

DAY 1: MONDAY 18^h APRIL: MORNING SESSION

REGISTRATION (8:15-9:00) UCL FOYER			
TIME	LECTURE THEATRE: LOWER GROUND FLOOR	LECTURE THEATRE: GROUND G03	ROOM 305
	Symposium: Headsprout Reading Programmes for diverse learners Chair: Carl Hughes BCBA CE: 1	Symposium: The Jigsaw CABAS School Chair: Emma Hawkins BCBA CE: 1	Symposium: Adult services and training Chair: Lisa Hutchinson BCBA CE: 1
9:00	The use of Headsprout Early Reading[®] with children in mainstream schools who have reading and language deficits MICHAEL BEVERLEY, J Carl Hughes & Emily Tyler Bangor University	The Jigsaw CABAS School: Background components & research EMMA HAWKINS & Kate Grant The Jigsaw CABAS school	A residential-based behaviorally-oriented treatment approach for an adolescent male with a history of maltreatment and severe behavior problems JENNIFER SHERIDAN ¹ & Andrea Deering ² , University of Ulster ¹ , Excell Education Services ²
9:20	Using Headsprout Early Reading with children with Learning Disabilities and other special educational needs EMILY TYLER ¹ , Bethan Williams ² , Meadhbh Wilson ¹ , J Carl Hughes ¹ & Michael Beverley ¹ Bangor University ¹ , Betsi Cadwaldr University Health Board ²	The Jigsaw CABAS School: Using research-based tactics to improve socially significant behaviour EDI MIDDLETON, Emma Martin, Sarah Statham, Jo Phillips, Sarah Alkhalaf & Emma Hawkins The Jigsaw CABAS school	The effects of Behavioral Skills Training on implementing three procedures by nonspecialist staff. CRISTINA COPELLI ^{1,2,3} & Paolo Moderato ³ , IULM ¹ , IESCUM ² , MIPIA ³
9:40	An Evaluation of Headsprout Early Reading for Children with Autism at Step by Step School FAYE RAPLEY, Corinna Grindle, J. Carl Hughes & Maria Saville Teaching children with autism to comprehend text using Headsprout Reading Comprehension Corinna Grindle, J. CARL HUGHES & Maria Saville	The Jigsaw CABAS School: Four case studies EMMA HAWKINS & Kate Grant	Increasing participation in a variety of workshops within a supported living environment for adults with a mental illness LISA HUTCHINSON, Bangor University
10:00	Headsprout discussant Janet Twyman	Discussion period	Positive behaviour support service: Placement development – A case study KATH DEVONSHIRE ¹ , Maria Saville ¹ , Sandy Toogood ² & Paul McWade ¹ , Halton Borough Council ¹ , Bangor University ²
10:30: 11:20	REFRESHMENTS (floor 3 common room)		

DAY 1: MONDAY 18th APRIL: MORNING SESSION (continued)

TIME	LECTURE THEATRE: LOWER GROUND FLOOR	LECTURE THEATRE: GROUND G03	ROOM 305
	Symposium: Derived relations and verbal behaviour Chair: Giovambattista Presti BCBA CE: 1	Symposium: Evidence and interventions in ASD Chair: Katy Lambert-Lee BCBA CE: 1	Symposium: General Symposium Chair: Nicola Kennedy
11:20	Reading as derived relational responding in autistic kids GIOVAMBATTISTA PRESTI ^{1,2,3} , Cristina Copelli ^{1,2,3} , Francesca Franciosi ³ , Valentina Cazzoli ³ , Federica Catelli ² , Virginia Licandro ³ & Luisa Lucchini ³ , IULM ¹ , IESCUM ² , MIPIA ³ , Italy	Demonstrating program effectiveness in a parent-mediated infant toddler program using the ABLLS-R JAMIE HUGHES, University of Kent	A behavioural support team model and positive behaviour supports KAREN FLOTKOETTER, University of Kent
11:40	Mi Capisci? Effects of a phonological training on children with Down Syndrome FEDERICA BERARDO ¹ , Chiara Diaferia ² & Silvia Perini ¹ , Universita degli Studi di Parma ¹ , Centro Tice ²	Changes over 12 months for children and adolescents with autism attending an ABA-based special school KATY A LAMBERT-LEE ^{1,2,3} , Richard Hastings ³ , Emma Douglas ^{1,2} , Esther Thomas ^{1,2} , Carl Hughes ³ & Gemma Griffith ³ , Ambitious about Autism ¹ , Treehouse School ² , Bangor University ³	Transition to university: Improving skills and social inclusion for a young adult with Autism Spectrum Disorder NICOLA KENNEDY ¹ , Karola Dillenburger ¹ & Nichola Booth ² , Queen's University, Belfast ¹ , Parents Education as Autism Therapists (P.E.A.T.) ²
12:00	Basic Frame Protocol: A training for higher order verbal operants ROBERT CATTIVELLI ¹ , Sara Andolfi ² & Valentina Tirelli ² Università degli Studi di Parma ¹ , Centro Tice ²	MIPIA – Early Intensive Intervention for Autistic Children: The Italian way Paulo Moderato ^{1,2,3} , Giovambattista Presti ^{1,2,3} , Francesca Pergolizzi ^{2,3} , Cristina Copelli ^{1,2,3} & LORENZO TODONE ^{2,3} , IULM ¹ , IESCUM ² , MIPIA ³	Symposium: Derived relational responding Chair: Anita Munnelly BCBA CE: 1
			Relational sentence construction ANITA MUNNELLY & Simon Dymond, Swansea University
12:20	Comparing the mastery of autoclitic frames in typically developing children and intellectually disabled adolescents MARIE LAURE NUCHADEE & Bruno Facon, University of Lille, France	Maths recovery: A numeracy curriculum for children with autism PAGONA TZANAKAKI, Corinna Grindle, Richard Hastings, Carl Hughes, Maria Savile, Bangor University	A Novel Function Acquisition Speed Test (FAST) for the implicit measurement of derived relations ANTHONY O'REILLY & Bryan Roche, NUI Maynooth
12:40	The benefits of pairing the Verbal SD with subsequent prompts in intraverbal training AMANDA LEWIS & Dorothea Lerman, University of Houston-Clear Lake	An analysis of programme components in the treatment of food selectivity for 2 children with autism CLAIRE MCDOWELL & Claire Duffy, University of Ulster	Evaluation of intraverbal category training on the emergence of novel intraverbal relations RICHARD MAY & Simon Dymond, Swansea University
1:00-2:00	LUNCH		

