.org/product/science-and-human-behavior-pdf/).

본 재단에서는 가능하면 더 많은 언어로 재단 웹사이트에 무료로 이 책을 공급할 예정입니다. 만약, 당신이 이중언어를 할 수 있는 행동과학자로서 이 번역 프로젝트에 재단과 함께 일할 의향이 있다면, 부디 operants@bfskinner.org로 연락바랍니다. 당신이 살고 있는 세계가 어디든, 우리는 행동에 관한 우리의 커뮤니티 번영을 위해 아낌없는 지원을 할 것입니다.

Norwegian Translated by Lars Halvorsen/Monica Vandbakk

Din støtte i 2014 hjalp organisasjonen å utvide det verdensomspennende atferdsanalytiske samfunnet.

I 2014 ble det rød-hvite nyhetsbrevet til en rapport. For første gang ble deler av innholdet oversatt og publisert i andre språk i tillegg til engelsk. Da dette skjedde fikk organisasjonen straks tilbud om hjelp til å legge til flere artikler i flere språk. Operant's har derfor nylig utvidet med korrespondenter i Japan, Israel og Tyrkia.

Om du bor utenfor USA, kan det likne et mareritt å få kjøpt og fraktet bøker fra USA. Elektroniske versjoner vil løse dette problemet. E-bok formatet er halvparten så dyrt som papirformat. De kan lastes ned umiddelbart. E-bøker eliminerer utsendelseskostnadene.

I 2014 ble tre av Skinner's bøker konvertert til E-bok format, mye takket være støtte fra Behavior Analyst Certification Bord (BACB). De første ordrene kom fra Italia, Australia og Japan.

B. F. Skinner organisasjonen fortsetter i 2015 sin internasjonale utspredelse med oversettelser av Science and Human Behavior. Boken er allerede nedlastbar gratis på engelsk på bfskinner.org/product/science-and-human-behavior-pdf/. Organisasjonen planlegger å tilby boken gratis på hjemmesiden sin på så mange språk som mulig. Om du er flerspråklig atferdsvitenskapsmann og interessert i å jobbe for organisasjonen med et slikt oversettelsesprosjekt, så ta kontakt på operants@bfskinner.org. Det spiller ingen rolle hvor i verden du bor, det er din støtte som gjør at det atferdsanalytiske samfunnet blomstrer.

Portuguese Translated by Monalisa Leão

Seu apoio em 2014 ajudou a Fundação a expandir a comunidade comportamental por todo o mundo. Em 2014, o boletim informativo vermelho e branco da Fundação tornou-se uma notícia. Pela primeira vez, seus conteúdos foram publicados em outros idiomas além do Inglês. No dia em que o primeiro artigo não-Ínglês saiu, a Fundação recebeu pedidos e ofertas de ajuda com a adição de mais artigos em duplos idiomas. Operants tem recentemente adicionado correspondentes no Japão, Israel e Turquia.

Se você mora fora dos EUA, a compra de livros impressos dos EUA pode ser um pesadelo. As versões eletrônicas resolvem o problema. Os livros no formato eletrônico custam a metade do preço daqueles impressos. Eles podem ser baixados imediatamente. Os livros eletrônicos poupam todos os custos de transporte. Em 2014 a Fundação converteu três livros do Skinner para o formato eletrônico, em parte devido ao apoio do Conselho de Certificação do Analista do Comportamento. Os primeiros pedidos vieram da Itália, Austrália, e Japão.

A propagação internacional da Fundação B. F. Skinner continua em 2015 com as traduções do Ciência e Comportamento Humano. O livro já pode ser baixado sem custo em Inglês (bfskinner.org/product/science-and-human-behavior-pdf/). A Fundação pretende oferecê-lo gratuitamente em seu site no maior número de idiomas possíveis. Se você é um cientista bilíngue interessado em trabalhar com a Fundação nesse projeto de tradução, por favor, entre em contato com operants@bfskinner.org. Seja qual for a parte do mundo na qual você vive, o seu apoio faz a nossa comunidade comportamental prosperar.

Russian Translated by Alexander Fedorov

Ваша поддержка в 2014 году помогла Фонду в развитии международного поведенческого сообщества.

В 2014 году красно-белый информационный статьи были опубликованы не на английском языке. В день, когда вышла первая неанглоязычная статья, Фонд получил запросы и предложения помочь с публикацией большого количества статей на двух языках. Недавно у Operants появились корреспонденты в Японии, Израиле и Турции.

Если вы живете за пределами США, покупка бумажных книг может стать ночным кошмаром. Электронные версии решают эту проблему: они вдвое дешевле бумажных, их можно сразу же загрузить и они позволяют сэкономить на доставке. В 2014 году Фонд перевел три книги Скиннера в электронный формат, отчасти благодаря поддержке Сертификационной комиссии анализа поведения. Первые заказы пришли из Италии, Австралии и Японии.

Международное развитие Фонда Б. Ф. Скиннера продолжится в 2015 году, в том числе, благодаря переводам книги «Наука и человеческое поведение». Ее уже можно бесплатно загрузить на английском языке (bfskinner.org/product/science-and-human-behavior-pdf/). Фонд планирует предлагать ее бесплатно на своем сайте на как можно большем количестве языков. Если вы являетесь ученым в области поведенческих наук, владеющим двумя языками, и заинтересованы в работе с Фондом над этим проектом перевода, пожалуйста, свяжитесь с нами по электронной почте operants@bfskinner.org. Где бы в мире вы не жили, ваша поддержка поможет процветанию нашего поведенческого сообщества.

Spanish Translated by Cristina Franco

Su apoyo en 2014 ayudó a la Fundación expandir la comunidad conductual en todo el mundo. En 2014, el boletín de la Fundación de rojo y blanco se convirtió en un informe. Por primera vez, artículos fueron publicados en otros idiomas aparte del Inglés. El día que el primer artículo publicado en otro idioma que el Inglés salió, la Fundación recibió solicitudes y ofrecimientos de ayuda con la adición de más artículos en idiomas duales. Operantes (Operants) ha añadido recientemente corresponsales internacionales en Japón, Israel y Turquía.

Si vive fuera de los EE.UU., la compra de libros impresos de los EE.UU. puede ser una pesadilla. Formatos de libros electrónicos salen a la mitad de costo a los formatos de papel. Se pueden descargar de inmediato. Libros electrónicos ahorran gastos de envío. En 2014 la Fundación convirtió tres de los libros de Skinner en formatos de libros electrónicos, gracias en parte al apoyo del Consejo de Certificación del Analista de Conducta. Las primeras órdenes fueron de Italia, Australia y Japón.

Propagación internacional de la Fundación BF Skinner continúa en 2015 con las traducciones de Ciencia y Conducta Humana (Science and Human Behavior). El libro ya se puede descargar de forma gratuita en Inglés (bfskinner.org/product/science-and-human-behavior-pdf/). La Fundación lo planea ofrecer gratuitamente en la web de la Fundación en los mas idiomas posible. Si usted es un científico de conducta bilingüe interesado en trabajar con la Fundación en este proyecto de traducción, por favor contacte operants@bfskinner.org. En cualquier lugar del mundo en que viva, su apoyo hace que nuestra comunidad conductual prospere.

Turkish Translated by Hande Cihan

2014'deki desteğiniz Vakfın dünya çapındaki davranışsal kitlelere ulaşmasında etkili oldu. Vakfın kırmızı ve beyaz bültenleri 2014'de rapor haline geldi. Makaleler ilk kez İngilizce dışındaki dillerde yayımlandı. Böylelikle vakıf, farklı dillerde yazılan daha çok makale ekleme konusunda yardım önerileri ve istekleri aldı. Bu bağlamda Operants yakın zamanda Japonya, İsrail ve Türkiye'den uluslararası bağlantılar kurdu.

Eğer A.B.D dışında yaşıyorsanız, Amerika'dan kitap satın almak kabus olabilir. Kitapların elektronik versiyonları ise bu problemi çözüyor. Kitapların e-kitap formatı, kağıt formatından yarı yarıya daha ekonomik ve hızlıca internetten indirilebilir. E-kitap ile tüm kargo maliyetlerinden tasarruf edilebilir. Vakıf, Davranış Analisti Belgelendirme Kurulu'nun desteği sayesinde üç adet Skinner kitabını 2014'de e-kitap formatına çevirdi. İlk siparişler İtalya, Avustralya ve Japonya'dan geldi.

B.F. Skinner Vakfı'nın uluslararası yayılımı 2015'de Science and Human Behaviour kitabının çevirisiyle devam ediyor. Kitap halihazırda İngilizce olarak ücretsiz indirilebilir (bfskinner.org/product/science-and-human-behavior-pdf/). Kitabı pek çok farklı dilde, vakfın sitesinde ücretsiz olarak sunmak, vakfın planları arasında. Eğer siz de bu çeviri projesinde vakıfla birlikte çalışmayla ilgilenen, çift dil bilen bir davranış bilimciyseniz lütfen operants@bfskinner.org adresiyle iletişime geçin. Dünyanın neresinde yaşıyor olursanız olun yapacağınız destek davranışsal toplumumuzun gelişmesine katkı sağlayacaktır.



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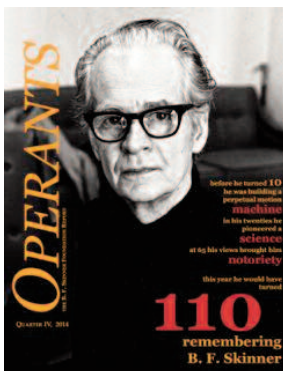
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Letters and Comments from *Operants* Readers

feedback



Quarter IV, 2014 issue was dedicated to the 110th birthday anniversary of B. F. Skinner

I wanted to tell you how much I enjoyed this special issue. I have my own memories of B. F. Skinner, as do so many in our field, I'm sure. (I'm sure you could fill another issue with these.) One that sticks out was from the same visit to University of Florida that Hank Pennypacker described. Fred was staying in a room on campus, and Ed Malagodi and I had taken him back there for a brief break in his schedule. We were talking with him about something when he said, "Excuse me," and took out a little notebook and wrote a note to himself about whatever had occurred to him during our discussion. Then it was back to the conversation. Of course, I did my

best to emulate this practice from then on.

On the same visit, he was meeting with a group of graduate students in a classroom, and I asked him what the relationship should be between BA and psychology. Without hesitation, he answered, "Not much." I don't recall his further comments because his first reaction seemed to say it all. His conviction greatly strengthened my confidence in taking that position to which I was already strongly inclined.

James M. Johnston



Quarter III, 2014 issue featured an archival photo on the back cover, which was taken in 1986 at Bad Kreuznach's Seminar. We asked our readers to help us identify people in the picture.

With readers' help, the Foundation was able to identify everyone (special thanks to Joanne Robbins!):

Top row L-R
Maria Malott
Dick Malott
Dave Palmer
Jon Donahue
Kurt Salzinger
Cloyd Hyten
Jeff Danforth
Hayes Reese

Bottom Row L-R
Ullin Place (passed in 2000)
Julie Vargas
Phil HineLine
Steve Hayes
Linda Parrot Hayes
Phil Chase



EABA Conference

Stockholm, Sweden (September 10-13, 2014)

report by Monica Vandbakk, M.A.

Photos: Karola Dillenburger

EABA facts: Børge Strømgren

After a great conference in Lisbon two years ago, the European Association for Behavior Analysis (EABA) committee, in cooperation with the Swedish Association for Behavior Analysis (SWABA), arranged the bi-annual EABA conference in the beautiful city of Stockholm from September 10 to 13, 2014.



The City Hall is one of Stockholm's most iconic buildings. Built in 1923, it is home to the prestigious annual Nobel Banquets.

The 7th EABA conference was opened in the famous City Hall of Stockholm. The visitors were introduced to the history and architecture of this building, and some fun and interesting facts from the annual Nobel banquet.

The scientific part of the conference occurred at the



Opening reception in the City Hall of Stockholm.

Stockholm University Campus.

Thursday's scientific program included seven symposia and five paper sessions, and Niklas Törneke, as invited speaker, talked about Relational Frame Theory for clinical use at the end of the day.

The paper session *Multiple Dimensions of Operant Behavior*, chaired by Reut Peleg, included the presentation of a current study by Peleg, Neil Martin, and Per Holth, *Is variability an operant dimension of behavior?* The preliminary answer they suggested was "no." Based on effects of reinforcement and extinction on three-response sequence under lag reinforcement schedules (measured by resistance to change), they found that responding did not cease, and the first and the last responses were the most resistant to change. It was then concluded that an interaction between both reinforcement and extinction is involved in the variability observed under lag schedules, the variability is most probably a byproduct of the schedule and other explanations than variability as an operant dimension are possible.

Laurilyn Jones and Francis Mechner presented *Systematic Operant Bias in Human Participants: Simple and Compound Effects* as the second contribution. This study examined the functional equivalence in 52 different operants (letter keystrokes), and the results showed systematic biases for certain sequences of letter keystrokes over others.

Miriam Garcia-Mijares, Hernando Borges Neves-Filho, Larissa dos Reis Stella, and Rodrigo Harder Ferro Dicezare ended the paper session with *Training Variables in Insight Problem Solving With Pigeons and Rats*. Their research investigated what kinds of training regimens and test situations produce an insightful performance (the spontaneous interconnection of repertoires). They found that only closely replicating rigid training of two repertoires in pigeons and rats demonstrated spontaneous interconnection. When altering the training variables, no such effect oc-

curred.

After lunch, it was time for the presidential address by Robert Mellon – *Dissemination and Deprivation: Who is*



Missing the Behavioral Enlightenment? He began with radical behaviorism and then explained reasoning as a process of long-term interaction between organisms and the events that precede and follow their actions. Despite this account, very few people, and not at all the people who struggle with problematic patterns of thinking and perceiving, are affected by this useful and better alternative. He suggested ways to improve the behavioral position and pointed out possible hinderances. He concluded with, “[It’s] not so easy, but much more effective.”

Martti T. Tuomisto chaired the symposium held in honor of Professor Nathan H. Azrin. Tuomisto gave many examples of the influence of Azrin’s work. Ned Carter, Anders Friberg, and John Lutzker honored Azrin and spoke of his achievements, contributions, and impact on basic and applied behavior analysis.

The first day of the conference ended with a poster and expo session. Almost 50 posters covering theoretical, experimental and applied behavior analysis were displayed.

Friday’s program included four symposia and eight paper sessions covering behavior analysis in education, stimulus equivalence research,

verbal behavior, gaming, and early intervention programs. Invited speakers included Mecca Chiesa, Jay Moore, and Camille Ferond.

Chiesa expounded on the implications of the conceptual analysis of behavior for the future of behavior analysis. The number of behavior analysts in Europe grows, and this suggests the acknowledgment of the potential and practical importance of our field. Chiesa’s main point was that while the practical and applied parts of behavior analysis seem less controversial, one must not forget that the acceptance of the theory and philosophy (the conceptual analysis of behavior) are fundamental to the future well being of behavior analysis. She ended her talk by quoting John F. Kennedy, “Like it or not, we are living in interesting times.”

Jay Moore followed up later that day with his talk about reasons for studying radical behaviorism as a philosophy.

The last invited speaker was Camille Ferond, and she gave an overview of the most robust influencing strategies and models in business environment and argued that Organizational Behavior Management (OBM) professionals have the methods to influence key decision makers in both the public and private sectors.