DAY 1: MONDAY 18th APRIL: AFTERNOON SESSION

	LECTURE THEATRE: LOWER GROUND FLOOR	LECTURE THEATRE: GROUND G03	ROOM 305
	Symposium: Behavioural analysis and programme design Chair: Lise Roll-Pettersson BCBA CE: 1	Symposium: Stimulus Equivalence Chair: Erik Arntzen BCBA CE: 1	Symposium: Relational learning Chair: Simon Dymond BCBA CE: 1
2:00	International collaboration: Blended Learning as a means to design and implement higher education courses in applied behaviour analysis and autism LISE ROLL-PETTERSSON ¹ , Shahla Ala 'i-Rosales ² & Annika Kack ¹ , Stockholm University ¹ , University of North Texas ²	Multiple functions in equivalence classes II: Predicting transfer of function components JACQUELINE J. SCHENK ¹ , Mickey Keenan ² , Mickey Martindale ² , & Jennifer Wolfe ² , Erasmus University Rotterdam, the Netherlands ¹ , University of Ulster ²	1:40 Expanding the context for the derived transfer of avoidance response functions: A laboratory analogue of cognitive defusion MARC BENNETT & Bryan Roche ² , Trinity College Dublin ¹ , NUI Maynooth ² 2:00 Gambling as a verbal event: Towards a Relational Frame Theory account of gambling ALICE HOON & Simon Dymond, Swansea University
2:20	Issues concerning applied behaviour analysis, autism and higher education; curricula content and instructional methods Shahla Ala i'-Rosales & LISE ROLL-PETTERSSON ² , University of North Texas ¹ , Stockholm University ²	Training structures and the formation of equivalence classes ERIK ARNTZEN & Steffen Hansen Akershus University College	Inferred threat and safety learning SIMON DYMOND, Mike Schlund, Bryan Roche, Robert Whelan, Jennifer Richards, Rhian Jones, Cara Davies & Ben Le Grice Swansea University ¹ , University of North Texas ²
2:40	"There's an App for that": Prompting therapist behaviour during Discrete Trial Teaching RICHARD MAY ¹ , Jennifer Austin ² & Simon Dymond ¹ , Swansea University ¹ , University of Glamorgan ²	Response to sample requirements in stimulus equivalence procedures CHRISTOFFER EILIFSEN, Erik Arntzen, & Live F. Braaten Akershus University College	POSTER ROOM SET UP TIME
3:00-4:00	REFRESHMENTS (floor 3 common room) & POSTER SESSION Room 305		

DAY 1: MONDAY 18th APRIL: AFTERNOON SESSION (continued)

LECTURE THEATRE: LOWER GROUND FLOOR	
4:00	<p>INVITED TALK</p> <p>European Association for Behavior Analysis (EABA): Update and future direction Professor Erik Arntzen, President, EABA</p> <p>BCBA CE: 1</p>
4:30	<p>PANEL & OPEN DISCUSSION (all ENCOURAGED to attend)</p> <p>BA professional status in the UK</p> <p>Chair: J Carl Hughes (Chair, EABG, Wales). Panel discussants: Louise Denne (ABA Autism Education Competencies Project), Neil Martin (Int. rep. BACB), Kate Grant (Jigsaw School, England), Gemma Griffith (ABA Census project), Claire McDowell (Uni. Of Ulster, Northern Ireland), Judith Cruikshank (ABA Scotland)</p> <p>BCBA CE: 1</p>
5:15	<p>INVITED ADDRESS</p> <p>Comprehensive ABA-based intervention for children with autism: Adding to the UK evidence base</p> <p>Professor Bob Remington, University of Southampton Professor Richard Hastings, Bangor University</p> <p>BCBA CE: 1</p>
6:15	<p>DAY END (social meeting in Tavistock Hotel bar from 7:30 onwards)</p>

DAY 2: TUESDAY 19th APRIL: MORNING SESSION

REGISTRATION (8.30 – 9.00) UCL Foyer			
TIME	LECTURE THEATRE: LOWER GROUND FLOOR	LECTURE THEATRE: GROUND G03	ROOM 305
	Symposium: Cultural and linguistic diversity Issues in Applied Behaviour Analysis Chair: Elin Walker-Jones BCBA CE: 1	Symposium: Communication and social skills training Chair: Amy Hulson-Jones BCBA CE: 1	Symposium: Fluency based instruction and Precision Teaching Chair: Bernie Kirkpatrick BCBA CE: 1
9:00	Implementing ABA procedures to support a language delayed child with social communication deficits within a mainstream school setting BEVERLEY JONES ¹ , Bethan Mair Williams ² , and J. Carl Hughes ¹ , Bangor Univeristy ¹ , and Betsi Cadwaladr NHS Trust ² .	Learning to communicate: PECS vs Sign Language. A work with children with delay of functional communication skills Chiari Ferrari, RITA NASI & Silvia Marchesi, IESCUM, MIPIA Italy	Fluency training on math skills to increase on-task behaviour of a young person with Attention Deficit Hyperactivity Disorder BERNIE KIRKPATRICK & Claire McDowell, University of Ulster
9:20	Defining the organism-environment interaction exactly: Translating and developing the terminology of behaviour analysis to another language MARTTI T. TUOMISTO & Lauri Parkkinen, University of Tampere, Finland	I NEED YOUR HELP! How to teach social skills behaviors to children with autism FRANCESCA FRANCIOSI ^{2,3} , Cristina Copelli ^{1,2,3} , Barbara Lucchini ² , & Giovambattista Presti ^{1,2,3} , IULM ¹ , IESCUM ² , MIPIA ³ Italy	Increasing staff knowledge of Applied Behavior Analysis terminology using Precision Teaching MICHELLE KELLY, NUI, Galway
9.40	New for old: developing novel reading resources in Welsh based on learning principles: a challenge for minority languages? YVONNE MOSELEY & J. Carl Hughes Bangor University and Ysgol Hafod Lon	Do you want to play with me? A specific training focused on developing social skills in autistic children Cristina Copelli ^{1,2,3} , MELISSA SCAGNELLI ^{1,2} , Paolo Moderato ^{1,2,3} & Giovambattista Presti ^{1,2,3} , IULM ¹ , IESCUM ² , MIPIA ³ , Italy	Sport performance and fluency training: from volleyball to skate FRANCESCA CAVALLINI ¹ , Iris Pellizzoni ² & Silvia Perini ¹ , Universita degli di Parma ¹ , Centro Tice ²
10:00	Delivering ABA in a special educational needs context: some achievements and challenges CERIDWEN HUGHES, Bethan Mair Williams, & J. Carl Hughes, Bangor University and Ysgol y Bont, Wales	The use of matching-to-sample to teach real-world object categorisation in preschool children with ASD RONDA BARRON & Sinead Smyth, University of Ulster	Do you want to chart with me? FRANCESCA CAVALLINI ¹ , Sara Andolfi ² & Martina Nani ¹ , Universita degli di Parma ¹ , Centro Tice ²
10:20	Behaviour Analysis in Ireland: Past, present and future MICHELLE KELLY NUI, Galway	Increasing social communication in children with autism using a tactile prompt. AMY HULSON-JONES, Corinna Grindle, Pagona Tzanakaki, J Carl Hughes, & Richard Hastings, Bangor University	POSTER ROOM SET UP TIME
10.40 11:40	REFRESHMENTS (floor 3 common room) & POSTER SESSION Room 305		

DAY 2: TUESDAY 19th APRIL: MORNING SESSION

	LECTURE THEATRE: LOWER GROUND FLOOR Symposium: General Symposium Chair: Andrea Deering BCBA CE: 1	LECTURE THEATRE: GROUND G03 Symposium: Stimulus Equivalence Chair: David Dickins BCBA CE: 1
11:40	Using SMS messaging to increase physiotherapy exercise compliance between sessions ANDREA DEERING, David Shaw & Sinead Smyth, Excell Education Services	Transitive inference in stimulus equivalence and serial learning DAVID DICKINS University of Liverpool
12:00	Is offering fruit and vegetables at school a good way to teach kids to eat fruit in the long term? The Food Dudes studies in Italy GIOVAMBATTISTA PRESTI & Silvia Cau, IULM University, Milan	The relatedness of stimuli in equivalence classes and other categories: Toward a comprehensive theory of equivalence LANNY FIELDS Professor of Psychology Queens College/CUNY
12:20	Using functional analysis to assess the effects of Naltrexone on the environmental mediation of self-injurious behaviour PETER BAKER Sussex Partnership NHS Foundation Trust, Tizard Centre University of Kent	
12:40	Discussion Period	
1:00- 2:00	LUNCH	