Saturday’s six paper sessions covered topics from RFT, discriminative processes in autism intervention, classifications and measurement, emergent behavior to private

events, and their role in self-control. Iver Iversen presented the importance of basic research for successful application



Gamla Stan, the Old Town, is one of the largest and best preserved medieval city centers in Europe, and one of the foremost attractions in Stockholm. This is where Stockholm was founded in 1252.

events, and their role in self-control. Iver Iversen presented the importance of basic research for successful application

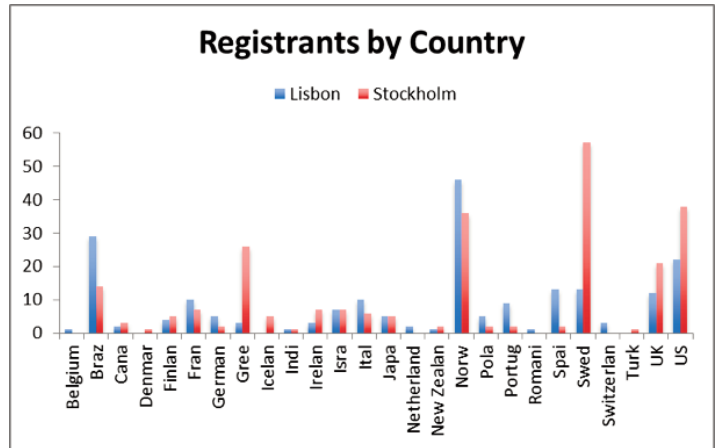
of behavior analysis, and he exemplified his findings by showing examples from his own research that used rats, chimpanzees, and paralyzed people. He demonstrated unusual ways to analyze data, and he emphasized that modern behavioral analysis has analysis and control methods that range from a focus on minute-to-minute response details to focus on daily behavior of groups of individuals.

Shahla Ala'I-Rosales was the last invited speaker and closed up the formal part of the conference in Stockholm.

The EABA committee called the conference to a close and invited proposals for the location of the next conference, to be held in Europe in the early autumn of 2016. ●

The European Association for Behavior Analysis is the European alternative to ABAI, and the aim is to promote behavior analysis in Europe. In the Stockholm conference, as many as 22 countries were represented, including non-European countries. Besides large delegations from the United States and Norway, Greece and Brazil were well represented as, of course, the host country Sweden.

The following countries were represented at the conference: Brazil, Japan, India, Canada, New Zealand, Israel, Poland, Germany, France, Iceland, Norway, Finland, Denmark, Italy, Greece, Portugal, Spain, Sweden, Turkey, United Kingdom, and USA.



Correspondent's Profile: Monica Vandbakk

My name is Monica Vandbakk. I live in Norway, and I have been a correspondent for *Operants* since January 2013. Hopefully, it will contribute to improving my English.

I work at Oslo and Akershus University College in central Oslo, Norway. I teach in the bachelor's program in Social Welfare and the bachelor's and master's program in Behavior Analysis. I am affiliated with the research group of Professor Per Holth and Professor Espen B. Johansen, and my main interest is the area of conditioned reinforcement. I am also a board member of the Norwegian Association of Behavior Analysis whose purpose is to spread behavioral analysis in Norway.

Prior to my employment at the University College, I worked at the University Hospital in Oslo, a more clinical and applied setting than teaching, and I still have some assignments for the hospital.

I feel fortunate that I have the possibility to teach behavior analytic basic principles as well as radical behaviorism. I conduct basic research in the rat laboratory, and I supervise staff members in facilitating proper environmental conditions for people who need training and behavioral changes. I get the best of both worlds.

I completed my master's in 2008, and I am currently working on my Ph.D. under the supervision of Professor Per Holth in Norway. We also collaborate with Professor Iver Iversen, and I will have a short stay in his lab at the University of North Florida in a few weeks. It is a perfect escape from the long winter in Norway, trading in the cold and the snow for some sun and for temperatures above freezing.

I have a husband and two kids. We have just finished an extensive renovation on our old house, so we have just returned to normal routines.

Why behavioral analysis?

I began university studying philosophy, and soon, I discovered a particular interest for empirically-oriented philosophers of science. I liked logical positivism, and I was concerned with the logical structures of science. Later, I was introduced to behavior analysis and started reading about radical behaviorism and Skinner's work. Parallel to this, I worked part time in a group home, and was able to see how some of my coworkers used behavioral principles and techniques to teach adults with disabilities to get dressed, to ask for favorite foods or activities, and so on. I thought it was wonderful to discover behavioral modification techniques based on the foundations and principles of a philosophy and rooted in empirical evidence.

What is your favorite book or article by Skinner? Do you have a Skinner quote you want to share with Operants readers?

I have several favorite books, but I use *About Behaviorism* a lot in my teaching. In this book, I discover something new all the time. I like this quote from *Walden Two*: "It is a mistake to suppose that the whole issue is how to free man. The issue is to improve the way in which he is controlled."

Why, in your opinion, is Skinner relevant? How developed is the Skinnerian field in your country?

Norway is one of the European countries where behavior analysis has a stronghold, especially in applied settings. Our association was founded in 1973, and today it counts 800 to 1,000 members, which is comparatively numerous, considering that Norway's population is just under five million. You cannot study behavior analysis at

any of the universities any longer, so the Skinnerian field is suffering, and new psychologists do not learn other than the usual misconceptions. Fortunately, you can learn about behavior analysis at some of the University Colleges, for example in Oslo or Ostfold. Oslo and Akershus University College has developed both a master's and a Ph.D. program now. I think the future looks quite bright.

What is your favorite article/interview you did for Operants? Why that one?

I have not done so many yet, but so far, I enjoyed the interview I just had with Professor Arne Brekstad, which will appear in a future issue. Brekstad has been tremendously important for the development and growth of behavior analysis in Norway.

When you are not on the job or writing for Operants, what are your favorite activities/hobbies?

I try to spend time with my family, and I love to immerse myself in a light but compelling book. If not, it is always some work to be done around the house, especially outdoors during the summer. I enjoy working in the garden.

Tell us more about your country. What do you like about it, and why people should visit?

Norway is vast and sparsely populated, and the mainland spans the same distance as from New York to Miami. In my opinion, the main attractions in Norway are the landscape and nature. It is quite expensive in Norway, and people are not that easy to get in touch with. Norwegians may be entrapped and dismissive until you get to know them. Norway is well organized and has much to offer if you have the time. I like the four different seasons although I would like the summer to last a bit longer. Sometimes I forget to appreciate how lucky we are in this country. No unemployment, a great welfare system, low poverty, little corruption. High taxes, but it is worth it. ●



Monica in the national costume at the Day of Constitution celebration on May 17th.

FUN FACT: ACCORDING TO WIKIPEDIA, NORWAY IS THE BIRTHPLACE OF MODERN SKIING. THE WORD "SKI" IS NORWEGIAN FOR "PIECE OF WOOD."

Dr. Mickey Keenan

Professor of Behaviour Analysis

Ulster University, Northern Ireland

interview by Katerina Dounavi, Ph.D.



Mickey Keenan is Professor of Behaviour Analysis at Ulster University where he teaches behaviour analysis to undergraduate psychology students. He was instrumental in laying the foundations for the master's course in Applied Behaviour Analysis (ABA) at the university after he established the first charity in Ireland whose mission was to promote ABA for the treatment of autism. He has campaigned tirelessly for the rights of children to have access to ABA in Ireland and throughout Europe. He has received numerous awards for his work including a Fellowship (British Psychological Society), Distinguished Community Fellowship (Ulster University), Personal Achievement Award (New York State Association for Behavior Analysis), Michael Hemmingway Award (Behavior Analyst Certification Board), and SABA award 2008 and 2015. He is co-author of the first multimedia book in behaviour analysis *Behaviour Analysis: A Primer* available on iTunes.

Tell us about the status of Behavior Analysis in Northern Ireland when you first started working in the field.

It was virgin territory when I began my studies at Ulster University. Julian Leslie was the animal guy at Coleraine, and between him, Leo Baker from Trinity College Dublin, and a couple of other academics from the Republic, a group was formed called *Behaviour Analysis in Ireland*. It created a platform for postgraduates to present their work, which was mostly basic experimental work. Apart from this activity, there wasn't anything else happening.

Could you highlight some events that have helped Behavior Analysis progress in Northern Ireland?

The biggest thing that happened is the creation of a charity called *Parents' Education as Autism Therapists* (PEAT; www.peatni.org). This parent-lead charity has brought the benefits of ABA to well over 800 people during its lifetime. This is an organisation that visits people's homes and works directly with parents, teaching them about ABA with extremely limited resources; for a number of years we had only one ABA professional. We have done this work whilst trying to stay afloat in the midst of prejudice against ABA as well as living during problems arising from the political conflict in Northern Ireland. The existence of PEAT has seeded the market for training in ABA. This has resulted in each of the universities in Northern Ireland now offering master's level training in ABA. Master's courses in ABA in the Republic of Ireland also owe their beginnings to what we started in Northern Ireland. After all these years though, we still don't have an ABA school for children with autism. This fact is evidence of the obstacles we face. But we will get there!

What are your thoughts on the current status of Behavior Analysis in Europe?

As a whole, the European Association for Behaviour Analysis (<http://www.europeanaba.org>) is going from strength to strength. But progress is still patchy and that makes it difficult to have a bigger impact that members would like. Language differences between countries is a huge obstacle, but colleagues are working tirelessly to catch up with developments elsewhere in the world.

Can you identify a number of obstacles in the dissemination of Behavior Analysis in Europe and suggestions on how to overcome them?

For some years, I asked myself the same question. Given the difficulties we have in Northern Ireland and the United Kingdom in

general, I thought how much more difficult it must be for colleagues in other countries to reach out to people when most of the material they have for teaching is written in English. I embarked on a project to address this problem in relation to autism. With PEAT, we got some funding for an early edition of what is called *Simple Steps* (www.simplestepsautism.com). I then applied for funding to have it translated into Norwegian, German, and Spanish. The project was called *Science and the Treatment of Autism: A Multimedia Package for Parents and Professionals* (<http://www.stamppp.com>). Much to my surprise, we got the funding, and over the course of the next two years, we updated the early version and translated it. As part of the grant proposal, I asked for money so that 500 free copies could be distributed within each country. My thinking on this point was very simple, let's flood the communities with information on ABA so that parents can have information on how to help their children. I thought this might also be a way to garner support from parents who wished to see changes in access to treatment based on ABA in their own countries. After this initial funding, I started another application, and again to my surprise, we were successful. This time the translations were in Italian, Icelandic, Dutch, and Swedish. Following workshops in basic principles of behaviour in Portugal, the parents who invited me also obtained funding for a Portuguese version of *Simple Steps*. The online program is currently available at a reasonable cost with the usual sorts of teething difficulties for such a complex undertaking. The project has been nominated for a SABA award to be delivered at the next ABAI convention in San Antonio in 2015. I have no financial interests in this project and feel free therefore to advertise it! The plan is for proceeds to be invested in PEAT, to develop material further, and to help partners develop ABA in their own countries.

Have you any thoughts on how behaviour analysts in the USA could help the spread of BA in other countries?

Adopt a behaviour analyst, that's the short answer. Seriously though, currently many professionals already help colleagues in Europe through the great relations they

have established and their contributions to the *European Journal of Behaviour Analysis*. Also, some organisations in the USA offer opportunities for placements in their departments. *The New England Center for Children*, for example, offers placements for students in our master's course. When the students return, they are bulging with confidence in their behaviour speak and skills. The problem, of course, is that nobody wants to employ them when they return. This is the same for most countries. The heart of the problem that needs to be addressed is the misinformation on ABA that drives government policy in many countries. Whilst there may not be much available in terms of training in behaviour analysis in some countries, when ABA is covered it is usually misrepresented either as something that died out years ago, or in the case of autism, it is viewed as something that is very cruel in its treatment of children. To complicate matters, I have learned that some colleagues from the USA are insensitive to cultural differences in other countries and come primarily with dollar signs in their eyes because they see opportunities for making money. This has

The heart of the problem that needs to be addressed is the misinformation on ABA that drives government policy in many countries.

been an important lesson for me to realise that behaviour analysts can sometimes fall prey to putting tokens in the form of pieces of paper and bits of metal (i.e., money) ahead of helping others. To really help colleagues in another country, I would urge people to discuss the problems they can address together initially; think *functional assessment*. Conferences can be costly because of translation issues, but I think that they are essential and that they work best when video clips are shown of ABA in action. At a meeting I had only two weeks ago with a local politician, she asked me, "What does this ABA look like?" Fortunately, I was able to show something to give her a feeling for the reason I was asking her to help. It is time consuming to work with others in a different country, so I would advise you not to start unless you are keen to make a change for that country. At the very least, if you have the resources, then visit colleagues in other countries, but do so without charging a fee. They may have money to cover your flights and accommodation, but that may be all.

Another issue that our discipline should address is

profile

the absence of a basic laboratory manual that guides teachers in the delivery of practical classes. Put yourself in the shoes of someone trying to teach about schedules of reinforcement, stimulus equivalence, avoidance, etc. to social workers without a science background. Where does this teacher turn to in order to make the topics interesting for this audience? What demonstrations can s/he use to help them teach? What software can s/he access to run practicals? Bear in mind that any answer to these questions must be based on an understanding of the damaging effects of misrepresentation of behaviour analysis that undoubtedly exists in other countries. There

There are many wonderful teachers out there who have a few gambits up their sleeves when it comes to adapting teaching strategies that take into consideration the backgrounds of their students. Let's have a repository to store them so others can experiment with them.

are many wonderful teachers out there who have a few gambits up their sleeves when it comes to adapting teaching strategies that take into consideration the backgrounds of their students. Let's have a repository to store them so others can experiment with them. We can take this suggestion further when it comes to sharing examples of good practice. I think the existence of a database of video clips of good practice would be invaluable for teachers preparing students for the BACB exams. Also, with more and more animal labs closing down I think there is an urgent need to get most of the basic principles on video. ●

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Algı Selim Parlak

Parin Yakupyan

ABA Therapy Center

Istanbul, Turkey

profile

interview by Hande Cihan and Yesim Güleç-Aslan

Can you tell us a little about yourselves?

Selim: I was born in Istanbul in 1978. I received my bachelor's degree from Marmara University from the department of Mechanic Teaching. While I was looking for a job as a machine teacher, I heard the word *autism* and was instantly intrigued. The very next day, I started working in the field of autism in public special education schools, special education and rehabilitation centers, sensory integration therapy centers and life centers. That was eleven years ago. I went on to complete my master's degree at Istanbul Commerce University in the department of Applied Psychology. The title of my thesis was *Empathy Skills of Mothers of Children with Autism*. I also went on to co-found and manage the Algı Special Education and Rehabilitation Center and ABA Therapy Center. I'm also the co-founder of an association named ÖÇED (Education of Special Children and Solidarity Association).

Parin: I was born in Istanbul. I received my bachelor's degree from Istanbul University Faculty of Economics studying to be an accountant. I worked in finance and accounting for 17 years. My twins were born in 2000, and I started to see things through a different window when one of my sons was diagnosed with autism in 2002. I felt a strong responsibility to do something and established Algı Special Education and Rehabilitation Center and ABA Therapy Center with Selim and my husband Dr. Garbis Yakupyan. The Center is not just a job for me, this is my life because I'm a mother of a child with autism.

Your institution consists of two parts, Rehabilitation Center and ABA Therapy Center, but today, we will talk about ABA Therapy Center. Can you tell us about stud-

Kendiniz biraz tanıtabilir misiniz?

Selim: 1978 İstanbul doğumluyum. Marmara Üniversitesi Teknik Eğitim Fakültesi Enerji Anabilim dalı Makina Öğretmenliği Lisansını tamamladım. Aslında kendi alanımda iş başvurularında bulunurken bir komşum sayesinde otizmle tanıştım ve bu alanda meslek yaşantım başladı. 11 yıldır da bu alanda çalışıyorum. Yüzlerce farklı gelişim gösteren çocuğun bireysel eğitimlerimi ve gelişimlerini takip ettim. Bu süre zarfında İstanbul Ticaret Üniversitesi Sosyal Bilimler Enstitüsünde Uygulamalı Psikoloji yüksek lisansını tamamladım. Tezim "Otistik Çocuğa Sahip Annelerin Empatik Becerilerinin İncelenmesi" konusu üzerineydi. Algı Eğitim Öğretim Hizmetleri Tic. Ltd. Şti' nin kurucuları arasındayım. Bu şirkete bağlı olarak faaliyet gösteren Algım Özel Eğitim ve Rehabilitasyon Merkezi'nin sorumlu müdürlüğünü ve ABA Terapi Merkezi Birimi'nin yöneticiliğini yapmaktayım. Son ÖÇED yani özel çocuklar eğitim ve dayanışma derneğinin başkan yardımcılığı yapmaktayım.

Parin: İstanbul doğumluyum. Ben muhasebeci olma hayaliyle İstanbul Üniversitesi İktisat Fakültesini bitirdim. 17-18 yıl kadar finans ve muhasebe sektöründe çalıştım. 2000 yılında ikiz çocuklarım dünyaya geldi ve çocuklarımdan biri 2002 yılında otizm tanısı aldığıında her şeyi farklı bir pencereden görmeye başladım. Kendimi bir şeyler

yapmak için sorumlu hissettim böylelikle Selim ve eşim Dr. Garbis Yakupyan ile birlikte Algım Özel Eğitim ve Rehabilitasyon Merkezi ve ABA Terapi Merkezi Birimini kurduk. Burası benim için sadece bir iş yeri değil burası benim hayatım çünkü ben bir otizimli çocuk annesiyim.

Kurumunuz Rehabilitasyon Merkezi ve ABA Terapi Merkezi olmak üzere iki kısımdan oluşuyor kurumunuz



*Parin Yakupyan (left) and
Algı Selim Parlak*

ies conducted there?

Selim: We both attended a seminar about the applications of ABA given by a behavior analyst, Nicole Stanley. I also participated in a 40-hour training seminar with another behavior analyst, Nükte Altıkulaç. We started with working with Altıkulaç, which became an important aspect of the work at our center. She studied Applied Behavior Analysis at Penn State University and she is our supervisor. Working with a supervisor is very rare in our country because we don't have many behavior analysts here. We also work with two education coordinators, one of whom is a psychologist and the other one is receiving a master's degree in Applied Behavior Analysis with a specialization in autism at Anadolu University. This gave us a great opportunity to receive training and supervision with experienced professionals in the field of ABA. Children in our center receive between 20 and 120 hours of instruction in ABA per week. We use the Assessment of Basic Language and Learning Skills (ABLLS) assessment tool to evaluate children in 25 different skill areas in order to set up the child's curriculum. Before ABA, we didn't use such detailed evaluation tools.

Parin: I can say that in our center, we have combined both technical and emotional sides of service. Since I have a child with autism I can understand how mothers feel and can relate to their emotional needs. Moreover, we also participate by presenting our research at conferences such as the *National Special Education Conference*, *Child and Adolescent Neurology Conference*, and *International Autism Conference*. We also put an emphasis on ongoing professional development by reading ABA books, which are mostly textbooks written in Turkish, such as *Applied Behavior Analysis* by Elif Tekin İftar, *Human and Behavior* by Doğan Cüceloğlu, and *Autism Journey of a Mother* by Nevin Benal Penny.

In recent years we hear the terms behavior analysis and behavior analyst in the field of special education a lot. What is the relationship between your studies and ABA? How did you become interested in ABA?

Selim: I think when you search for the existing autism interventions, no matter in which country you live, it is inevitable to choose ABA. According to the report by National Assessment and Accrediation Council (NAAC), ABA is one of the best scientific based methods in the world.

Parin: First of all, since there is no age limit, ABA is applicable for everyone. It is such an easy method for teach-

ancak bugün sizinle daha çok ABA Terapi Merkezi'den yapılan çalışmalarla ilgili konuşacağız. Burada otizm alanına yönelik çalışmalarınızdan bahseder misiniz?

Selim: İkimizde uygulamalı davranış analisti Nicole Stanley tarafından verilen UDA uygulamaları seminerine katıldık. Ayrıca bir başka davranış analisti olan Nükte Altıkulaç'ın verdiği 5 modülden oluşan 40 saatlik eğitime katıldık. En önemli çalışmamız biz burada bir UDA uzmanı olan Nükte Altıkulaç ile çalışıyoruz kendisi PENN STATE UNIVERSITY'de "APPLIED BEHAVIORAL ANALYSIS" okumuş ve bize süpervizörlük yapıyor ayrıca biri psikolog diğeri UDA master programına devam eden 2 eğitim koordinatörüyle çalışıyoruz. Bu kuruma bağlı herkes için çok büyük bir avantaj ve Türkiye'de çok az kişinin bu sistemle çalıştığını biliyoruz. Çocuklar haftada 20-120 seans arası eğitim alıyorlar. 25 farklı beceri alanında çocuğu değerlendiren ABLLS (Assessment of Basic Language and Learning Skills) değerlendirme aracını kullanıyoruz ve çocuğun müfredatını buna göre ayarlıyoruz. UDA'yı tanımadan önce bu kadar detaylı bir değerlendirme yapmıyorduk. Sadece genel olarak çocuğun ne bilip ne bilmediğine bakan kaba değerlendirme formları vardı o kadar.

Parin: Ben annelere çok yakın olduğum için işin hem teknik hem de duygusal yönünü birleştirdik diyebilirim. Bunun dışında yapılan ciddi kongrelere mutlaka katılım gösteriyoruz. Hatta bu kongrelere poster sunumlar yapıyoruz. Her yeni çıkan kitabı takip ediyoruz. Takip ettiğimiz kitaplar dil problemi nedeniyle daha çok Türkçe ders kitapları oluyor.

Türkiye'de davranış analisti/uygulamalı davranış analisti kavramı son birkaç yıldır özellikle özel eğitim alanında daha sık duyduğumuz bir kavram haline geldi. Sizin çalışmalarınızın UDA ile ilişkisi nedir? UDA'ya yönelme süreciniz ve ilginiz hakkında neler söylemek istersiniz?

Selim: Su an hangi ülkede olursa olsun var olan sistemler araştırıldığında zaten UDA'ya yönelmek kaçınılmaz. NAAC raporuna göre de UDA su an bilimselliği kanıtlanmış 3 yöntemden biri. UDA'da genelleme var, pekiştireci silikleştirme var. Beceriyi öğrettikten sonra kontrol zamanları var.

Parin: Bir de UDA'nın yaşı yok bir kere her yaş grubu için çok uygun. Çok kolay uygulanabilir bir yöntem uygulayıcılar için. Data'ya dayalı bir yöntem çocuk bir başka bir terapistte geçtiği zaman çocuğu alan terapistin ben

ers to apply. It is based on data so that when the teachers start to work with a child, they know what to do by making data-based decisions. Teacher can address different skills or behaviors at the same time. The goal of ABA is to replace negative behavior with positive behavior. The most important thing about ABA is that it is based on reinforcements that make children happy. If the children feel happy when they are practicing the target behavior, they will practice that behavior more. That is why ABA is so effective for children with autism. All these positive aspects of ABA directed us to use it in our center.

What do you think about current situation of ABA in Turkey?

Selim: In Turkey, neither practitioners, teachers, or families use ABA because they don't know what ABA is.

Parin: All these people Selim mentioned don't like ABA because of individuals who have implemented ABA incorrectly in the past. Everybody thinks that they are using ABA even if they are not. Instead, they use music therapy, technology based teaching, and/or sensory integration therapy.

Only a few people in our country use "real ABA". That is why people think ABA and behaviorism consist of only reinforcement and punishment. Because of incorrect implementation, people think ABA is mechanical.

Can you tell us what you know about radical behaviorism of B. F. Skinner, which is the basis of ABA and what is the current status of radical behaviorism in Turkey?

Selim: Behaviorism and ABA are such new concepts in Turkey. The first school for children with autism using ABA was established in 1999. When I was in my master's program at the department of psychology, I read about Skinner's philosophy but nothing very in-depth. In Turkey behaviorism is known and used mostly in special education not in psychology departments.

Parin: Since we mostly take part in the implementation of ABA we don't know much about radical behaviorism. On the other hand, as a teacher I can say that the philosophy of behaviorism is important to understand because when the principles of ABA are implemented incorrectly, it causes the misconceptions that often happen in the field of ABA and autism.

What recommendations do you provide in order to

ne çalışacağım deme şansı yok. Olumsuz bir davranışın yerine olumlu bir davranış koymayı hedefliyorsunuz. Herkes farklı bir dil konuşmuyor bu nedenle çocuk da ne yapacağını biliyor. Bunun dışında UDA ile aynı anda pek çok beceriyi çalışabiliyorsunuz. En önemlisi UDA pekiştirmeye dayalı bir yöntem olduğu için çocuk mutlu oluyor ve mutlu olduğu için o davranışı ya da beceriyi içselleştiriyor bu yüzden bizim çocuklarımız için çok işlevsel tüm bunlar bizi UDA'ya yönlendirdi.

Sizce Türkiye'de uygulamalı davranış analizine yönelik nasıl bir bakış açısı söz konusu?

Selim: UDA Türkiye'de kullanılmıyor çünkü bilinmiyor. Özel Eğitim kurumlarının kullandığı benimsediği bir yöntem değil çünkü personel UDA sistemine direnıyor. İnsanlar data tutmayı gereksiz görüyorlar.

Parin: Uygulamacılar dolaylı sevilmiyor açıkçası bilen bilmeyen uyguluyor UDA'yı. Çok azı gerçek UDA'yı uyguluyor. UDA ve davranışçı sistem hep cezaya dayalı zannediliyor. Yanlış uygulamalar yüzünden mekanik kalıyor ve ne yazık ki eleştirildiği yere gelebiliyor. Biraz davranışçı yaklaşırsa ben UDA uyguluyorum diyor. Türkiye'de genel olarak baktığımızda ise böyle bir eğitimi verebilecek kurum sayısı çok az çünkü insanların maddi gücü ve kurumların kapasitesi bunun açısından yeterli değil. Aileler de yine aynı şekilde UDA'yı bilmiyor.

Uygulamalı davranış analizinin temeli olan davranışçı yaklaşım ve Skinner'ın radikal davranışçılık felsefesi hakkındaki kendi bilgilerinizi ve Türkiye'deki genel duruma ilişkin gözlemlerinizi paylaşır mısınız?

Selim: Psikoloji yüksek lisansım sırasında modern psikolojide okuduk ama yüzeysel kaldı bu bilgiler. Çünkü ülkemiz psikoloji bölümlerinde UDA çok tanınmıyor daha dışarıda bir konu olarak kalıyor. Zaten Türkiye tarihine bakacak olursak ilk OÇEM 1999 yılında kuruldu yani otizm ve UDA çok yeni bir konu ülkemizde.

Parin: Bu konuda kongrelerde, seminerlerde bilgiler aldık ancak daha çok uygulama kısmında yer aldığımız için davranışçılığın tarihçesi, felsefesine uzağız. İşe uygulamacı olarak baktığımızda ise evet davranışçılığın felsefesi çok güzel ancak yanlış uygulandığında o felsefenin çökmesine ve insanların önyargılarından kurtulamamasına neden oluyor.

Sizce Türkiye'de uygulamalı davranış analizinin yaygınlaşması, olumsuz bakış açısının değişmesi ve doğru bir şekilde uygulanması, davranışçı yaklaşım ve Skinner'ın

change negative points of view about ABA in Turkey?

Selim: In Turkey we need well educated practitioners of ABA. We need more people to become certified behavior analysts, and we need ABA supervisors. On my own behalf, I can say that we are making great efforts to bring ABA professionals to Turkey, but we need support to train qualified staff in the field. We also need resources in our native language since not many people in Turkey know English.

Parin: We need to disseminate and market ABA so that people can see the difference between the children who get quality ABA and the children who don't. In our country, people utilize social media a lot. I think we can use the power of social media to help correct misconceptions about ABA. I learned about ABA with our supervisor, Nükte, but I wish my son had a chance to receive ABA services. I think he would be in a better condition.

Finally, what would you like tell to Operants readers?

Selim: I'm not sure how much people understand about Turkey, but we want people to know that we are very interested in learning more about how other developing countries are implementing ABA. We need their support. We heard about the B.F. Skinner Foundation and *Operants* thanks to you (Yesim & Hande). We also would like access to materials in our native language so that we could learn what is going on in other countries in the field of behaviorism and ABA. This would be nice. ●

About Correspondents:



Dr. Yesim Gulec Aslan received her Ph.D. in 2008 from the Faculty of Special Education at Anadolu University in Eskişehir, Turkey, and since 2010 has worked at the Department of Special Education, Sakarya University, Turkey. Her lectures and research focus on autism spectrum disorders, applied behavioral analysis, discrete trial teaching, early intensive behavioral intervention, incidental teaching, and especially qualitative research methods.

Hande Cihan (M.A. Student) received her bachelor's degree from Marmara University, and she started her master's degree at Anadolu University in the Department of Special Education while working as a special education teacher. Since 2012, Ms. Cihan has worked as a research assistant at Sakarya University in the Special Education Department. Her research focuses on autism spectrum disorders, problem behavior, and applied behavior analysis.

radikal davranışçılık yaklaşımı hakkında bilgi düzeyinin artması için neler yapılabilir?

Selim: Biz UDA'nın bilinmesi için kendi adımıza savaş halindeyiz diyebiliriz. Özellikle UDA'yı uygulayacak iyi uygulamacıların yetiştirilmesine ihtiyaç var. Süpervizörlük alabileceğimiz kişi sayısı çok az. Onları yetiştirmek ve sistemde tutmak için çaba gösteriyoruz biz de. Örneğin şu an otizm dernekleri federasyonu ile birlikte ÖÇED olarak UDA terapistlerinin edindiği tecrübeleri birbirleri ile paylaşacakları bir seminer düzenleyeceğiz. Türkiye'de bu konuda kişilerin bireysel olarak kendilerini geliştirebilecekleri ana dilde kaynak çok az. UDA ders olarak sadece özel eğitim bölümlerinde okutuluyor oysa lisansta böyle bir bölüm yer alabilir.

Parin: Seminerler, duyurular yapılmalı. Şu an ülkemizde insanlar sosyal medyada yaşıyor bu nedenle sosyal medyanın da gücü kullanılmalı UDA'nın tanınmasında. İnsanların UDA eğitimi almış ve almamış çocuklar arasında nasıl bir fark olduğunu görmeliler. Ben Nükte Hanım ile birlikte tanıdım UDA'yı ama şu an keşke benim oğlumda bu eğitimi alabilseydi diyorum eminim çok farklı yerlerde olurdu.

Son olarak, Operants okurlarıyla paylaşmak istedikleriniz var mı?

Selim: Yurt dışından nasıl bakılıyor Türkiye hakkında ne biliniyor bilmiyorum ama ülkemizde özel eğitimin UDA ile daha iyi yerlere gelebilmesi için bu işi daha iyi standartlarda yapan ülkelerin, kişilerin bilgilerinden faydalanmak istiyoruz. Seminer olabilir onların desteklerini bekliyoruz. Bunun dışında biz bu derneği ve Operants'ı sizin (Yeşim & Hande) aracılığınız ile duyduk bu dergiye Türkçe olarak ulaşabilmek güzel olurdu. ●

Association for Behaviour Analysis Australia (AABA)

around
the
world

President Elect – Alayna Haberlin, Ph.D., BCBA-D

interview by Amanda Kelly, Ph.D.

What are the reasons behind forming the Association now? Is it caused by the changing landscape of the field?

The association was started for a few reasons. The first was to promote Applied Behavior Analysis (ABA) awareness in Australia. ABA is not well-known to the public. Generally, health and educational professionals have no, little, or out-dated information about ABA. The understanding of what ABA is and what it can do for society is very limited in Australia. We have come across a common difficulty; that other professionals (e.g., teachers, doctors, etc.) will not recommend or discuss ABA as a service option. One of our aims is to be seen on par with other allied health professionals. We want to show the public that there is research behind ABA and to debunk the myths that people have about ABA. As well, we have found it challenging to work collaboratively with other professionals (e.g., teachers, doctors, psychologists), since we were constantly having to educate/re-educate others about what ABA is and what we do.