DAY 2: TUESDAY 19th APRIL: AFTERNOON SESSION

	LECTURE THEATRE: LOWER GROUND FLOOR	LECTURE THEATRE: GROUND G03
2:00	<p align="center">INVITED TUTORIAL Some public perspectives on the problem of privacy M. Jackson Marr, Georgia Tech</p> <p align="center">BCBA CE: 1</p>	<p align="center">PANEL DISCUSSION: Working as a behaviour analyst in a changing economy Chair: Marguerite Hoerger Panel discussants: Dr Sandy Toogood, BCBA-D, Nick Barratt, MSc, BCBA, & Dr Marguerite Hoerger, BCBA-D</p> <p align="center">BCBA CE: 1</p>
	LECTURE THEATRE: LOWER GROUND FLOOR	
2:45	<p align="center">INVITED TUTORIAL</p> <p align="center">Measuring behaviour is behaviour: Notes on teaching behaviour analytic measurement procedures Mecca Chiesa, Tizard Centre</p> <p align="center">BCBA CE: 1</p>	
3:30	REFRESHMENTS	
4:00	<p align="center">EABG 2011 KEYNOTE ADDRESS</p> <p align="center">New Technologies and Behavioral Cusps: A New Era for Behavior Analysis? Dr Janet Twyman Associate Professor of Pediatrics at the University of Massachusetts Medical School/E.K. Shriver Center</p> <p align="center">BCBA CE: 1</p>	
5:00	<p align="center">DAY TWO END (End of organised symposia) (Social meeting in Travistock bar from 7:30)</p>	

POSTER PRESENTATIONS

DAY I: MONDAY 18 th APRIL	DAY 2: TUESDAY 19 th APRIL
Evaluating preference assessment procedures for use in clinical settings Denise Foran, Saskia Dodebier & Marguerite Hoerger Bangor University	Child safety in shopping carts: An effective intervention to avoid accidents Arni Por Eiriksson & Zuilma Gabriela Siguroardottis University of Iceland
An educational way to say and solve clinical problems Roberto Cattivelli ¹ , Valentina Tirelli ² & Cavallini Francesca ¹ Università degli Studi di Parma ¹ , Centro Tice ²	How can the Mantel-Haenszel methods help us to improve our data analysis? Ángel M. Fidalgo & Jaqueline M. Madeira, University of Oviedo
Learning speed while learning reading Valentina Tirelli ¹ , Sara Andolfi ¹ & Martina Nani ² , Centro Tice ¹ , Università degli Studi di Parma	Increasing compliance with children with autism: Effects of programmed reinforcement for high-probability requests and varied inter-instruction intervals Laura Pitts & Simon Dymond, Swansea University
Autoclitic training on children with Down Syndrome Federica Berardo ¹ , Laura Pignoli ² & Vanessa Artoni ¹ , Università degli Studi di Parma ¹ , Centro Tice ²	Effectiveness and feasibility of a relaxation clinical training for anxiety and depression symptoms reduction in psychiatric setting. Preliminary results Roberto Truzoli, Cecilia Rovetta, Alessandra Roaro, Matteo Zambotto, F. Re, C. Vigano & G. Ba Faculty of Medicine and Surgery, University of Milan
Behavioral definition of symbolic play skills Monica Rodriguez-Mori & Luis Antonio Perez-Gonzalez University of Oviedo	MSc Applied Behaviour Analysis at the University of Ulster, Coleraine Claire McDowell, Sinead Smyth & Julian Leslie University of Ulster
Bringing data to life, a new way to display and present data Nicola McAuley, Nichola Booth, Mickey Keenan & Stephen Gallagher, University of Ulster	Flash cards at university: an application for teaching educational psychology Roberto Cattivelli ¹ , Gianluca Amato ² & Francesca Cavallini ¹ Università degli Studi di Parma ¹ , Centro Tice ²
Developing a local specialist challenging behaviour support service Maria Saville ¹ , Kath Devonshire ¹ , Sandy Toogood ² & Paul McWade ¹ Halton Borough Council ¹ , Bangor University ²	Staff motivation in services for children with autism Rossana Somalvico & Paolo Moderato IULM, IESCUM
Primary school teachers' knowledge of and attitude towards applied behaviour analysis in the Republic of Ireland Trish Carolan & Claire McDowell, University of Ulster	ABA schools census - UK Gemma Griffith, Richard Hastings, Rachel Fletcher Bangor University
Emergent slot machine gambling Simon Dymond, Kate McCann, Joanne Griffiths & Victoria Crocker, Swansea University	Reducing delay in worker payment in an agency setting: The effects on worker attendance and the resultant cost implications Rachael Whitaker, & J. Carl Hughes, Bangor University
Incorporating ABA into the Foundation Stage in a special needs school Yvonne Mosely ^{1,2} , Marguerite Hoerger ^{1,2} , Donna Rees-Roberts ² , Bethan Mair Williams ³ , Elin Walker-Jones ^{1,2} Bangor University ¹ , Gwynedd LEA ² , Betsi Cadwaladr University Health Board ³	Using Applied Behaviour Analysis to improve autism teaching and reduce pupil exclusion in a special school Denise Foran & Marguerite Hoerger Bangor University and Ysgol y Gogarth

DAY 3 WEDNESDAY 20TH APRIL
WORKSHOPS (NB: No Scheduled talks or symposia on Day 3).

(PLEASE NOTE THAT WORKSHOP COST IS NOT COVERED IN CONFERENCE REGISTRATION)

Workshop 1: Room: TBA
<p>FULL DAY WORKSHOP (9:00 – 3:30) Introduction to Precision Teaching and Standard Celeration Charting Dr. J. Carl Hughes¹, BCBA, Mike Beverley¹, & Dr Claire McDowell², Wales Centre for Behaviour Analysis, School of Psychology, Bangor University¹ & University of Ulster, Coleraine² PRICE: £80 FULL / BCBA; £40 – STUDENT / BCABA (Please Note this charge is not covered in Conference Registration)</p> <p>BCBA CE: 5</p>
Workshop 2: Room: TBA
<p>HALF DAY WORKSHOP (9:00 – 12:30) Functional behavioural assessment (FBA) and challenging behaviours; supporting behaviour change in children with autism CE Instructor: Christos Nikopoulos, DPhil, BCBA-D PRICE: £50 FULL / BCBA; £25 – STUDENT / BCaBA (Please Note this charge is not covered in Conference Registration)</p> <p>BCBA CE: 3</p>
Workshop 3: Room: TBA
<p>FULL DAY WORKSHOP: 9:00 – 3.30 An experiential introduction to Acceptance & Commitment Therapy Eric Morris, South London & Maudsley NHS Foundation Trust PRICE: £80 FULL / BCBA; £40– STUDENT / BCaBA (Please Note this charge is not covered in Conference Registration)</p>

DAY 1

8:15-9:00 REGISTRATION (Foyer of UCL Psychology)

LECTURE THEATRE: LOWER GROUND FLOOR

Symposium: Headsprout Reading Programmes for diverse learners

Bangor University, Wales

Chair: J. Carl Hughes

BCBA CE: 1

9:00

The use of Headsprout® Early Reading with children in mainstream schools who have reading and language deficits

MICHAEL BEVERLEY, Emily Tyler & J. Carl Hughes

Bangor University

The ability to read is essential if children are to access the rest of their academic curriculum and failure to read effectively can have significant detrimental effects on their future life choices and prospects. This study sought to increase the existing database to support the effectiveness of Headsprout Early Reading® (HER)—an internet based reading programme that over the course of 80 episodes teaches children to read. Children who were identified by their classroom teacher as struggling readers were pre-tested and then randomly allocated to either receive the HER intervention or teaching as usual. Results from the data show that HER is an effective early reading programme for children with reading delays.