Secondly, while there is the Australian Cognitive Behavior Therapy (CBT) Association, which is affiliated with the Association for Behavior Analysis International (ABAI), our organization feels that not much is being done to promote ABA in Australia nor to bring public awareness to the needs of practitioners in the field. While we are not yet an official chapter of ABAI, we view ourselves as the only ABA organization in Australia.

Third, practicing ABA in Australia can be a lonely profession. Australia is a big country geographically and there are a small number of practitioners (fewer than 40) certified by the Behavior Analyst Certification Board (BACB) working within Australia. It has been difficult for

providers to communicate or collaborate with each other. We have not had an outlet to come together and discuss issues that are important to us, which can lead a practitioner to feel isolated and lonely. Presently, the most common way practitioners in Australia connect is by running into one another at a conference outside the country.

What are the main activities of the Association now, and where do you see yourselves in five or ten years?

We want to provide various ways for practitioners and those interested in learning about ABA to come together, develop professional relationships, express their concerns, build solutions to common problems, and feel part of a collective group of people who want to use the science of behavior to change Australia. Currently, the association is working to provide free monthly webinars to our members. The topics vary (e.g., staff training, self-control, reading) to show the diversity of the application of the science of behavior analysis. We are lucky to get many talented presenters to volunteer their time and energy to help us with this project. About a third of our members are attending these webinars. Additionally, we are in the process of getting CEU approval in order to offer CEUs for our members who attend the webinars.

The second project that we are working on is having the BCBA certification recognised under the Medicare system (Australian health benefit system). As of now, there are no government-provided rebates for services by a BCBA. This results in many families having to pay out of pocket for the services they need. By getting the BCBA certification recognised by Medicare, BCBA services will receive government rebates making our services more affordable to families.

A third project is to develop informational YouTube



Dr. Alayna Haberlin

videos about ABA and its benefits as a way to educate people who are working on Australia's new disability services funding package called the *National Disability Insurance Scheme* (NDIS). In the initial testing sites, we have received feedback that ABA services were being denied, but after explaining what ABA is and what the services look like (e.g., high number of hours), the services were then approved. These educational videos would be the start of educating the NDIS employees about ABA and the various applica-

tions of the principles. We would then like to work closer with NDIS to ensure that ABA services are accepted as easily as other types of services.

A fourth project is to find a university that will support a BACB-approved course sequence. Currently, there is no BACB-approved course sequence in Australia. Therefore, BCBA's receive their training on the mainland before locating to Australia, or they are forced to pursue online options.

Other Board Members of the Association:



Head of Committees – Alex Brown, Bachelor of Psychology Associate MAPS, BCBA



Secretary of the Association – Michelle Furninger, BCaBA



Treasurer – Karen Lyth, Bachelor of Science, Post Graduate Diploma in Psych, Masters in Counseling, Associate MAPS, BCBA

In five years, we would like to be seen as an allied health professional for Medicare rebates for individuals needing our services, hold annual conferences where BCBA's can gain CEU's, have a BACB-approved University course in an Australian University, and have hundreds of members!

In 10-years time, we would like to have two universities with BACB course sequences, to bring people from overseas to do workshops, to provide money to fund be-

havior analytic research in Australia, and to develop government relations to assist in lobbying for the importance of research-based practices. We would also like to start seeing states and territories across Australia have their own ABA Chapters.

What is the current status of behaviorology in Australia overall? In which areas is it strong?

The field is incredibly small (less than 50). There are pockets of professionals across the country trying to

bring awareness and promote the science. In general, behavior analysis is a relatively unknown field, or little is known about it from the public perspective. The one area where ABA is gaining momentum is in autism related services. We want to expand Australian views about ABA to understand that ABA can be used in all aspects of life and can improve outcomes for all people in all areas. Half of the members are BCBA's and half are practitioners working in the field who are not certified. However, even in this setting, practitioners face many difficulties with being accepted when working with other professionals and by the community in general.

We find that many other allied health professionals have very limited understanding of ABA. When liaising with Occupational Therapists and Speech Pathologists, it is not uncommon for them to comment negatively about what we do, or completely misunderstand our work. Most of the views are out-dated and are based on a view that ABA is only discrete trial teaching (DTT). The association endeavours to educate our close colleagues as well as the wider community to promote a greater depth of understanding.

How and where are behaviorists educated? Is there a certification board to certify the practitioners?

Currently, there is no university in Australia that has a course sequence approved by the BACB. This means that anyone with certification has been trained overseas and migrated to Australia or has completed an online course while living in Australia. Others who are working in the field of ABA have then been trained on the job. The lack of university training makes it difficult for people to realize that there is a life-long career in ABA. Many young people are initially interested in ABA while doing their university studies but ultimately end up in other fields due to the lack

of Australian-based university training. This challenges the growth of our field in Australia as we have a limited number of new practitioners coming into the field.

Over the years, there have been a limited number of ABA-related conferences or workshops given by certified people. This has resulted in limited options for people to pursue/continue their education in ABA. Completing CEUs to maintain certification for Australians is very expensive as we usually have to travel to the US to attend workshops and symposiums. We would love to have our own conference here one day so that Australians can gain their CEUs locally and also make the BCBA more attractive to future practitioners.

How is Skinner and his science perceived in Australia (both by the scientific community and practitioners)?

The increasing popularity of the use of Skinner's analysis of verbal behavior over the past few years has been encouraging although there is a gross misunderstanding of B.F. Skinner's work. This is generally due to lack of a local University programs in ABA as well as the lack of a formal group promoting an accurate view of the contributions from Skinner. It is disappointing that many do not understand the use of radical behaviorism in the way Skinner intended it. They see it as radical in the strict sense. Many educators would believe that Skinner dismisses anything beyond observable behavior.

Who are the "stars" of behaviorism in Australia that Operants readers should know about?

We are all stars! All of us practicing in Australia are using the science of behavior analysis to help change lives for the better. Though we face challenges in moving our field forward, we persevere. We are all passionate about the science and love what we do in the land down under! ●



Dr. Susan Schneider

Visiting Scholar at the University of the Pacific
Stockton, CA

interview by Sheila Habarad, MA



Schneider's involvement in behavior analysis goes back to high school when she read *Beyond Freedom and Dignity* and wrote B. F. Skinner, never dreaming that he would reply. They corresponded through her master's degree in mechanical engineering at Brown, her engineering career, and her stint in the Peace Corps. At that point Schneider bowed to the inevitable and switched careers, obtaining her Ph.D. in 1989 (University of Kansas). A research pioneer, she was the first to apply the generalized matching law to sequences and to demonstrate operant generalization and matching in neonates. Her publications also cover the history and philosophy of behavior analysis and the neglected method of sequential analysis. Schneider has championed the inclusive "systems" approach to nature nurture relations, culminating in reviews in *JEAB* and *The Behavior Analyst*, and she has served on the editorial boards for both of those journals. Her book, *The Science of Consequences: How They Affect Genes, Change the Brain, and Impact Our World*, summarizes the field of operant behavior, its larger nature-nurture context, and its full range of applications. It earned a mention in the journal *Nature*, was a selection of the *Scientific American Book Club*, and won this year's SABA Media Award.

What led you to the field of behavior analysis?

First of all you cannot predict your career track. I wanted to focus on renewable energy (domestically as well as globally) but when I graduated with my masters there was a lack of jobs that focused on global energy at that time. I entered a different area in engineering than the one I was anticipating. When my career started to become disappointing, I left with an eagerness to utilize both compassion and science to make the world a better place. I found the Peace Corps and was fascinated. I became an engineer in the Peace Corps for a short period of time.

Meanwhile, I had read Skinner in an advanced high school class. We had to do a book report on one of the books on a list the teacher gave us. When I went to the local library, the library only had two of the books: *Games People Play* by Eric Berne and *Beyond Freedom and Dignity* by B.F. Skinner. *Beyond Freedom and Dignity* was a longer and more challenging read but it yielded more substance. I chose *Beyond Freedom and Dignity*, if I hadn't, we wouldn't be sitting here talking today. It was extremely powerful seeing a psychology that was science based and data specific. The book had such a significant impact on me that I ended up writing Skinner after class finished in the late 70s. This was outside of the box for me, something I wouldn't have typically done. To my surprise he wrote me back and we maintained correspondence for 15 years, till the end of his life.

That is how I came into contact with behavior analysis. Behavior analysis seemed both important and exciting to me, right from the start. After my time in the Peace Corps, I decided to switch careers. I applied to multiple schools of behavior analysis with Skinner's recommendation and was accepted into all of them.

What is the present position of behavior analysts towards cognitive science?

There is the structure and function aspect that Charlie Catania wrote about in the 1973 in *American Psychologist*. Cognitive psychologists and scientists tend to look at structural questions, considering the nature of different forms of memory both short-term and long-term. Whereas, operant psychology was very focused on function, answering the "why" questions and the variables associated with consequences which gives us operant be-

havior principles.

Clearly any question you ask about behavior will normally have both structural and functional aspects. Behavior analysts don't focus exclusively on function though it's a specialty for us, nor can cognitive psychologists focus solely on structure. Ideally we need to work with structure and function.

When we as behavior analysts address questions like memory, which David Palmer has done quite notably in his chapter, *A behavioral Interpretation of Memory*, in the book *Dialogues on Verbal Behavior*, we find that this is one of the many areas where our specialties and questions of focus really overlap with cognitive science. I don't think that there is any "inherent conflict" with cognitive science. Cognitive psychologist Henry "Roddy" Rodegier (Washington University State in St. Louis, MO) wrote favorably about behavior analysis and associative learning in the APS (American Psychological Society) Observer when he was APS president in 2004. (<http://www.psychologicalscience.org/index.php/uncategorized/what-happened-to-behaviorism.html>) There have always been behavior analysts who have recognized that good scientists ought to be able to work together. This is not to say that we must always agree. We may disagree theoretically over the methodology used, their hypothetical constructs, their tendency to use measures like reaction time, and of course the all too often questionnaire studies with Likert scales, etc. However, these are not barriers that cannot be surmounted.

There have been plenty of analysts collaborating and have cited the work of cognitive psychologists productively about those sorts of question: thinking, memory, and automaticity. I presented an Invited Address on interdisciplinary behavior analysis at an ABAI Conference a couple of years ago. This is one of the areas where cognitivists, social psychologists, and behavior analysts all made important contributions. I think behavior analysts currently neglect it right now, but it illustrates how we can all work together productively. Terminology is another barrier.

What do you feel are the critical points that still need to be addressed?

There is not as much collaborative work as one would like, but there is some out there in waves, certainly there are many examples of very successful interdiscipli-

nary behavior analysis.

One more main point, people like Rodney Rodegier, he is one of the cognitive scientists who recognizes the existence of functional behavior categories like operant behavior principles, operant learning, and Pavlovian processes. We need to do more to integrate or re-integrate operant principles into all the areas where they apply, which is practically everywhere. That would go a long way, I think, for bridging the divide. But there are long standing biases, unfortunately, on both sides, with some reason that will be hard to overcome, but we are the experts on positive reinforcement. We should be able to overcome this using our own principles. I will be talking about this further at my award acceptance speech during ABAI 2015's Annual Conference.

In spite of the deep differences that characterize the two sciences, behavior analysis and cognitivism, we are witnessing a growing upsurge of a combination or linkage of the terms, particularly in professional areas concerning social work and psychotherapy. In fact it is now common to see in advertisements, post-graduate courses, psychiatrist wards, and institutions for disabled, that the "cognitive-behavioral approach" is applied. Do you think that this may be a problem for people who are not familiar with the differences between the two sciences?

I suppose it can be. I don't think it needs to be a problem. I think that we need the evidence basis, for example both Alan Kazdin and Scott Lilienfeld, are doing great work in this regard in clinical psychology to move towards more explicit recommendations based on the evidence. Evidence based practice is a very common term, not just in psychology, but also in education and industry. It's a move towards a greater reliance on science, even though it's not always done very well. We're increasingly seeing the case that single subject designs are being accepted in areas where they used to be rejected. It's obviously a movement in the right direction for behavior analysis, as long as our principles are present. What we want is for our principles to be recognized; valued and used wherever they apply. This means that in a lot of areas where traditionally there haven't been many behavior analysts working, there are still people who may recognize the way in which operant principles are acting. They may also apply these principles

to some degree and recognize the database that we have contributed so much to. It's just a matter of building on that. Wouldn't this be great, from our point of view? And again, we have things to learn too. I want to emphasize that. The interdisciplinary collaboration with Speech Language Pathology is just a wonderful example for decades, a big success story for us. This collaboration is building in Behavior Economics to some degree, we have seen success in Behavior Pharmacology, there's no reason why Clinical Psychology should be any different. Overall, I think we are moving in the right direction.

The behavioral community knows that there are difficulties in understanding and accepting the concepts and implications of radical behaviorism. Some difficulties come from technical language such as operant conditioning, schedules of reinforcement, and the like, but part are due to more complex social reasons linked to our cultural conceptions and practices. There are language uses that seem to bring us inexorably back to an inner agent, to free will, to information processes and ideas forming, all concepts we should go "beyond" as Skinner suggests. Religion and law institutions appear to be particularly impervious to any possible shift in view and practice. Are there more effective approaches to face this problem that have not been exploited enough?

Now, we're talking about the philosophy side of the science and not the science of course. In 1987 I published a paper "A history of the term radical behaviorism: From Watson to Skinner." I was very much into the philosophical side. Jay Moore and Roy Moxley have more recently written about the differences of radical and methodological behaviorism, addressing how Skinner's 1945 paper, "The operational analysis of psychological terms," examines how you can use science to look at private events. That's the big difference between methodological behaviorism and radical behaviorism. The work done by behavior analysts with verbal behavior and private events since then has supported Skinner's analysis marvelously. Clearly we have been able to use science with private events, not just interpretation and not based on reaction times like for cognitive psychologists way back to the early 19th century. Though, you do have to come up against methodological challenges.

While I'm on the question about methodological

versus radical behaviorism, I can say that radical behaviorism means thorough-going behaviorism, all encompassing to all the relevant areas where operant principles operate and certainly they operate privately just as publicly. Behavior Neuroscience is now going to help bolster our cause, as it already has started to. We see some of the same things happening in the brain whether the behavior is private or public depending on what people are saying to themselves or thinking about, or the emotions we're experiencing for example.

There's a chapter about private events that I always like to recommend, it's in the "Handbook of Research Methods in Human Operant Behavior," edited by Andy Lattal and Mike Perone in 1998. The chapter is titled "Self-Report Methods," by Tom Critchfield, Jalie Tucker and Rudy Vuchinich. One of the topics was how can we do good science on private events in behavior analysis. It's just a wonderful chapter. This is an area a lot of us tend to shy away from. Obviously there is a lot of subjectivity there, but this can be an extremely valuable augmentation of more objective and standard behavior analysis dependent measures. I highly recommend this chapter.

The free-will concept is one of those areas where I don't know if it makes a lot of difference so long as what we do is science based. Scientists look for order as far as we can. It needs to be noted that there are many different definitions of free will in the philosophical literature. I think when it comes to what's pragmatic; of course, Skinner being a philosophical pragmatist I would argue, what matters is taking the science as far as we can. Clearly we know a lot about what influences behavior, and I tend to take a pragmatic approach to understand as much about behavior and apply as much of the science as I can.

You have cited some of the main successful applications of behavior science. While in some fields it looks there have been significant progress, education and schooling in general appears to have been relatively left out. Some important step forward was taken, such as that of Julie Vargas with her recent book, Behavior Analysis for Effective Teaching addressed to teachers. Still the terrific potential of programmed instruction has not been developed and valued enough. Public schools are reluctant in adopting the methodology, but are there private institutions where the practice is used with success? And if the

application is successful, why is it not more spread in our country?