9:20

Using Headsprout® Early Reading with children with Learning Disabilities and other special educational needs

EMILY TYLER, Bethan Williams, Meadhbh Wilson, J. Carl Hughes & Michael Beverley

Reading instruction in individuals with learning disabilities has typically focused on a sight word reading approach. However, there is increasing evidence that individuals with learning disabilities can benefit from phonics-based reading instruction.

Headsprout® Early Reading (HER®) is an online phonics-based programme designed for typically developing children. However, preliminary findings suggest HER® can be used to help improve reading and language skills in children with various special educational needs, including those with significant learning disabilities. Individual progress across a range of reading and language skills, including word recognition, basic early literacy skills, expressive and receptive vocabulary and articulation of

participants enrolled in the programme will be presented. The adaptations and extra support required for some participants to access HER[®] will also be discussed, along with some of the challenges for future research implementing and evaluating the use of HER[®] in special education settings.

9:40

An evaluation of Headsprout[®] Early Reading for Children with autism at Step by Step School

FAYE RAPLEY, Corinna Grindle, J. Carl Hughes & Maria Saville

Several studies have demonstrated the effectiveness of the online reading programme Headsprout Reading Basics (HER[®]) with typical learners; however there have been no studies to empirically determine the effectiveness of the program for children with autism. This study examined the use of HER[®] with four participants with a diagnosis of autism. The research design used a single subject pre/post test design. A number of standardised tests were taken prior to and following the Headsprout intervention in order to assess the effects on the participants reading and spelling. HER[®] had positive impacts on participants reading accuracy and spelling, however there were limited improvements in reading comprehension.

10:00

Teaching children with autism to comprehend text using Headsprout Reading Comprehension[®]

Corinna Grindle, J. CARL HUGHES & Maria Saville

Headsprout Reading Comprehension (HRC[®]) is an online program that teaches learners to answer reading comprehension questions in four categories: literal comprehension, inferential comprehension, main idea (summative) comprehension, and derived meaning (vocabulary) comprehension. These skills are notoriously difficult for many children with autism. The present study evaluated and investigated the use of HRC with three children with a diagnosis of autism who were on an ABA program. Two of the three had previously completed HER[®] up to episode 80, and all children met the reading rate and accuracy requirements to begin the program. Results are discussed with reference to improved reading comprehension in this population and the practical strategies required to support children with Autism in order that they may benefit from the HRC[®] program.

10:20

Headsprout discussant

Janet Twyman

10:30- 11:20: REFRESHMENTS (COMMON ROOM FLOOR 3)

Symposium: Derived relations and verbal behaviour

Chair: Giovambattista Presti

BCBA CE: 1

11:20

Reading as derived relational responding in autistic kids

GIOVAMBATTISTA PRESTI^{1,2,3}, Cristina Copelli^{1,2,3}, Francesca Franciosi², Valentina Cazzoli², Federica Catelli³, Virginia Licandro² and Luisa Lucchini² IULM, MIPIA², IESCUM³

The stimulus equivalence paradigm provides effective methods to teach complex repertoires like reading. We trained three children with autism, 5, 6 and 6 years old respectively in a conditional discrimination task to match a picture (B) with its written word in capital letter (A) and in small letter (C). Each stimulus class included three members. In two studies, after the A-B, B-C training, testing for emergent relations showed a 100% of correct responses for B-A, C-B, C-A, and A-C relations. In the third study after the B-A training, testing for the emergent relation A-B showed a 100% of correct responses, and after the B-C training, testing for emergent relations showed a 100% of correct responses for C-B, C-A and A-C relations. Previous to this matching-to-sample training, both children had learned to tact (D) the picture (B-D) as part of their educational curricula. So, after testing for the first emergent relations, we tested also, A-D, C-D and B-D relations. Correct responses ranged between 95 to 100% in three testing trials thus demonstrating the formation of a four-member class. Following this first training, for two children new triplets of words were progressively introduced. The choice was made in such a way that each new syllable of a new word was present either at the beginning or at the end in a re-combinative fashion. Carefully planning of this re-combinative strategy led to a progressive reduction of the number of trials for reaching mastery criterion in the A-B/B-C training and eventually to spontaneous reading of words never trained before. The students not only learned to match the training words but also learned to read them. In addition, most of the students learned to read new words that involved recombinations of the syllables of the training words. The results replicate and extend the generality of a prior analysis of a reading program based on stimulus equivalence and recombination of units. The present data suggest that a teaching package based on equivalence and recombination of units has generality across participants with reading difficulties. Teaching reading at the level of whole words may gradually produce control by smaller units, allowing for recombination and reading of new words (Skinner, 1957). Differences with previously published researches will be addressed and implication for further investigations on how to build a reading curriculum for languages that have a point-to-point correspondence between written sign and sound, such as Italian or Spanish, will be discussed.

11:40

Mi capisci? Effects of a phonological training on children with Down Syndrome.

FEDERICA BERARDO¹, Chiara Diaferia² and Silvia Perini¹,
Università degli Studi di Parma¹, Centro Tice²

This preliminary study describes the effectiveness of a brief intervention training aimed at increasing the speech-comprehensibility of two children with Down Syndrome (7 & 11 years old). The participants were selected on the basis of phonological deficits in the area of the relevant emission of verbal operants. Children with Down Syndrome often display speech-comprehensibility deficits, historically treated using articulation therapy and oral-motor training. The program developed in the study adds a frequency-building procedure (using Precision Teaching) aimed at increasing the rates of echoic emissions of 2 sets of words (substantives and adjectives) when composing 5 sentences not in training. A multiple baseline design across subjects was used. During pre and post probes we measured the number of words, composing sentences, and speech being recognized by 10 competent speakers. First results suggest that a fluency-based echoic training was effective in increasing speech-comprehensibility.

12:00

Basic Frame Protocol: a training procedure for higher order verbal operants

ROBERTO CATTIVELLI¹, Sara Andolfi² and Valentina Tirelli²,
Università degli Studi di Parma¹, Centro Tice²

From a Behavior Analytic perspective, the ability to describe and compare objects is an example of an autoclitic tact. From a RFT perspective though, this skill is related to frames of coordination, distinction and comparison. This study verifies the effect of a Multiple Exemplar training concerning the “basic frame” of coordination, distinction and comparison on the skill of describing random pictures. A typically developing child participated in the study. The procedure used to promote fluent performances includes Precision Teaching (fluency building), modelling, and Learn Units. First results seem to confirm the importance of a training with the frames of coordination, distinction and comparison for the acquisition of higher order verbal operants.

12:20

Comparing the mastery of autoclitic frames between typically developing children and intellectually disabled adolescents

MARIE LAURE NUCHADEE and Bruno Facon
University of Lille North of France

The purpose of this study is to compare how typically developing (TD) children and intellectually disabled (ID) adolescents answer the different frames assessed in a grammar test and inquire whether a longer history of contingencies would result in a better mastery of certain autoclitic frames. The French version of the Test for Reception Of Grammar was administered to 39 TD children and to 38 ID adolescents of similar level of intellectual development. A bootstrapping strategy was used to determine if there was indeed a difference in the performance of the two groups of participants at handling the different grammatical structures assessed in the test. The results indicate that out of the 63 frames tested, 5 were mastered differently by the ID and TD children. Further empirical work would be necessary to further explore these findings and to explain how and why these differed from the other frames assessed.

12:40

The benefits of pairing the verbal SD with subsequent prompts in intraverbal training

AMANDA LEWIS and Dorothea Lerman

University of Houston-Clear Lake

Least-to-most prompting is a common strategy used in acquisition training for individuals with developmental disabilities. Despite being an oft-utilized procedure, little research has been conducted to compare variations within least-to-most prompting procedures. The current study compared the efficacy of reiterating the initial verbal discriminative stimulus (SD) with every prompt (SD pairing condition) and withholding the verbal SD when prompting (no SD pairing condition). Variations in responding were assessed across intraverbal skills for three participants diagnosed with autism spectrum disorder. Acquisition was compared using a combined multielement and multiple baseline across targets design. Overall, the SD pairing condition resulted in faster acquisition than the no SD pairing condition. Furthermore, all SD pairing targets were acquired; however, in several cases, the no SD pairing condition did not result in acquisition of the intraverbal. These findings are discussed in terms of clinical recommendations, the potential for generalization across skills, and treatment integrity.

LUNCH 1.00-2.00

PARALLEL SESSION: LECTURE THEATRE: GROUND FLOOR G03

Symposium: Research from The Jigsaw CABAS School

The Jigsaw CABAS School, Surrey, UK

Chair: Emma Hawkins

BCBA CE: 1

9:00

The Jigsaw CABAS School: Background, components & research

EMMA HAWKINS and Kate Grant

The Jigsaw CABAS School opened in September 1999 for six Surrey children with autism spectrum disorders. There are currently forty children on roll at the school and this presentation describes the growth of the school over the last twelve years. The components of a CABAS school are also described with the emphasis being on staff training and research. An update is provided on the recent links made between The Jigsaw CABAS School and Nicholls State University to provide a Masters programme for the teaching staff at the school. Furthermore, an overview of the recently published research is provided.

9:20

The Jigsaw CABAS School: Using research-based tactics to improve socially significant behaviour

EDI MIDDLETON, Emma Martin, Sarah Statham, Jo Phillips, Sarah Alkhalaf and Emma Hawkins

This presentation focuses on three research projects that have recently been carried out at The Jigsaw CABAS School as part of the CABAS teaching ranks and the Masters programme at Nicholls State University. First, data are presented on the use of multiple exemplar instruction to induce joint stimulus control across saying and writing/typing. Three of the four participants successfully had this important verbal capability induced. Second, echoic-to-mand training and establishing operations were used to evoke the mand 'where is it?' in three pupils using PECS. Third, the Premack Principle was used to increase water consumption in a pupil who previously would only drink Coca-Cola. The social significance of all the studies are discussed and the importance of staff training and target-setting to improve the outcomes of the pupils.

9:40

The Jigsaw CABAS School: Four Case Studies

EMMA HAWKINS and Kate Grant

This presentation demonstrates the progress of four pupils with autism spectrum disorder at The Jigsaw CABAS School. Two case studies are described focusing on ten years of data for two pupils who entered the school when it first opened in September 1999. Progress is described in terms of academic skills, communication skills, social skills, self-help skills, play skills and physical development skills. Two further case studies focus on the communication skills of two pupils who did not emit any functional vocal behaviour on entry to the school.

10. 00: Discussion period

10.30 – 11.30 REFRESHMENTS (Common room 3rd floor)**Symposium: Evidence and interventions in ASD**

Chair: Katy Lambert-Lee

BCBA CE: 1

11:20

Demonstrating program effectiveness in a parent-mediated infant toddler program using the ABLLS-R

JAMIE HUGHES

University of Kent

Research indicates that an empirically derived interventions such as ABA, during a child's early development (0-3 years) may (1) prevent or reduce the long term impact of a child's developmental disability on his ongoing growth and development, (2) increase the probability he will be able to participate in typical developmental, academic and social activities in natural environments, and (3) improve the likelihood he will no longer require specialized services. A parent-mediated infant toddler program (e.g., Toddler Parent Training Program) was developed to better meet the needs of infants and toddlers diagnosed with autism or at risk, receiving services through several early childhood intervention (ECI) programs. This program placed a heavy emphasis on the development of play and functional communication skills, parent training in reducing problematic behaviors, and generalization of acquired skills across caregivers in the child's natural environment. Outcome data demonstrate

positive results for at risk infants and toddlers with an increase in overall independence across all skill areas, and an increased likelihood of placement into a less restrictive environment upon transition out of the ECI program. The program design and data collection methods will be presented to illustrate the usefulness of a parent-mediated training program.

11:40

Changes over 12 months for children and adolescents with autism attending an ABA-based special school

KATY A LAMBERT-LEE^{1,2,3}, Richard P Hastings³, Emma Douglas^{1,2}, Esther Thomas^{1,2}, J. Carl Hughes³ and Gemma Griffith³

Ambitious about Autism¹, Treehouse School² and Bangor University³

Research evaluations of Early Intensive Behavioral Intervention (EIBI) for children with autism have typically adopted careful inclusion criteria, often screening out those children with significant challenging behaviors and those with more severe intellectual disability. In ABA school settings in the UK where children's placements are funded by local authorities, there is a necessity to admit and to teach any child with autism at any time within their school career. In the present paper, we present the results from outcome data collected in TreeHouse School, London over the course of one year. Fifty-three students with autism were tested and then re-tested with the Assessment of Basic Language and Learning Skills (ABLLS-R), and for 24 pupils a repeated Vineland Adaptive Behavior Scales (VABS) assessment was also available. Repeated measures t tests revealed statistically significant improvements over time on all ABLLS domains and for all VABS scores. These changes were also reflected in change in individual pupils. Correlates of change in the ABLLS and VABS scores will also be explored and discussion will include the relative merits of using assessment tools as outcome measures.

12:00

MIPIA - Early Intensive Intervention for Autistic Children: the Italian way

Paolo Moderato¹, Giovambattista Presti¹, Francesca Pergolizzi², Cristina Copelli¹ and LORENZO TODONE², Iulm-Iescum-Mipia¹ and Iescum-Mipia²

Research-based interventions and, specifically, ABA services are now more frequently requested by parents of children with developmental disabilities, including those in Italy. Leveraging on the BACB certification, IESUM, the Italian chapter of ABAI and EABA, developed an integrated model of intervention called MIPIA - Italian Model of Early and Intensive Intervention for Autism. MIPIA is characterized by individualized, early, intensive, inclusive, integrated and sustainable programs. Although interventions are deployed in family homes, baseline assessment and program efficacy and effectiveness evaluation procedures are centralized. In addition to designing and delivering ABA

interventions to children and their families in an integrated and clinically comprehensive fashion, MIPIA also uses ABA to train therapists, tutors and consultants and evaluate their skills. MIPIA services are delivered at home all over Italy. Although MIPIA may be conceptualized as a “virtual” structure - in the absence of a specific building in a specific location - the model and its supporting infrastructure may represent a feasible way to spread ABA intervention procedures, and the model itself, across a wide geographical area, while maintaining a high quality of service within the context of the BACB credentials and associated standards. MIPIA consultants and tutors share a set of values that form the framework of a homogeneous environment that aims to achieve both clinical and research goals. The procedures, tools, structure of the service, personnel involved, training issues, strengths, opportunities, of such a system, as well as its weaknesses and potential threats will be discussed.