First of all we have to remind ourselves that although progress can seem to be painfully slow, we have made a lot of progress into public education in the United States compared to where we used to be. Ronnie Detrich, Siegfried Englemen, Wesley Becker, Kent Johnson, all the people involved in Project Follow Through, Distar, and others developed behavioral approaches. Along with Skinner's programmed instruction, they started behavior system learning, the whole idea of "catching them being good", and the Good Behavior Game. All of these advances that go back decades show some of the progress that has been made. Positive Behavior Support has been a major step forward for us, even though it may be the case that the programs aren't always implemented with very good integrity. It's a step in the right direction.

One of the main obstacles has been that the people in the Colleges of Education in this country don't always have good scientific training, but of course some do. I hope there is change, even if it's gradual. There's just a huge inertia with a large entity like that, with huge amounts of money involved and people with very different backgrounds and training. Most people involved do not have good scientific training, or understand operant learning principles. Applications and data are not convincing for them. Mainstream education goes through fads. So again, any step forward is a cause for celebration. For example, Hart and Risley's data showing "meaningful differences" has been accepted and disseminated as the basis for large scale interventions. Bit by bit with efforts like Response to Intervention and possibly Positive Behavior Support we are creating some change.

More specifically, one problem has been Direct Instruction. While there is lot of data supporting it, Direct Instruction creates a big change in what teachers normally do. More recently, there have been variations of Direct Instruction designed to be more accepted by the teachers and public education community.

Again, I'm not an expert in this area, but we see that the ratio of positive reinforcement to mild punishment techniques is being acknowledged. Making it more positive is being introduced into more and more classrooms. We have to remember that these are steps forward. There are

more teachers using these techniques.

Now we have to try to get into the Colleges of Education to train new teachers who are going to go out and cope with classroom management. It's tragic how many teachers still go into the classroom without any knowledge of basic behavior analysis principles or coping strategies like the Good Behavior Game. They haven't been given the background they need to succeed.

We cannot forget what Skinner straightforwardly called "the shame of American education." Moving forward, do you think that more needs to be done?

We have more responsibility now, which can be a good thing. Although it can be problematic, as we see with No Child Left Behind. There is now so much focus on test scores, but still in some ways that was a step in the right direction too because there are more data to make decisions on. It is a very data based approach. There is clearly no easy magic bullet here but we are making progress.

Skinner often speaks of behavior science and the philosophy of that science ("About Behaviorism" was an example of the treatment of that philosophy) hoping that there would follow a conspicuous increase in research both in amplitude and complexity. We wonder if there has not been, instead, a reverse of the desirable situation, with a preoccupying shortage of laboratory work. Can you give us a picture of the current situation in this sense?

Yes, if we are talking about basic research, things are not looking good. There's clearly still a need for basic behavior analysis research such as on the nature of functional behavior categories and their interactions, by which I mean, operants, respondents, and species typical behavior (i.e. instincts, courtship rituals, territoriality, imprinting, migration, etc.) as the main three behaviors. All three of these main groups follow different principles. Surprisingly, they also interact with each other. This is fundamental to understand behavior. Getting these categories better understood and delineated will have a huge impact on the acceptance of the generality of these principles and therefore of behavior analysis. We know a lot more about the neurophysiology for reflexes and classical conditioning now. We're getting there with operants but still have a long way to go, and the same thing with respect to species typical behaviors.

Looking from a pragmatic standpoint, to convince

other people, having an understanding of the underlying neurophysiological mechanisms is going to be extremely helpful and valuable in itself. But there are fewer and fewer basic behavior analysts doing that kind of work, there are fewer and fewer positions at prestigious universities that have a basic behavior analyst because those that are retiring are not being replaced. We need to rely on people in behavior neuroscience to do this, and to a lesser extent in behavior economics although very few of those have animal labs, and the decline of the animal laboratory is another issue. From my point as someone who did animal research for a number of years, this is a real loss. We need the basic research to elucidate things like the nature of functional behavior categories that in turn are fundamental to a lot else throughout the behavior sciences and the life sciences in general, because everything interacts. I take a systems approach in my book. Nature-nurture always work together, operant learning effects genetic activity, and it changes the brain. So delineating the functional behavior categories, following what Skinner discovered about operants, what Pavlov discovered about respondents and what ethologists discovered about species-typical behavior. This is fundamental and there are so few people doing this research. There is only so far you can go into human research because you can not do the kind of controlled experiments with humans obviously that you can do quite frequently with animals. So we need that research for the interactions as well as for the basic categories. I pick that as one example, but I think it's an important one. We are doing less of this than in the 1980s when I was in the field.

*As the famous metaphor goes, we have climbed upon the giant's shoulders and should have a better view of the field. Our beloved giant, B. F. Skinner writes in **The Selection of Behavior** by Catania and Harnad, 1988: "Why have I not been more readily understood? – and continues – "The central position, however, is not traditional, and that may be the problem... To move from an inner determination of behavior to an environmental determination is a difficult step." Do you think that we are more equipped to*

overcome this difficulty now? Have we better chances of interacting with other sciences and disciplines such as Economics and Politics in order to make them more effective and socially useful?

We covered a good bit of this earlier, although I would say, another reason why B. F. Skinner hasn't been better understood is that selectionism as a causal mechanism is different from what most people are used to. Natural selection and evolution we're still fighting about, although scientists generally accept that. Taking that same kind of principle acting on behavior, is a switch. That's a related but separate issue to respond to the question "Is Skinner better understood?" I think that in regard to his principles yes, in regard to Skinner himself unfortunately there still are a lot of misrepresentations. I was a co-founder of the BALANCE Special Interest Group (SIG) of ABAI and was its first chair in the early 90s that has now become the Dissemination of Behavior Analysis SIG. We were basically, trying to correct misrepresentations of Skinner in textbooks and in the popular media while trying to proactively promote accurate representations. I don't know, it seems like there are still some issues with the intro-psych textbooks, but it's been a while since I've taught intro-psych. We still have a way to go with the psychology to correct the misrepresentation of Skinner. In psychology I think we have made some progress. The principles are not recognized as often as they should be, but some progress has been made. In other fields as we discussed earlier a lot of progress has been made. And I think that's what Skinner would care the most about, getting the principles recognized, valued, and used. That's what really matters. Overall I think he would be pleased and of course we used to talk about all of these things. I am so fortunate that I got to know him.

What do you think is Skinner's most important book?

I agree with his own estimate that *Verbal Behavior* was his single most important work. ●

The Political Discourses of Behavior Analysis

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reflections

The purpose of this essay is to raise questions about the relationship between politics and behavior analysis. Perhaps the best way to begin this discussion is to address the relevance of the topic. The recurrence of academic theses, dissertations, and manuscript publications over the last ten years, permits us to say, at least in Brazil, that political issues are a subject of interest among behavior analysts. They appear in conceptual essays, experimental investigations (particularly those supported by the concept of metacontingency) and in the planning of interventions, which are meant to be considered as cultural designs.

The first task for behavior analysts is to create an operational definition for the word, "politics." Politics is an issue that crosses practically all Western thought, and there are many nuances that could be discussed in a complete definition of this concept. Hannah Arendt has faced the challenge of trying to answer the question, "What is politics?" in a series of posthumous fragments. She has encouraged her readers to think about how it relates to radical behaviorism:

Politics is based on the plurality of men ... Philosophy and theology always were concerned with the man, and all his statements would be correct even if there was only one man, or two men only, or just identical men ... Politics deals with the coexistence

Este ensaio tem como objetivo levantar alguns questionamentos acerca das relações entre política e Análise do Comportamento. Talvez o melhor modo de iniciar essa discussão seja perguntando pela pertinência do tema. Em outras palavras, será que a política é, ou deveria ser, um assunto de interesse para a área?

Um vislumbre na produção de teses, dissertações e artigos nos últimos dez anos, permite-nos dizer que, pelo menos no Brasil, questões políticas não são ignoradas por analistas do comportamento: elas têm aparecido em trabalhos conceituais, em investigações experimentais, sobretudo naquelas amparadas pelo conceito de metacontingência, e no planejamento de intervenções consideradas delineamentos culturais.

Mas o que é política? Uma vez que a política é um assunto que atravessou praticamente todo o pensamento ocidental, há muitas nuances que poderiam ser discutidas em uma definição cabal desse conceito (Ferrater Mora, 2001). Mesmo sem desprezar essa dificuldade, Hannah Arendt, em um conjunto de fragmentos póstumos, enfrenta o desafio de tentar responder à questão "o que é política?" de uma forma interessante para pensarmos em relações com o comportamentalismo radical.

Nas palavras dessa autora:

A política baseia-se na pluralidade dos homens ... A filosofia e a teologia sempre se ocupam do homem, e todas as suas afirmações seriam corretas mesmo se



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and association of different men ...

Politics is the field, which confronts the challenge of dealing with differences amongst individuals. In Classical Greek philosophy, *politiké* was the branch of knowledge concerned with living in the polis, which, according to Aristotle “is not made up only of so many men, but of different kinds of men.” This has been interpreted to mean that whenever we are looking at a social relationship, which involves at least two different people, we call it a political relationship. The behavioral point of view presumes that no two people are alike. Skinner was following a Darwinian logic when he argued that there are three levels of variation and selection, which build organisms and make them completely individual and irreducible. The starting point is the difference, not the similarity, which allows us to conclude that, according to radical behaviorism, all social relations is a political relationship.

Considering that behavior analysis necessarily operates in the political field, i.e., in the social relations between differences, we find the crucial question to be: how can the proposal of scientific psychology deal with these differences? We can elaborate on this question to ask: how can radical behaviorism try to resolve the relationship between differences? The next important question is; which political philosophy does radical behaviorism approach?

As it occurs in epistemology, the Skinnerian text is not univocal to answer these questions. I don't believe it is possible to try and capture the real political sense of radical behaviorism. Instead, presenting two possible political itineraries might allow us to start building from Skinnerian text.

Radical Behaviorism as technocracy

The first (and best-consolidated) political discourse found in Skinner's text is one that takes *Walden Two* as the main political project of radical behaviorism. It does not matter whether *Walden Two* is an utopia in the sense of an inspiring, unrealizable dream or a project that should be considered literally (as in Los Horcones). It simply highlights the features of political discourse resulting from Skinnerian work; *Walden II* represents a technocracy. It is a political model in which the relationship between lay people and experts is conflictive and hierarchical; the “knowledge” of the laity is not only different from the expert knowledge but also inferior, therefore the decision-making

houvesse apenas um homem, ou apenas dois homens, ou apenas homens idênticos ... A política trata da convivência entre diferentes. (Arendt, 1993/2007, p. 21)

Política é, portanto, o campo no qual que se enfrenta o desafio de lidar com a diferença. Na filosofia grega clássica, *politiké* era o ramo de conhecimento que se ocupava do convívio na *pólis*, constituída “não apenas de muitos homens, mas de diferentes tipos de homens” (Aristóteles, trad. 1998, p. 2001). Dessa forma, sempre que estamos diante de uma relação social em que participam pelo menos duas pessoas diferentes, podemos dizer que se trata de uma relação política. Ora, de um ponto de vista comportamentalista, não existem duas pessoas iguais. Seguindo uma lógica darwinista, Skinner (1989) argumenta que os três níveis de variação e seleção constroem organismos, pessoas e *selves* completamente individuais e irreduzíveis: o ponto de partida é a diferença, e não o idêntico, o que nos permite concluir que, no comportamentalismo radical, toda relação social é uma relação política.

Considerando, então, que a Análise do Comportamento opera necessariamente no campo político, ou seja, no campo das relações sociais entre diferentes, a pergunta crucial é: como essa proposta de psicologia científica lida com essa diferença? Podemos deslocar um pouco a questão e perguntar: como o Comportamentalismo Radical tenta resolver a relação entre diferentes? Ou ainda, de que filosofia política o Comportamentalismo Radical se aproxima?

Tal como acontece na epistemologia, o texto skinneriano não é unívoco para responder a essas questões (cf. Moxley, 1999). Evidentemente, não se trata de tentar captar o verdadeiro sentido político do comportamentalismo radical - até porque não acredito que isso seja possível - mas, isto sim, de apresentar dois possíveis itinerários políticos que podemos construir partindo do texto skinneriano.

Comportamentalismo Radical como tecnocracia

O primeiro (e mais bem consolidado) discurso político encontrado no texto skinneriano é aquele que toma *Walden II* como o principal projeto político do Comportamentalismo Radical. Não importa, aqui, se *Walden* é uma utopia (no sentido de um sonho inspirador, mas irrealizável) ou um projeto que deve ser considerado de forma literal (como em Los Horcones), mas sim destacar as características do discurso político decorrente dessa obra de Skinner. Politicamente, *Walden II* representa uma tecnocra-

in political affairs, specifically the final say, should always be given by a specialist (or scientist).

There is thus a reduction of the political discourse to scientific discourse, following the typically modern dream of a scientifically administered society. A technocracy requires that public policy must be planned and executed (or, at the very least, supervised) by experts. The concept of cultural planning is a subsidiary of this political discourse. It is evident that behavior analysts are eager to be recognized as the specialists, who will plan the society of the future.

The discourse of technocracy has a strong appeal among Brazilian behavior analysts for at least two reasons: First, it seduces us because it promises to replace political corruption by technical-scientific competence. This entails replacing politicians with scientists in order to optimize the correction of societal problems, which have not been successfully addressed by politicians.

Second, behavior analysis is widely taught as a technology of scientific knowledge in Brazilian psychology, which is committed to the experimental method, data analysis, graphic presentation, control of variables etc. This modern context of Brazilian psychology gives rise to the image of the behavior analyst as a political expert, who is on the side of the facts rather than of ideological issues.

One of the major challenges for a technocracy, which aims to control political discourse by replacing it with technical-scientific discourse, rests on an idealized view of the scientist. It is as if the scientists were completely free from prejudices, preferences, biases, and can therefore make better and more objective decisions than the politicians. Skinner, himself, (1953) refuses this idealized vision of the scientist, stating "Scientists are by nature no more honest than other men but . . . the practice of science puts an exceptionally high premium on honesty. It is characteristic of science that any lack of honesty quickly brings disaster" (p. 12). Even in the context of a scientific verbal community, which relies on things like peer evaluation, replication, and identification of limitations to try and correct the knowledge produced, we occasionally find questionable practices, such as improper attribution of authorship, omission of quotes, irrelevant quotes only to raise the impact factor

cia. Nesse modelo político, a relação entre leigos e especialistas é conflituosa e hierárquica: o "conhecimento" do leigo não é só diferente do conhecimento do especialista, ele é inferior e, por isso, a tomada de decisão em assuntos políticos, a palavra final, deve ser sempre do especialista (ou do cientista). Opera-se, aqui, uma *redução* do discurso político ao discurso científico, acompanhando o sonho tipicamente moderno de uma sociedade cientificamente administrada (Bauman, 2010). Tornando isso mais concreto: em uma tecnocracia as políticas públicas devem ser planejadas e executadas (ou, ao menos, supervisionadas) por especialistas. Não é difícil perceber como a noção de planejamento cultural é subsidiária desse discurso político: tudo se passa como se o analista de comportamento estivesse ansioso por ser reconhecido como o especialista que planejará a sociedade do futuro.

O discurso da tecnocracia tem um forte apelo no contexto brasileiro por pelo menos dois motivos. Em primeiro lugar, ele nos seduz porque promete substituir a *corrupção* política pela *competência* tecnocientífica: substituindo políticos por cientistas evitaríamos todos os problemas já consolidados na nossa sociedade. Em segundo lugar, a Análise do Comportamento é amplamente ensinada como uma forma (ou talvez como a única forma) de conhecimento científico na psicologia brasileira: comprometida com o método experimental, com os dados, os gráficos, o controle de variáveis etc. Desse contexto decorre, quase que naturalmente, a imagem do analista de comportamento como um especialista que está do lado dos fatos e, por esse motivo, acima de questões ideológicas.