12:20

Maths recovery: A numeracy curriculum for children with autism

PAGONA TZANAKAKI, Corinna Grindle, Richard Hastings, Carl Hughes, Maria Savile
Bangor University

Mathematical skills have been shown to be an important component of school success; they are equally essential in everyday life. Existing ABA curricula for children with autism do not effectively address this area as they contain only a few numeracy targets. Maths Recovery is a systematic numeracy curriculum designed for typically developing children who are low performers in mathematics. Some adaptations were made to this curriculum so that it can be better suited to the needs of children with autism. Six children with autism enrolled in an ABA unit attached to a mainstream school in Wales were taught for six months with the adapted Maths Recovery curriculum. We used a pre-test post-test design to evaluate their progress. All participants made gains after the intervention. Results indicate that this adapted numeracy curriculum can benefit children with autism and/or learning disabilities.

12:40

An analysis of programme components in the treatment of food selectivity for 2 children with autism

CLAIRE MCDOWELL and Claire Duffy
University of Ulster

This study builds on previous research in relation to food selectivity by exploring the treatment components necessary to increase acceptance using the least intrusive treatment model. Intervention components were introduced in a sequential treatment approach in the following order, (1) repeated presentation, (2) repeated presentation and differential positive reinforcement (DRA), and (3) repeated presentation, DRA and escape extinction (EE). Both participants presented with a diagnosis of Autism

Spectrum Disorders (ASD) and food selectivity issues. A delayed multiple baseline design was employed across four non-preferred foods. A causal relationship was demonstrated between treatment intervention and behaviour for participants 1 and 2. Repeated presentation (treatment condition 1) of non-preferred food was only sufficient to increase acceptance to an achievement criteria level for participant 1. Escape extinction (treatment condition 3) was included as a necessary component to increase acceptance for participant 2 however introduction of DRA did result in a decrease in the occurrence of inappropriate behaviour. Generalisation and maintenance were achieved for participants 1 and 2 at a one and two month follow-up respectively.

PARALLEL SESSION: ROOM 305

Symposium: Adult services and training

Chair: Lisa Hutchinson

BCBA CE: 1

9:00

A residential-based behaviorally-oriented treatment approach for an adolescent male with a history of maltreatment and severe behavior problems

JENNIFER SHERIDAN¹ and Andrea Deering²
University of Ulster¹, Excell Education Services²

This article involves two studies implemented within a behavior support plan designed for a 12-year-old male who had a history of severe abuse and neglect and was removed from his parents by the police and placed into the care of the state. One study examined the effect of a multi-element intervention consisting of a concurrent token economy and contingency contract with response cost. Challenging behavior was reduced to zero levels as measured by monthly frequency of incidents. Within this behavior support plan another study targeting personal hygiene was implemented, increasing compliance with daily personal hygiene tasks to 100%.

9:20

The effects of Behavioral Skills Training on implementing three procedures by non-specialist staff

CRISTINA COPELLI¹ and Paolo Moderato²
IULM-IESCUM-MIPIA¹, IULM-IESCUM²

Treatment integrity is a topic of particular interest among not only researchers but also change agents. The application of behavioral intervention programs often require that non-specialist staff is employed. Recent research demonstrated that some features of behavioral technology can be rapidly taught to those

staff members. Behavioral skills training packages have been used to teach a wide variety of behavioral and other skills (Reid & Parsons, 1995), such as implementing functional analyses (Iwata et al., 2000) and stimulus preference assessments (Lavie & Sturmey, 2002). This study evaluates the effectiveness of a treatment package to train 4 therapists on implementing three different procedures: paired stimulus assessment, discrete-trial teaching and pairing. Behavioral skills training packages consisted of verbal and written instruction, a review of graphed baseline performance, rehearsal of the skills by the trainee, verbal feedback, and modelling of the correct skills by the trainer. A multiple baseline design across subjects was used to evaluate the effectiveness of training. Results show that staff members increased their use of correct teaching procedures when training was implemented. Improvements in child performance paralleled the application of each trained procedure.

9:40

Increasing participation in a variety of workshops within a supported living environment for adults with a mental illness

LISA HUTCHINSON

Bangor University

The current study aimed to increase participation at a variety of life skills workshops in a supported housing scheme for adults with a severe mental illness. An alternating treatments design was used to examine the effects of five treatment interventions on participation. Interventions included a poster, flyer and verbal prompt. Two other interventions were also examined which involved the use of a verbal prompt and a raffle. If a participant attended a workshop, he/she would receive a raffle ticket. In one of these interventions participants had an opportunity of winning a prize, and in the other participants had the opportunity to win a £10 gift voucher of their choice. Eleven participants took part in the study, the majority of whom had been diagnosed with schizophrenia. Results revealed that, in comparison to pre study levels of five people or less, raffle contingencies did not increase the total number of participants attending workshops. However, results did reveal evidence of a small increase in the number of participants attending workshops when the verbal prompt and voucher contingency was in place as opposed to when the poster and flyer conditions were implemented.

10:00

Positive Behaviour Support service: Placement development – A Case Study

KATH DEVONSHIRE¹, Maria Saville¹, Sandy Toogood² and Paul McWade¹
Halton Borough Council¹, Bangor University²

In England, more people with learning disabilities reside out of borough than any other group (Whelton, 2009). Research suggests this is often due to a lack of suitable local services to support this client population (Beadle –Brown et al. 2005). The Mansell Report (Revised edition: 2007) recommends the development of local specialist services to support mainstream practise in improving the lives of those with the most challenging needs and for each individual, a proper person centred plan. One function of Halton Borough Council’s Positive Behaviour Support Service (PBSS) is to identify individuals with learning disabilities who exhibit behaviour that challenges services and reside out of borough. The current case study presents preliminary findings for an individual returning to Halton, supported by a package of: functional assessment and intervention; staff training in Active Support, Person Centred Planning and Interactive Training. Reported outcomes relate to: client and staff engagement and challenging behaviour.

10.30 – 11.20: REFRESHMENTS (Common room floor 3)

General symposium

Chair: Nicola Kennedy

11.20

A behavioural support team model and Positive Behaviour Supports

KAREN FLOTKOETTER

The University of Kent

For the 2007 – 2009 school years, six public schools in the United States implemented Positive Behaviour Supports. Data is calculated on student behaviour coded as minor and major behaviours. These behaviours are tracked by student, location, incident type, and teacher across campus; allowing the school to problem solve challenging times of day, locations, students and staff to implement research based behavioural interventions. All schools have seen a decrease in referrals from 40 referrals to 2,600 hundred referrals less than the previous school year. Using the 45 minutes per referral, these numbers indicate these schools have regained five days to 325 school days devoted to academics. The Positive Behaviour Support programme was implemented by the school’s behaviour support team, made up of school psychologists, behaviour analysts, and behaviour technicians. This behaviour support team conducted trainings, as well as implemented specific behaviour intervention plans at the Tier 1, individual, level.