Um dos principais problemas de uma tecnocracia é que a tentativa de esvaziar o discurso político, substituindo-o pelo discurso tecnocientífico, assenta-se em uma visão idealizada do cientista. Tudo se passa como se o cientista fosse completamente isento de preconceitos, preferências, vieses, podendo, por isso, tomar decisões mais acertadas e objetivas do que políticos. O próprio Skinner (1953) recusa essa visão idealizada do cientista: "Os cientistas não são, por natureza, mais honestos que quaisquer outros homens, mas . . . a prática da ciência coloca na honestidade um prêmio excepcionalmente alto. É característico da ciência de que qualquer falta de honestidade acarreta imediatamente desastre" (p. 12). E mesmo no contexto de uma comunidade verbal científica, que lança mão de práticas específicas para corrigir o conhecimento produzido, vez por outra encontramos práticas duvidosas, como atribuição indevida de autoria, omissão de citações, citações irrelevantes apenas para elevar o fator de impacto de um colega, fraude em dados e assim por diante. Além disso, o cientista colocado na posição de espe-

of a colleague, data fraud, and several other behaviors, which lack evidence of integrity. Furthermore, the scientist placed in the specialist position does not respond impartially to the demand of empirical integrity. This echoes a question formulated by Skinner (1953) in relation to controlling agencies: “In what measure would not a scientist in power behave just to stay in power?”

The proposition of a technocracy, the first political discourse of radical behaviorism, raises the behavior analyst to the condition of a specialist or cultural planner. This is closely affiliated with modern thought. This is speech that is compatible with many of the features of this thought, as the preference for order, the lowering of any other form of knowledge that cannot be considered scientific, the idealization of the scientist and so on (Bauman, 2010). These points may be the subject of extensive debate. The goal, here, is to show and explore another possibility.

Radical Behaviorism as micro-politics

The second political discourse we can find in Skinner’s text is much less explored, so far. It begins in the critical discussion about controlling agencies, defined as institutions that organize contingencies and formulate rules that allow a more homogeneous and extensive social control in a group (Skinner, 1953). The main point of Skinner’s analysis of these agencies is that, unlike the discourse that was constructed and disseminated extensively by the representatives of institutions, the controlling agencies always work to promote their own survival by maintaining the ability (or power) to control individual behavior. There is something inherently misleading in institutional power: people behave according to the “values” of an agency not simply because “it is the truth”, because “there is no way to be different”, or because “it is the best for everyone”, but because the agency was successful in organizing contingencies to keep controlling the behavior of individuals (Skinner, 1971). The success of a controlling agency, i.e., their survival in a society, depends on, among other things, the agency’s ability to hide their individual behavior control techniques. It can do this by “erasing” its operating mode or omitting the origin of its rules and practices. In this sense, institutional control should be viewed with suspicion. It works to try and divert our attention from the control sources (creating a “smokescreen”).

cialista não responde de forma isenta a essa demanda. Para ecoar uma questão que Skinner (1953) formula em relação às agências controladoras, em que medida um cientista no poder não se comportaria apenas para manter-se no poder?

A essa altura talvez já tenha ficado claro que esse primeiro discurso político do comportamentalismo radical, o discurso da tecnocracia, que eleva o analista de comportamento à condição de especialista ou planejador cultural, está fortemente filiado ao pensamento moderno. Trata-se de um discurso que se harmoniza com muitas das características desse pensamento, como a preferência pela ordem, o rebaixamento de qualquer outra forma de conhecimento que não puder ser considerada científica, a idealização do cientista e assim por diante (Bauman, 2010). Embora esses pontos possam ser alvo de extenso debate, meu objetivo aqui é mostrar e explorar outra possibilidade.

Comportamentalismo Radical como micropolítica

O segundo discurso político que podemos encontrar no texto skinneriano é bem menos explorado. Ele inicia-se na discussão crítica das agências controladoras, entendidas como instituições que organizam contingências e formulam regras que permitem um controle social mais homogêneo e extenso em um grupo (Skinner, 1953). O ponto crucial da análise skinneriana dessas agências é o de que, diferente do discurso construído e difundido exaustivamente pelos representantes de instituições, as agências controladoras sempre funcionam orientadas pela sua própria sobrevivência, ou seja, para manter a capacidade (ou poder) de controle do comportamento individual. Há, portanto, algo de enganador no poder institucional: as pessoas se comportam em função dos “valores” de uma agência não porque “é a verdade”, porque “não tem como ser diferente”, ou porque “é o melhor para todos”, mas porque a agência foi bem-sucedida em organizar contingências para manter o controle do comportamento dos indivíduos (Skinner, 1971). O sucesso de uma agência controladora - sua sobrevivência em uma sociedade - depende, entre outras coisas, de quanto essa agência consegue esconder suas técnicas de controle do comportamento individual, por exemplo, “apagando” seu modo de funcionamento ou omitindo a origem de suas regras e práticas. Nesse sentido, o controle institucional deveria ser visto com desconfiança: ele funciona tentando desviar nosso olhar das fontes de con-

This historically common operation of controlling agencies tends to create unbalanced and unfair interpersonal relationships. Inside an agency, the counter control which could balance to some extent the relationship between controllers and controlled, is consistently avoided by punishment or a threat of punishment. In addition, the agencies try to keep this inequality, creating justifications outside the field of contingencies (and sometimes in the field of necessity) to explain the institutionalized relationship between the controlled and the controllers. Institutions are typically seen blaming the controlled by invoking a corrupt or impulsive human nature and attributing the behavior to an unreachable and uncontrollable unconscious by the individual.

In criticizing the institutional power and social relations mediated by controlling agencies, such political discourse tends to move away from the macro-politics, that is, the politics undertaken by professional politicians, political parties or other representatives of government institutions. However, technocracy is not necessarily a synonym of an apolitical attitude, or an emptying of the political discourse. Here, the focus is moved to micro-politics. This means that the solution to the problems caused by the interaction between different people should not be a matter exclusively dealt in the context of institutions or controlling agencies, but a matter to be specially and preferably resolved in their own interpersonal relationships. In the words of Skinner himself, political issues should be resolved in face-to-face control. However, the discourse linked to technocracy is still influenced by macro-politics, which is a type of politics exclusively understood in the field of controlling agencies. The only specificity of technocracy is trying to replace the government agency, represented by professional politicians, with the scientific agency, represented by experts.

Micro-politics, the second political discourse of radical behaviorism, is consistent with many of the contemporary discussions that defend the transformative potential of the micro-politics. For example, social movements that are networked, decentralized, and non-partisan public demonstrations are seen as legitimate in today's political field. In addition, micro-politics also makes room for the discussion of popular participation in public policies. This is the model of a representative democracy: seeking alternatives in a direct or participatory

trole (criando uma “cortina de fumaça”).

Esse funcionamento típico das agências controladoras tende a criar relações interpessoais desequilibradas e injustas, pois no interior de uma agência o contra-controle, que poderia em alguma medida equilibrar a relação entre controlador e controlado, é consistentemente evitado por punição ou ameaça de punição. Além disso, as agências tentam cristalizar essa desigualdade, criando justificativas fora do campo das contingências (e, por vezes, no campo da necessidade) para explicar a relação institucionalizada entre controlados e controladores: culpabilizando o controlado, invocando uma natureza humana corrompida ou impulsiva, atribuindo o comportamento a um inconsciente inalcançável e incontrolável por parte do indivíduo.

Ao criticar o poder institucional, as relações sociais mediadas por agências controladoras, esse discurso político tende a se afastar da macropolítica, ou seja, da política empreendida por políticos profissionais, por partidos políticos ou por outros representantes de instituições governamentais. No entanto, isso não é (ou pelo menos não precisa ser) sinônimo de uma atitude apolítica, ou de um esvaziamento do discurso político. Aqui, a política é deslocada para uma micropolítica. Isso quer dizer que a solução de problemas originados pelo convívio entre diferentes não deveria ser um assunto exclusivamente tratado no contexto de instituições ou agências controladoras, mas principal e preferencialmente um assunto a ser resolvido nas próprias relações interpessoais. Para usar uma expressão do próprio Skinner (1978), as questões políticas deveriam ser resolvidas no controle face a face.

Nesse ponto, é possível perceber que o discurso vinculado à tecnocracia é ainda refém da macropolítica: de uma política entendida exclusivamente no campo das agências controladoras. A única especificidade da tecnocracia é tentar substituir a agência governamental, representada por políticos profissionais, pela agência científica, representada por especialistas.

Esse segundo discurso político do Comportamento Radical é consistente com discussões contemporâneas, que com a desilusão na macropolítica, defendem o potencial transformador da micropolítica. Nesse contexto, os movimentos sociais em rede, as manifestações populares descentralizadas e apartidárias são vistos como o legítimo campo político da atualidade (Castells, 2012/2013). Além disso, a micropolítica também abre espaço para a discussão da parti-

democracy. Micro-politics would be the appropriate field for political decisions not mediated by “experts” or representatives of controlling agencies, rather by members of the public. In a consistent performance with micro-political discourse, we would see a community where policies are being planned, and people would be not only heard, but also prepared to present their own demands eliminating the mediation of a “spokesperson”. It is a discourse aimed at weakening controlling agencies and eliminating expert prestige. It is thinking politics in terms of concrete interpersonal relationships, which are contextualized in local realities.

Skinnerian text allows more than one political itinerary. The question that remains is: with which of these political narratives has Behavior Analysis been committed? Which of these narratives are we training the future analysts of behavior to pursue? The answer is not difficult to find. The technocratic discourse is well established in the production and education of behavior analysis in Brazil, therefore we try to explore the features and potentialities of a micro-political discourse in radical behaviorism. This narrative encourages the behavior analyst to move away from controlling agencies, to refuse the role of representative of these agencies, to respect small local narratives, to take a more modest posture in relation to the layman, and to consider that the control of social behavior is an issue that is resolved between people (not between institutions or representatives of institutions). Above all, micro-politics is able to prevent the conversion of behavior analysis into a controlling agency. Behavior analysts, who are committed to a technocratic project, should view this possibility with suspicion. They probably will argue that it would be working against behavior analysis and abandoning what has been achieved. But what has been achieved? What do we want to achieve? What political and social role has behavior analysis built during its near fifty-year existence in Brazil? Is our modest advancement due to the fact we still are not a control agency or because we spent all this time trying to be an agency? ●

cipação popular em políticas públicas. Trata-se de reconhecer os sinais de esgotamento do modelo de democracia representativa, buscando alternativas em uma democracia direta ou participativa. A micropolítica seria, portanto, o campo adequado para decisões políticas não mediadas por “especialistas”, representantes de agências controladoras. Em uma atuação consistente com o discurso micropolítico, as pessoas de uma comunidade, em que políticas públicas estão sendo planejadas, não seriam apenas ouvidas, mas instrumentalizadas para apresentar suas próprias demandas dispensando a mediação de um “porta-voz”. É um discurso que visa o enfraquecimento das agências controladoras e a queda do prestígio do especialista. Enfim, trata-se de pensar a política nas relações interpessoais concretas e contextualizadas em realidades locais.

Uma vez que o texto skinneriano permite mais de um itinerário político, a pergunta que resta fazer é: com qual dessas narrativas políticas a Análise do Comportamento tem se comprometido? Ou ainda, com qual dessas narrativas estamos formando os futuros analistas de comportamento? Receio que a resposta não é difícil de ser dada. O discurso tecnocrático é bem consolidado na produção e ensino da Análise do Comportamento no Brasil e, por isso, tentamos explorar, aqui, as características e potencialidades de um discurso micropolítico no comportamentalismo radical. Essa outra narrativa encoraja o analista de comportamento a se afastar de agências controladoras, a recusar o papel de representante dessas agências, a respeitar pequenas narrativas locais, a assumir uma postura mais modesta na relação com o leigo, a considerar que o controle do comportamento social é um assunto que se resolve entre pessoas, e não entre instituições ou representantes de instituições. Mas, acima de tudo, a micropolítica inviabiliza a conversão da Análise do Comportamento em uma agência controladora. Provavelmente essa possibilidade será vista com desconfiança pelos analistas de comportamento comprometidos com um projeto tecnocrata. Eles provavelmente argumentarão que isso seria trabalhar contra a Análise do Comportamento, seria abandonar aquilo que já foi conquistado. Mas o que foi conquistado? O que queremos conquistar? Qual o papel político e social que a Análise do Comportamento construiu em praticamente cinquenta anos de existência no Brasil? Será que nosso avanço modesto se deve ao fato de ainda não sermos uma agência de controle ou de termos passado esse tempo todo tentando ser uma agência? ●

Commentary

on *The Political Discourses of Behavior Analysis*

by Carlos Eduardo Lopes

reflections

Jerome D. Ullman, Ph.D.

Portuguese translation by Monalisa Leão

A fitting way to begin this commentary is with this quote from Skinner's last published article (written in 1989), *A World of Our Own*: "I should like to see a closer association with the other so-called behavioral sciences—sociology, economics, political science, and all the rest. Their data are almost exclusively behavioral, if historical, but their formulations are still largely mentalistic" To be sure, this not the first time that he made this point. Another instance, from *Behaviorism at Fifty*: "There is still a need for behaviorism in the social sciences where psychology has long been used for explanatory purposed. Economics has had its economic man. Political science has considered man as a political animal."

With his focus on politics from a behavior analytic perspective, I find the Carlos Lopes essay particularly germane to this theme. In his essay, Lopes sets out to discuss the relationship between politics and behavior analysis. He notes that behavior analysts are interested in political issues for several reasons: for conceptual explorations, experimental investigations, and planning how a culture might be better designed. As a behaviorologist, my particular interest is the conceptual exploration of the relationship between Skinnerian science and the behavioral sciences. Thus, I appreciate Lopes's work.

The first issue Lopes raises is the development of an operational definition of *politics*, not an easy task. He notes that in Western culture a complete definition of this concept would entail a considerable number of nuances. Lopes observes, "Hannah Arendt has faced the challenge of trying to answer the question, 'What is politics?' . . . She has encouraged her readers to think about how it relates to radical behaviorism: . . . Politics deals with the relationship between different individuals". In her book, *The Promise of Politics* (2005), Arendt states that in her



Uma maneira apropriada de começar esse comentário é com esta citação do último artigo publicado de Skinner (1993) (escrito em 1989): "Eu gostaria de ver uma associação mais próxima com outras ciências assim chamadas comportamentais – sociologia, economia, ciência política, e todo o resto. Seus dados são quase exclusivamente comportamentais, se não históricos, mas suas formulações são ainda amplamente mentalistas" (p. 5). Para ter certeza, essa não é a primeira vez que ele destacou esse ponto. Outro exemplo: "Há ainda uma necessidade do behaviorismo nas ciências sociais onde a psicologia tem sido

muito utilizada para o propósito explicativo. A economia tem tido seu homem econômico. A ciência política tem considerado o homem como um animal político" (Skinner, 1963, p. 131). Com sua ênfase na política a partir de uma perspectiva analítica comportamental, eu acho o ensaio de Carlos Lopes pertinente ao tema. Em seu ensaio, Lopes se propõe a discutir as relações entre política e análise do comportamento. Ele observa que os analistas do comportamento estão interessados nos assuntos políticos por diversas razões: por investigações conceituais, investigações experimentais, e planejamento de como a cultura pode ser mais bem projetada. Como um "behaviorologista", meu interesse particular é a investigação conceitual das relações entre a ciência skinneriana e as ciências comportamentais. Assim, eu aprecio o trabalho de Lopes.

A primeira questão que Lopes levanta é o desenvolvimento de uma definição operacional de política, que não é uma tarefa fácil. Ele observa que na cultura ocidental uma definição completa desse conceito implicaria em um número considerável de nuances. Lopes afirma, "Hannah Arendt, em um conjunto de fragmentos póstumos, enfrenta o desafio de tentar responder à questão 'o que é política?' de uma forma interessante para pensarmos em relações com o comportamentalismo radical: . . . A política trata da convivência entre diferentes". Em seu livro, *A Promessa da Política* (2005), Arendt

view: “Politics deals with the coexistence and association of *different men*”. As Skinnerians, however, what is at issue are actions and contingencies. What differ are contingencies across varied behavioral repertoires—the resulting effects of reinforcing and punishing histories within particular social environments. With respect to political issues, the impetus may derive—directly or indirectly—from the reinforcing contingencies maintained within the social environment of politically oriented institutions.

Perhaps it’s a translation problem, but Lopes’s comment about Arendt “encouraged her readers to think about how it relates to radical behaviorism” stymied me. Googling, I was not able to find anything suggesting that she has any familiarity with the science of behavior. The closest I came is that, along with sociology, Arendt had serious misgivings about psychology (Arendt, 1953/1973, pp. 460–479; Baehr, 2002). Furthermore, Arendt (1958) is contemptuous of what she calls “the all-comprehensive pretension of the social sciences which as ‘behavioral sciences’ aim to reduce man as a whole, in all his activities, to the level of a conditioned and behaving animal” (p. 45). Apparently, in her view, behaviorists deny that we have a human nature and see the human being as a robot. So how would this view comport with radical behaviorism? Such a view would reject it.

From the Skinnerian viewpoint, the best definition of politics I have found is in Susan Schneider’s (2012) consequential book (pun unintended), *The Science of Consequences*. In the chapter titled “Consequences on a Grand Scale,” she states: “Politics is about consequences in conflict” (p. 249). Her definition of politics corresponds well with my view expressed in terms of conflicts between institutions due to antagonistic macrocontingency relations. (I must now add a caveat: My discussion of the macrocontingency concept is not at all about individuals, but about patterns of behavior that ensue from individuals acting in unison.) I introduced the concept of *antagonistic macrocontingencies* in 1978, exemplifying politics with a real-life class struggle: “When miners were threatened with the coercive force of the state during the 110-day coal strike last year, not a single self-acclaimed ‘friend-of-labor’ politician stood up and defended them. The politicians were part of the business-dominated

afirma que no seu ponto de vista: “A política lida com a convivência e relação de homens *diferentes*” (p. 93). Como skinneriano, no entanto, o que está em questão são ações e contingências. O que difere são contingências ao longo de repertórios comportamentais variados - os efeitos resultantes de histórias de reforço e punição dentro de ambientes sociais particulares. No que diz respeito às questões políticas, o ímpeto pode derivar - direta ou indiretamente - de contingências reforçadoras mantidas dentro de um ambiente social de instituições orientadas politicamente.

Talvez seja um problema de tradução, mas o comentário de Lopes sobre Arendt: “Hannah Arendt, em um conjunto de fragmentos póstumos, enfrenta o desafio de tentar responder à questão ‘o que é política?’ de uma forma interessante para pensarmos em relações com o comportamentalismo radical” frustrou-me. Pesquisando, eu não fui capaz de encontrar nada sugerindo que ela tem alguma familiaridade com a ciência do comportamento. O mais próximo que cheguei é que, junto com a sociologia, Arendt teve sérias dúvidas sobre a psicologia (Arendt, 1953/1973, pp. 460–479; Baehr, 2002). Ademais, Arendt (1958) despreza o que ela chama de “a pretensão toda - abrangente das ciências sociais que, como as ‘ciências comportamentais’, objetivam reduzir o homem como um todo, em todas as suas atividades, ao nível de um animal condicionado e que se comporta” (p. 45). Aparentemente, em seu ponto de vista, os behavioristas negam que nós temos uma natureza humana e vêem o ser humano como robô. Então como é que este ponto de vista seria compatível com o Behaviorismo Radical? Tal visão o rejeitaria.

Do ponto de vista skinneriano, a melhor definição de política encontrada está no livro consequential de Susan Schneider (2012) (trocadilho não intencional), *A Ciência das Consequências*. No capítulo intitulado “Consequências em Grande Escala”, ela afirma: “Política é sobre as consequências em conflito” (p. 249). Sua definição de política corresponde melhor com meu ponto de vista expresso em termos de conflitos entre instituições devido às relações de macrocontingência antagônicas. (Eu devo agora acrescentar uma ressalva: minha discussão do conceito de macrocontingência não é ela toda sobre indivíduos, mas sobre padrões de comportamentos que resultam de indivíduos que agem em uníssono). Eu introduzi o conceito de macrocontingências antagônicas em 1978, exemplificando a política como uma luta de classes: “Quando mineiros foram ameaçados com a força coercitiva do estado

state” (p. 65).

Another illustration of real politics—the analysis of antagonistic macrocontingencies at the institutional level—comes from my participation in a panel discussion on *Effective Interactions with the Social Sciences* at Campinas, Brasil in 2005. The *potentiating variable* (coined by Israel Goldiamond—for the present purpose, a more appropriate term than *motivating operation*) was distribution of land in 2005. That administration promised the “resettlement” of 400,000 landless peasant families during its four-year term, but few had received any land. The coordinating macrocontingency rendered a two-week march for land reform, culminating in a protest of 12,000 in the streets of Brasília. At the institutional-level, the Movement of Landless Rural Workers (MST) organized the protest actions. As reported (Italie, 2005), the police injured dozens of protesters when mounted officers made repeated baton charges. The police department, part of a larger institutional arrangement—the government—was antagonistically related to the MST, a militantly opposed institution. This encounter could not be more clearly political: *consequences in conflict*.

The section titled “Radical Behaviorism as technocracy” seems somewhat contradictory and, in my view, less than promising. First, *Walden II* is held to be Skinner’s best political discourse; in Lopes’s opinion, radical behaviorism’s prime political project. But he then comments that *Walden II* is a utopia, an unrealizable dream. If Lopes were implying here that no major changes in society would result, I would agree with him. Continuing with his discussion of technocracy, he opines that experts must carry out a public policy. What is not explained is just how this would be done. He observes that the behavior analysts in Brazil are intrigued by technocracy. According to Lopes, they foresee replacing political corruption. And concomitantly, he believes that they see themselves as political experts. In this context “political” is not the same as Schneider’s (2012) consequences in conflict. Nothing is said of the powerful “political machine” backed up by millionaires, if not billionaires, and how the “political experts” would gain some of that power. Where would they start? If the context is a local school system, for example, it is under-

durante a greve de carvão de 110 dias no ano passado, nenhum político auto-aclamado ‘amigo – do – trabalho’ levantou-se e os defendeu. Os políticos faziam parte do estado de negócio dominado” (p. 65).

Outra ilustração de uma verdadeira política – a análise de macrocontingências antagonicas em um nível institucional – vem da minha participação em um painel de discussão sobre Interações Efetivas com as Ciências Sociais de Campinas, Brasil em 2005. A variável potencializadora (criada por Israel Goldiamond – para o presente fim, um termo mais apropriado do que operação motivadora) era a distribuição de terra em 2005. Essa administração prometeu o “reassentamento” de 400 mil famílias de camponeses sem-terra durante o seu mandato de quatro anos, mas poucos receberam alguma terra. A coordenação da macrocontingência gerou uma marcha de duas semanas para a reforma agrária, culminando em um protesto de 12 mil pessoas nas ruas de Brasília. No nível institucional, o Movimento dos Trabalhadores Rurais Sem Terra (MST) organizou ações de protesto. Conforme relatado (Italie, 2005), a polícia feriu vários protestantes quando a polícia montada fez uso da força de seus cassetetes. O departamento de polícia, o qual faz parte de um grande arranjo constitucional – o governo – estava antagonicamente relacionado ao MST, uma instituição oposta militantemente. Esse conflito não poderia ser mais claro.

A sessão intitulada “Behaviorismo Radical como tecnocracia” parece um pouco contraditória e, no meu ponto de vista, menos promissora. Primeiramente, *Walden II* é considerado o melhor discurso político de Skinner; na opinião de Lopes, o principal projeto político do behaviorismo radical. Mas depois ele comenta que *Walden II* é uma utopia, um sonho não realizável. Se Lopes estivesse sugerindo aqui que não há grandes mudanças na sociedade, eu concordaria com ele. Continuando com sua discussão de tecnocracia, ele afirma que os especialistas deveriam defender uma política pública. O que não é explicado é justamente como isso poderia ser feito. Ele observa que os analistas do comportamento no Brasil estão fascinados com a tecnocracia. De acordo com Lopes, eles prevêem a substituição da corrupção política. E, concomitantemente, ele acredita que eles se vêem como especialistas políticos. Nesse contexto “política” não é o mesmo que consequências em conflito de Schneider’s (2012). Nada é dito sobre a poderosa “máquina política” apoiada por milionários, se não bilionários, e como os “especialistas políticos” ganharia

standable how technocracy might work out. Which takes us to the next section.

The last section, *Radical Behaviorism as micro-politics*, concerns a subject matter about which I am unacquainted. From an article by Smeed et al. (2009), I learned that micro-politics relates to the politics internal to organizations, is just as much about cooperation as it is about conflict, and uses formal and informal power by individuals and groups who achieve their goals in organizations.

To conclude, I wish to remark that Carlos Lopes merits recognition for emphasizing the relevance of politics as a viable subject matter for our science. As we direct our research towards conceptual explorations, experimental investigations, and planning a better future, inroads will eventually be made in collaborating with social scientists. How compelling they find our discipline will be accomplished one step at a time (this essay possibly being one), as they leave their mentalistic baggage behind and join us in interdisciplinary collaboration. ●

algum desse poder. Por onde eles começariam? Se o contexto é um sistema escolar local, por exemplo, é compreensível como a tecnocracia poderia funcionar. O que nos leva para a próxima sessão.

A última sessão, Behaviorismo Radical como micropolítica, diz respeito a um assunto sobre o qual eu não conheço. A partir de um artigo de Smeed et al. (2009), eu aprendi que micropolítica diz respeito à política interna das organizações, trata-se tanto de cooperação como de conflito, e usa o poder formal e informal por meio dos indivíduos e grupos que alcançam seus objetivos nas organizações.

Para concluir, gostaria de mencionar que Carlos Lopes merece reconhecimento por enfatizar a relevância da política como um assunto viável para nossa ciência. Como nós direcionamos nossa pesquisa para investigações conceituais, investigações experimentais, e planejamento de um futuro melhor, incursões eventualmente serão feitas em colaboração com os cientistas sociais. O quanto convincente eles acharem nossa disciplina, será conquistado um passo de cada vez (sendo este texto um deles), assim eles deixam sua bagagem mentalista para trás e se juntam a nos em colaboração interdisciplinar. ●

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J. D. Ulman recebeu os títulos de bacharel e mestre em psicologia pela Universidade do Sul da Florida em 1965 e 1968, respectivamente; e seu doutorado em psicologia educacional pela Universidade Southern Illinois em 1972. Ele tem trabalhado como um psicólogo escolar na Florida, um pesquisador no Centro de Saúde Mental e de Desenvolvimento Choate em Illinois, e um consultor comportamental em Escolas Públicas de Indianapolis. Ele veio para a Universidade Estadual Ball (BSU) em 1974 onde lecionou cursos nas áreas de análise do comportamento aplicada e distúrbios comportamentais. Em seus últimos anos, coordenou um programa de pós-graduação online em análise comportamental aplicada. Seus interesses de pesquisa incluem metodologia de pesquisa comportamental, análise do comportamento aplicada em educação especial, e as implicações socioculturais da behaviorologia. Ele também atuou no conselho editorial da Behavior and Social Issues. Em 2012 ele se tornou Professor Emérito de Educação Especial na BSU. Sua realização mais recente é a publicação de "As Cartas Ulman – Skinner" e um conjunto de réplicas a comentários em uma edição especial do European Journal of Behavior Analysis.

B. F. Skinner's *Contingencies of Reinforcement*

science
corner

commentary by David C. Palmer, Ph.D.
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Like the early explorers of newly discovered lands, Skinner was a pioneer. With *Walden Two*, *Science and Human Behavior*, *Verbal Behavior*, and his early papers on the technology of teaching, he was the first to lay claim, in the name of science, to the whole panorama of human behavior, formerly mostly uncharted. But like all early explorers, in his push to the hinterlands of the field he had to pass by many alluring vistas, inviting paths, and curious landforms, leaving blank large sections of his chart, to be filled in by those who were sure to follow.

Many did follow, and the science of behavior developed inexorably. But after the publication of *Schedules of Reinforcement* and *Verbal Behavior*, pillars of the empirical and conceptual analyses of behavior respectively, when he might justifiably have settled into a comfortable retirement, Skinner himself was among the first to explore some of those byways and to extend his own earlier accounts. *Contingencies of Reinforcement* is a collection of diverse papers from this period, and it includes some of his sharpest conceptual analyses. He took the occasion of the publication of this anthology in 1969 to survey the domain one more time: he appended commentaries to the papers, and in some cases, his notes are longer than the papers themselves and as incisive. The book, then, is not merely a recapitulation of his earlier work but a refinement, clarification, and extension of it.

As the writer of this foreword I stand as an obstacle between the reader and text, but I hope to pay for the impertinence by alerting him to some of the cogent analyses to be found within. By identifying those that I have found especially helpful in my own attempts to understand complex behavior, perhaps I will whet the reader's appetite for what follows.

The Experimental Analysis/Interpretation Distinction

In early drafts of *Verbal Behavior*, Skinner supported his account with experimental data whenever possible, but he found that most of his analysis went far beyond what could be demonstrated in the laboratory. As the empirical work became increasingly incongruous, he dropped references to it entirely. He characterized the result this way:

The emphasis is upon an orderly arrangement of well-known facts, in accordance with a formulation of behavior derived from an exper-



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*His interests in behavior analysis are broad, but his main contributions have all been attempts to extend Skinner's interpretive accounts of human behavior, particularly in the domains of language, memory, problem solving, and private events. He remains convinced that behavioral principles offer an adequate foundation for interpreting such phenomena. Together with John Donahoe, he authored the text, *Learning and Complex Behavior*, which was an attempt to justify such optimism.*

*This commentary first appeared as foreword to B. F. Skinner, *Contingencies of Reinforcement*, B. F. Skinner Foundation, 2013.*

imental analysis of a more rigorous sort. The present extension to verbal behavior is thus an exercise in interpretation rather than a quantitative extrapolation of rigorous experimental results. (p. 11)

Interpretation, in this sense, has a technical meaning for Skinner. The laboratory is the smithy in which the tools of science are forged and from which its principles emerge, but many natural phenomena are not amenable to experimental control. For Skinner, to interpret the fragmentary and uncontrolled data of everyday experience is to show how such data might arise by appealing to principles that have emerged from an experimental analysis and to nothing else. An interpretation, then, differs from mere speculation in that it rests upon a set of principles that have been validated in the laboratory. Skinner had begun to articulate this technical sense of the term interpretation in several early papers (see *Cumulative Record*) but his most comprehensive statement awaited his commentary on a paper in the present volume:

The use of concepts and laws derived from an experimental analysis in the interpretation of daily life is also a source of misunderstanding. An analogy from another science may be helpful. Geophysics interprets the present condition of the accessible parts of the earth in terms of presumed conditions in the mantle and core. It appeals quite freely to physical laws derived from laboratory analyses of matter under various pressures and temperatures, even though it is merely an assumption that comparable states actually prevail in the interior of the earth. In the same way familiar facts about verbal behavior are interpreted with principles derived from the laboratory study of contingencies of reinforcement, even though the contingencies maintained by the verbal environment cannot be precisely ascertained. In both these examples, principles derived from research conducted under the favorable conditions of the laboratory are used to give a plausible account of facts which are not at the moment under experimental control. Neither account can at the present time be proved, but both are to be preferred to treatments which lack the same kind of experimental support. (p. 100)

The distinction between interpretation, which rests solely on established principles, and mere speculation, is not widely understood, nor is it commonly appreciated

how much of what we take as scientific fact is an interpretation. Most of the facts of cosmology, evolutionary biology, and geology, as well as virtually all of our explanations of everyday physical events, are interpretations, not the result of experimental analyses. Interpretation, then, is not a tawdry sideshow of science but an indispensable part of the main feature.