11.40

Transition to university: Improving skills and social inclusion for a young adult with Autism Spectrum Disorder

NICOLA KENNEDY¹, Karola Dillenburger¹ and Nichola Booth²
 Queens University, Belfast¹, Parents Education as Autism Therapists (P.E.A.T)²

Adapting to University life is difficult for most first year students, even more so for individuals on the Autism Spectrum who may experience high levels of anxiety just trying to fit in. This may be due to lack of social skills more generally or simply, to unfamiliarity with the social rules and routines of University life. The effectiveness of video modelling, prompts, and study skills coaching in increasing appropriate university behaviour in a 19-year old male student was assessed. Target behaviours included appropriate participation in tutorials, interaction with peers, and communication with university tutors and support staff. Preliminary data and recommendations for practice are outlined.

Symposium: Derived relational responding

Chair: Anita Munnelly

BCBA CE: 1

12:00

Relational sentence structure

ANITA MULLENY and Simon Dymond
 Swansea University

The current study employed a variant of the Relational Completion Procedure (RCP; Dymond & Whelan, 2010) to train and test derived comparative “more-than” and “less-than” relations. A constructed response format was employed in which participants were required to “drag and drop” samples and comparisons to “construct a sentence”, with all stimuli presented sequentially from left-to-right. Following nonarbitrary relational training and testing designed to establish the contextual functions of “more-than” and “less-than” for two arbitrary visual stimuli, participants were exposed to arbitrary relational training. Participants were exposed to one of three training schedules, in which the trained relations differed between the groups: All-More ($E > D$, $D > C$, $C > B$, & $B > A$); All-Less ($A < B$, $B < C$, $C < D$, & $D < E$); and Less-More ($A < B$, $B < C$, $D > C$, & $E > D$). All participants were then exposed to an arbitrary relational test phase that employed a variant of the simple-to-complex testing protocol. Probes for the properties of mutual entailment were presented first, and were followed by tests for one- and two-node combinatorial entailment. Findings demonstrated that 10 out of 12 participants successfully completed the experimental task. Thus, the RCP was successful in establishing responding

in accordance with the derived comparative relations of “more-than” and “less-than”. The implications of this paradigm for training and testing multiple stimulus relations will be discussed.

12:20

A novel Function Acquisition Speed Test (FAST) for the implicit measurement of derived relations

ANTHONY O'REILLY and Bryan Roche
NUI Maynooth

Eighteen subjects completed a one-to-many matching-to-sample training procedure designed to lead to the formation of two three-member stimulus equivalence relations (A1-B1-C1 and A2-B2-C2, with A stimuli as nodes). Using B1, C1 and two novel stimuli, subjects were then trained to produce a common key-press response for two stimuli, and a second key-press response for the remaining two stimuli across two blocks of operant response training. During one block the reinforcement contingencies were consistent with emergent equivalence relations (i.e., B1 and C1 shared a response function), whereas during the other block they were not. The majority of subjects who completed the procedure showed a response class acquisition rate differential across the two test blocks in the predicted direction, thereby demonstrating the formation of the equivalence relations. It is suggested that this procedure provides the basis for a novel behavior-analytic alternative to popular “implicit” tests for stimulus-stimulus relations.

12:40

Evaluation of intraverbal category training on the emergence of novel intraverbal relations

RICHARD MAY and Simon Dymond
Swansea University

The present study evaluated the emergence of untrained intraverbal relations following vocal intraverbal training with three typically developing children. Children were taught relations involving city names, country names, and names of famous landmarks, where vocal naming served as either stimuli or responses. Following initial baseline training in city to country (e.g., “Name the country that Dublin is in.” [“Ireland”]) and landmark to city (“Name the city that Croke Park is in.” [“Dublin”]) relations, repeated test probes revealed that not all untrained relations emerged for all participants. A multiple baseline across participants design was used to evaluate the effect of a category training procedure on the emergence of intraverbals. Specifically, participants were given explicit category training with the ‘landmark’ contextual cue that, while present during testing, was absent in the initial training phase. Two of the three participants demonstrated the emergence of novel intraverbal relations following category training.

1.00 – 2.00 LUNCH

LECTURE THEATRE: LOWER GROUND FLOOR

Symposium: Behavioural analysis and programme design

Chair: Lise Roll-Pettersson

BCBA CE: 1

2:00

International collaboration: Blended Learning as a means to design and implement higher education courses in applied behaviour analysis and autism

LISE ROLL-PETTERSSON, Shahla Ala 'i-Rosales² and Annika Kack¹
Stockholm University¹, University of North Texas²

The last decade has experienced an increase of children diagnosed with autism creating a demand for behaviour analytic supports. However many countries lack expertise and university based coursework in behaviour analysis as it applies to autism. The purpose of this paper is to present two master level higher education courses which utilized blended learning technologies. The first course adhered to BACB certification guidelines, and was designed and implemented through collaboration between The University of North Texas and Stockholm University. The second course was subsidized by Nordplus Higher Education and introduced applied behaviour analysis and autism to a group of students enrolled in four Nordic-Baltic universities/colleges. Courses were evaluated using different formats. Findings are discussed related to topics raised at higher education summit held at the University of North Texas which focused on issues pertaining to designing, implementing, and supervising behaviour analytic interventions in autism.

2:20

Issues concerning Applied Behaviour Analysis, autism and higher education; curricula content and instructional methods

Shahla Ala 'i-Rosales¹ and LISE ROLL-PETTERSSON²
University of North Texas¹, Stockholm University²

The growing number of children diagnosed with autism, in congruency with the expansion of research supporting the effectiveness of applied behaviour analysis has lead to a global demand for competent professionals with expertise in applied behaviour analysis as it applies to autism. There are to date only a handful of university programs internationally recognized as meeting content criteria for certification in BA. The purpose of this presentation is to describe the outcome of a summit held at The University of

North Texas in which professionals with expertise in areas of significance to higher education met and produced a series of articles published in a special edition of EOJBA. The relevance of the articles as a source for faculty and administration for developing effective courses in applied behaviour analysis and autism will be discussed in relation to curricula content, instructional methods, and issues pertinent for developing innovative, socially relevant programs.

2:40

“There’s an App for that”: Prompting therapist behaviour during discrete trial teaching

RICHARD MAY¹, Jennifer Austin² and Simon Dymond¹,
Swansea University¹, University of Glamorgan²

Research aimed at training therapists to deliver discrete trial teaching (DTT) has tended to focus on a limited range of therapist competencies and has neglected important variables such as the rate and variation of trial types delivered across complete teaching sessions. Stimulus prompting procedures may facilitate the delivery of DTT for the broad range of competencies needed during therapy. In the present study, three experienced therapists were taught to deliver DTT with and without a stimulus prompt. A multiple baseline across participants with embedded reversal design was used to analyze performance during simulated teaching sessions. Results showed that all participants delivered both a higher rate of accurate trials and a greater variety of trials in sessions that incorporated stimulus prompting. The implications of the present findings for the development of portable computing solutions and apps to facilitate therapist behavior during DTT will be discussed.