Evolution and Behavior

Darwin's exposition of evolution by natural selection is a parsimonious and powerful interpretation of adaptive complexity in nature. Repeated cycles of variation and selection adequately explain the origins of the myriad life forms that we see in nature. In addition, if behavioral contingencies are relatively constant over generations, adaptive behavior can be selected by contingencies of survival as well. In *Science and Human Behavior*, Skinner remarked on the evolutionary origin of reflexes as well as the adaptive significance of the principle of reinforcement and other behavioral principles:

The process of conditioning also has survival value. Since the environment changes from generation to generation, particularly the external rather than the internal environment, appropriate reflex responses cannot always develop as inherited mechanisms. Thus an organism may be prepared to secrete saliva when certain chemical substances stimulate its mouth, but it cannot gain the added advantage of salivating before food is actually tasted unless the physical appearance of foodstuffs remains the same from environment to environment and from time to time. Since nature cannot foresee, so to speak, that an object with a particular appearance will be edible, the evolutionary process can only provide a mechanism by which the individual will acquire responses to particular features of a given environment after they have been encountered. Where inherited behavior leaves off, the inherited modifiability of the process of conditioning takes over. (p. 55)

Moreover, he pointed out the analogy between the processes of evolution by natural selection and the shaping of novel behavior by reinforcement:

In certain respects operant reinforcement resembles the natural selection of evolutionary theory. Just as genetic characteristics which arise as mutations are selected or

discarded by their consequences, so novel forms of behavior are selected or discarded through reinforcement. (p. 430)

In *Walden Two*, Skinner, speaking through Frazier, acknowledged the role of genetic variation in human behavior: “Our ten-year-olds have all had the same environment since birth, but the range of their IQ’s is almost as great as in the population at large. This seems to be true of other abilities and skills as well.” As *Walden Two* is a novel, this statement is merely a prediction, but it shows where Skinner stood on the topic.

Nevertheless, Skinner’s critics, and even some of his colleagues, assumed that he neglected or ignored the role of evolution in behavior. No doubt this assumption arose from several circumstances: First his interpretations of human behavior invoked principles that had been derived almost exclusively from experiments with rats and pigeons. Second, the remarkable speed with which he was able to shape novel and arbitrary behavior in pigeons and other species suggested that such shaping was limited only by an animal’s morphological features. Third, he studied arbitrary behavior in laboratory settings, rather than behavior typical of various species in their natural environments. Finally, and most importantly, the public, along with many scientists, are determined to believe that someone, somewhere, believes that the newborn infant is a *tabula rasa*. Not even Locke, who coined the term, thought that inheritance was irrelevant, and certainly Watson believed no such thing. But Skinner inherited from Watson the token role of extreme environmentalist assigned by popular prejudice to anyone who suggests that human behavior can be improved.

The Phylogeny and Ontogeny of Behavior was originally published in *Science* in 1966 and should have eliminated such misconceptions, for it is an explicit acknowledgement and comprehensive discussion of the contributions of both the ontogenetic and phylogenetic environments to the behavior of organisms. Many types of contingencies are common to both environments, but some differ, and Skinner carefully discusses both cases. More-

over, he cites, with approval, the work of the Brelands, who showed that under some conditions behavior of phylogenetic origin can interfere with shaping by reinforcement. Skinner’s critics crowed with delight at these findings, but Skinner found the Brelands’ conclusions to be “plausible, and not disturbing.” He calmly noted that intrusions can happen in both directions. Indeed they can; he cited examples of behavior shaped in the laboratory that interfered with normal eating, and examples in human affairs abound, from the use of contraceptives and vows of chastity to hunger strikes and suicide bombings. Skinner was a consistent advocate for a thoroughgoing science of behavior, not a partisan trying to exaggerate the role of one aspect of the science as opposed to another:

Early behaviorists, impressed by the importance of newly discovered environmental variables, found it particularly reinforcing to explain what appeared to be an instinct by showing that it could have been learned, just as ethologists have found it reinforcing to

We cannot change the contingencies of selection that have shaped our genome, and our ability to engineer genetic change is still limited, but the scope of behavioral engineering is vast.

show that behavior attributed to the environment is still exhibited when environmental variables have been ruled out. The important issue is empirical: what are the relevant variables? (p. 199)

Of course, some of Skinner’s proposals, presented elsewhere, were controversial and occasioned furious objections, for he dared to propose that the shape of the future is in our own hands. Whatever the genetic cards we have been dealt, we can play them much more skillfully and to better effect than we have hitherto. We cannot change the contingencies of selection that have shaped our genome, and our ability to engineer genetic change is still limited, but the scope of behavioral engineering is vast. That such an unremarkable observation should have engendered so much controversy and emotion is a testimony to the enduring influence of dualism in human affairs.

Rule-Governed Behavior vs. Contingency-Shaped Behavior

A major appeal of Darwin’s theory is its power and scope. A computer program that simulates variation and selection of sequences of DNA bases can, at least in princi-

ple, generate the genome of every organism that has ever existed, as well as an indefinite number of other beasts that never have existed and never will. Thus, in principle, the explanatory adequacy of Darwin's theory is profound. Such a demonstration does not prove that the theory accounts for the origin of species in fact, but it shows that it is sufficiently powerful to do so, given the requisite variations and history of selection. An analogous conclusion can be drawn about behavior. Shaping generates novel behavior through the systematic reinforcement of variations along one or more dimensions. A computer program that simulates variation and selection of behavior can, in principle, generate any imaginable topography and sequence of behavior within the limits of the program. Since the potential scope of such a system is indefinitely large, contingencies of reinforcement are plausible candidates as explanations of complex behavior.

However, it is easy to show that much human behavior is not shaped through the reinforcement of successive approximations. Rather, complex adaptive behavior often occurs in its terminal form on its first occasion. If we need to drive to Boston, we do not wander aimlessly, getting successively closer with each excursion. We consult a map, ask a passerby, or follow the commands of an electronic navigator, and arrive at our destination, possibly without having taken a single false turn. When telephoning a plumber, we do not enter numbers at random; we look up the number and enter it correctly at once. If all behavior were shaped through the reinforcement of successive approximations to a target behavior, the process would be conspicuous; everyone would be a behaviorist. The abrupt appearance of adaptive behavior, common in humans but rare in other species, fuels speculation that human behavior requires special treatment, that it cannot be explained with the interpretive tools that have emerged from the animal laboratory.

In *Operant Behavior* (Chapter 5) and *An Operant Analysis of Problem Solving* (Chapter 6), Skinner introduced the concept of rule-governed behavior and contrasted it with contingency-shaped behavior. In verbal communities children quickly learn to respond systematically to verbal stimuli: "Turn left," "Look up," "Raise your hand," "Take one giant step forward." Given a sufficiently finegrained "alphabet" of responses under verbal control, virtually any

topography and sequence of behavior can be evoked at once through the arrangement of corresponding verbal stimuli: "Take your first left, go two blocks, turn left at the church, then bear right onto Livingston Avenue." "Mix together one beaten egg, one cup milk, one tablespoon melted butter, two cups flour, one-half teaspoon salt, two tablespoons sugar, and two teaspoons baking soda." Initially the reinforcement for such behavior is generalized social reinforcement, but the behavior evoked by verbal stimuli can, and usually does, satisfy a second contingency as well: We arrive at our destination, and the pancakes are edible. A single topography of behavior satisfies both contingencies; it is evoked by the verbal contingency, but control transfers to the second contingency, which may be verbal or non-verbal, and in the future behavior will occur upon the appropriate occasion in the absence of the verbal stimuli.

The effect, of course, is dramatic. In a verbal community, when novel behavior is shaped in one person through cycles of variation and differential reinforcement, possibly over a long time, a second person can emit the terminal behavior through verbal instruction on the first opportunity. That is, the contingency-shaped behavior of one person can become the source of control for the verbally governed behavior of myriad others. Thus effective behavior can spread rapidly throughout a culture and across generations. Thus, Skinner's conception of rule-governed and contingency-shaped behavior was an important advance, for it accommodated many facts about human behavior that would otherwise have been difficult, if not impossible, to explain.

Radical Behaviorism and Competing Paradigms

The term *radical behaviorism* had been used in the 1920s by various writers to characterize the work of Watson and his supporters, and in this usage, radical was an adjective. That is, it was intended as a descriptive term, picturesque with a touch of the pejorative. Skinner appears to have been the first person to embrace the term to represent his own position. Although he occasionally wrote of a radical behaviorism, meaning fundamental or thoroughgoing, and certainly with no pejorative connotation, he generally used the term as a compound noun: radical behaviorism was a label representing a particular coherent set of assumptions and tenets about the science of behavior, distinct

from the position he dubbed methodological behaviorism. He first used the term in print in *The Operational Analysis of Psychological Terms*, a paper that emerged from his early analyses of verbal behavior, but his unpublished notes reveal that he had been using the term for more than a decade. Noting the lapse of a half-century since Watson first raised objections to mentalism and three decades since the topic had been much discussed, Skinner wrote *Behaviorism at Fifty* as a restatement of radical behaviorism.

In several works, but particularly in *Science and Human Behavior*, Skinner discussed the status of private events in a science of behavior, but as the central role of interpretation in science was poorly grasped by others, his exposition was not influential outside his field. Behaviorism at Fifty was a renewed attempt to make his case. At the heart of the paper is an elegant analogy:

Science often talks about things it cannot see or measure. When a man tosses a penny into the air, it must be assumed that he tosses the earth beneath him downward. It is quite out of the question to see or measure the effect on the earth, but the effect must be assumed for the sake of a consistent account. (p. 228)

Likewise, we must assume that a principle of behavior continues to operate in those instances that do not lend themselves to experimental manipulation. Radical behaviorism takes the position that behavioral principles apply to all behavior, public and private, observed and unobserved. Experimental analysis must confine itself to observable and manipulable events, but the scope of the principles derived from an experimental analysis includes all behavioral events.

The ramifications of this assumption differentiate radical behaviorism from competing paradigms. Human behavior is difficult to control experimentally for at least two reasons: First, much relevant behavior is difficult to measure with our current tools; that is, it is covert. Second, an experimenter has limited control over the histories of human subjects. But these problems do not go away by fleeing to another paradigm. When studying human behav-

ior, all scientists, whatever their theoretical orientation, face the same ethical constraints and must accommodate the fleeting, subtle, and multidimensional nature of the subject matter. However, the behaviorist has an important advantage: He has a set of analytical tools that have been validated in the laboratory and are therefore empirical, not hypothetical:

Unlike hypotheses, theories, and models, together with the statistical manipulations of data which support them, a smooth curve showing a change in probability of a response as a function of a controlled variable is a fact in the bag, and there is no need to worry about it as one goes in search of others. (p. 84)

It is the “fact in the bag” more than anything else that sets the behaviorist apart from those who subscribe to competing paradigms. The inductive principles that have emerged from the behavioral laboratory are not hypothetical. Any interpretations of the available data of human behavior that rest only on such principles are therefore superior to,

not just different from, those that rest on hypothetical constructs. The facts in the bag are available to everyone, of every persuasion, and they don’t go away when they are ignored. But at the time the papers in this volume (*Contingencies of Reinforcement*) were written, the social sciences were rapidly expanding and differentiating into subordinate disciplines whose advocates were commonly critical of Skinner and his science. As a result of this adversarial stance, they made the colossal error of ignoring the facts that had been uncovered by the experimental analysis of behavior. One looks in vain through textbooks in cognition, cognitive neuroscience, psycholinguistics, linguistics, philosophy of science, and related disciplines for discussions of reinforcement, extinction, stimulus control, and other behavioral principles. Contingencies of reinforcement are ubiquitous in human affairs. To overlook them is careless, but to deliberately dismiss them from consideration is foolish. The facts are in the bag, and turning one’s back will not set them loose again. ●

Contingencies of reinforcement are ubiquitous in human affairs. To overlook them is careless, but to deliberately dismiss them from consideration is foolish.

Brief Biographies of a Selection of Skinner's Coauthors

by Todd L. McKerchar, Ph.D.
Jacksonville State University, and
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University of Kansas

Beginning with the next issue of *Operants*, we will start publishing brief biographies on a selection of Skinner's coauthors. Here is an introduction by the authors:

This project started more than ten years ago, while reading Skinner's three-volume autobiography. The autobiography was fascinating in that it provided additional context for his scientific discoveries and development, much of which could not be easily gleaned from reading his books and journal articles alone. Perhaps because of this, we found ourselves becoming increasingly interested in the historical aspects of his development and, thus, the history of behavior analysis. The next logical step was to further investigate the nature of Skinner's scientific collaborations. Of course it can be difficult to operationally define "collaborator," but after we considered various possibilities, we formalized a collaborator as "a coauthor on any of Skinner's scientific publications" (limitations notwithstanding).

Our analysis was primarily quantitative, and less historical, at least as history is conceived in the traditional sense. Along with the late and great Nate Smith, we coded, categorized, and counted Skinner's coauthored and single-authored publications. In doing so, we found, for example, that Skinner was much more likely to coauthor an empirical work than a conceptual one, that the majority of his coauthored works were journal articles, as opposed to books or chapters, and that the most frequent outlet for his coauthored journal articles was the *Journal of the Experimental Analysis of Behavior*. These and other findings were largely, but not always, consistent with psychology and science at large, as revealed by the scientometric literature. We presented these findings in a symposium on Skinner's Science and System at the 2003 meeting of the Association for Behavior Analysis. Later, we published these findings in *The Behavior Analyst*.

During this time, we were also collecting information on and learning more about Skinner's coauthors. Of course, many of his coauthors are well-known successful

behavior analysts in their own right (e.g., Catania, Ferster, Lindsley), but we knew little or nothing about others and were interested in learning more about them. For example, T. C. Barnes was the senior author on Skinner's first scientific publication. What were Barnes's accomplishments and what can we learn about the context of Barnes and Skinner's collaboration? Similarly, William Heron was Skinner's most frequent coauthor, but within behavior analysis Heron is not well known. What were Heron's accomplishments and what became of him? Some of this natural history was explored in our paper in *The Behavior Analyst*, but most of it was omitted because it didn't quite fit with our larger theme. After talking with the B.F. Skinner Foundation, we now have an outlet for this work.

Because our interest primarily lies with Skinner's lesser-known coauthors — at least lesser known in behavior analysis — we focus on them. This may end up having more historical value because, as we found, not much has been written on them. We will attempt to do two things in each biography. First, we will provide biographical, educational, and career information for these coauthors, and, if applicable, will describe their awards, honors, and major professional contributions. Second, we will attempt to describe the context of Skinner's collaborations with these coauthors, as culled from various historical sources (e.g., Skinner's autobiography, the Harvard University Archives).

We should point out, however, that for many of these coauthors our biographical records are incomplete. Because they were not well known in behavior analysis and psychology, they were unlikely to have extensive or widely published obituaries. We have done our best to conduct thorough searches, but in some cases we have exhausted the resources available to us. Accordingly, we encourage anyone who has biographical information on Skinner's lesser-known coauthors to please contact us. In the next issue of *Operants*, we will begin with the first author of Skinner's first scientific publication—Thomas Cunliffe Barnes. ●

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(English)

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As always, the editors welcome your feedback. Suggestions and news items are very welcome. Feel free to contact any of us by emailing operants@bfskinner.org.

from
the
archives



*Continuing the international theme: Eve and B. F. Skinner riding camels in Egypt (February, 1964).
It is not a paper cut-out. He actually wore suit and tie on this occasion! From the family archives.*



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