3.00-4.00 REFRESHMENTS (common room 3rd floor) AND POSTER VIEWING (ROOM 305)

PARALLEL SESSION: LECTURE THEATRE: GROUND G03

Symposium: Stimulus equivalence

Chair: Erik Arntzen

BCBA CE: 1

2:00

Multiple functions in equivalence classes II: Predicting transfer of function components

JACQUELINE J. SCHENK¹, Mickey Keenan², Mickey Martindale², & Jennifer Wolfe², Erasmus University Rotterdam¹, University of Ulster²

Three experiments involving adult participants examined transfer of function components following training multiple functions to each of two stimuli in two three-member equivalence classes. In Experiment 1, behaviors trained involved drawing dots; A1 → draw 10 black dots, C1 → draw 1 black dot, A2 → draw 10 red dots, and C2 → draw 1 red dot. Thus, trained functions consisted of a ‘number’ and ‘color’ component. Following maintenance testing, B stimuli were presented to examine transfer of function (i.e. drawing) and/or function components (i.e. number and color components). In the majority of cases, behaviors trained initially to A and C stimuli appeared at B1 and B2. For 10/12 participants who maintained baseline responding, emergent behaviors appearing at B generally were color appropriate for each class. The number of dots drawn, however, varied across participants ranging from 1 to 11 dots, although numbers were consistent across trials (i.e. within participants).

In Experiments 2 and 3, similar procedures were used but with different multiple functions trained at A and C stimuli (Experiment 2: holding a golf club with a position location component; Experiment 3: holding a golf club in various positions and stick drawing response). In Experiment 2, 3/8 participants, responses at B stimuli consisted of novel behaviors involving a blending of previously trained location and/or position components. Remaining participants produced the behavior trained at either A or C on B probes. In Experiment 3, 3/4 participants consistently produced novel behaviors with the golf club and 2/4 participants produced either a morphed or cumulated drawing of original images. Although more future studies are needed, overall the results suggest that (1) emergent responses are more likely to involve a novel combination i.e. a blend of function components when the trained multiple functions are topographically more distinct and (2) transfer of function components is affected by the compatibility of emergent stimulus-function relations with stimulus-stimulus relations within the established equivalence classes. The results are discussed with respect to the control and predictability of novel behavior in equivalence classes and interaction of function components in multiple function transfer to members of equivalence classes.

2:20

Training structures and the formation of equivalence classes

ERIK ARNTZEN and Steffen Hansen
Akershus University College

The simultaneous protocol is the most frequent used protocol when training and testing for the formation of equivalence classes. When training participants in six conditional discriminations and testing for the emergence of three 3-member or 4-member classes, the differences between OTM and MTO training structures are minimal, while the linear series (LS) training structure is less effective (e.g., Arntzen et al., 2010). However, one of the predictions from the discrimination analysis by Saunders and Green (1999) is that the differences in stimulus equivalence outcome between training structures should increase with an increased number of class members. Hence, the purpose of the present study was to test for differential stimulus equivalence outcome in three 3-member classes vs. three 6-member classes. We

also wanted to replicate earlier findings on reaction time, which previously have shown an increase from baseline to testing as well as a higher increase in reaction time on equivalence than symmetry tests. Furthermore, reaction time and the differential effects of training structures on stimulus equivalence outcome were investigated in a follow-up test two weeks after initial training and testing.

2:40

Response to sample requirements in stimulus equivalence procedures

CHRISTOFFER EILIFSEN, Erik Arntzen, & Live F. Braaten
Akershus University College

Studies of stimulus equivalence using conditional discrimination procedures have often included a requirement of a response to the sample stimulus before comparison stimuli are presented to the participant. This requirement is generally applied both in the procedure for establishing the conditional discriminations and in the test for emergent relations. However, not all studies have included or reported of such a sample response requirement. In studies of conditional discrimination with nonhuman animals, such a requirement has been shown to greatly increase the probability of responding according to the reinforcement contingencies. To investigate whether a requirement of a sample response will affect the performance of humans, we have conducted several studies where there has either been a requirement of a sample response (RRS) or no requirement of a sample response (NRRS) in both conditional discrimination procedures and in stimulus equivalence tests. In addition, we have manipulated the sample duration in NRRS procedures. This has been investigated with both children and adults as participants, and by using both group experimental designs and non-reversal single-subject designs. The current paper will discuss the results from this series of experiments, focusing on the reaction times to comparison stimuli in various stages of the stimulus equivalence procedure, the number of trials required for formation of the conditional discriminations, and the probability of stimulus equivalence class formation as dependent variables.

PARALLEL SESSION: ROOM 305

Symposium: Behavioural analysis of gambling

Chair: Simon Dymond

BCBA CE: 1

1:40

Expanding the context for the derived transfer of avoidance response functions: A laboratory analogue of cognitive defusion.

Eleven subjects were exposed to linear stimulus equivalence training protocol leading to the formation

of two three-member equivalence relations (A1-B1-C1, A2-B2-C2). In context 1, A1 and A2 were established as discriminative stimuli for avoidance and non-avoidance, respectively. As an analogue of a cognitive defusion intervention, various operant response functions were then established for the A stimuli across three further contexts. The C stimuli were then presented individually in a novel context 5, and then in context 1. As expected, derived avoidance of C1, but not C2 was reliably observed in the original avoidance conditioning context 1. Significantly less avoidance was observed in novel context 5. A control group of 4 subjects for whom the intervention was conducted using novel stimuli, showed maintained levels of avoidance in novel context 5 compared to context 1. This finding supports a Relational Frame Theory interpretation of the behavioural processes involved in “cognitive defusion” treatments.

2:00

Gambling as a verbal event: Towards a Relational Frame Theory account of gambling

ALICE HOON and Simon Dymond,
Swansea University

Surprisingly few behaviour analysts have conducted research on gambling behaviour. Traditional behavioural accounts of gambling have tended to emphasise the role played by direct contingencies of reinforcement. However, such accounts cannot explain individual differences in gamblers exposed to identical schedules of reinforcement, among other limitations. Relational Frame Theory (RFT) seeks to account for such differences by considering that gambling behaviour may, at least in part, be maintained by verbal stimulus functions that interact with, or override, programmed contingencies of reinforcement. Empirical RFT gambling research conducted to date and the potential that RFT has to offer regarding a comprehensive explanation of gambling behaviour will be discussed.

2.40. Poster room set up

3.00-4.00 REFRESHMENTS (COMMON ROOM FLOOR 3) AND POSTER VIEWING (ROOM 305)

4.00. INVITED ADDRESS: LECTURE THEATRE: LOWER GROUND FLOOR

European Association for Behavior Analysis (EABA): Update and future direction

Professor Erik Arntzen, President, EABA

BCBA CE: 1

In this talk I will update the delegates on the history of the European Association of Behavior Analysis (EABA). I will discuss the current status of the organisation and our plans for the development of behaviour analysis across Europe in the future.

4.30 PANEL & OPEN DISCUSSION (all ENCOURAGED to attend)

BA professional status in the UK**BCBA CE: 1**

Chair: **J Carl Hughes** (Chair, EABG, Wales). Panel discussants: **Louise Denne** (ABA Autism Education Competencies Project), **Neil Martin** (Int. rep. BACB), **Kate Grant** (Jigsaw School, England), **Gemma Griffith** (ABA Census project), **Claire McDowell** (Uni. Of Ulster, Northern Ireland), **Judith Cruikshank** (ABA Scotland)

The panel discussion is an opportunity for us to update the conference delegates on recent developments in behaviour analysis in the UK. Opportunity will be given for questions and discussion of current issues. Each of the panel members will give a short update of their area followed by an open discussion.

5:15 INVITED ADDRESS: LECTURE THEATRE: LOWER GROUND FLOOR

Comprehensive ABA-based intervention for children with autism: Adding to the UK evidence base

Professor Bob Remington, University of Southampton

Professor Richard Hastings, Bangor University

BCBA CE: 1

Since Lovaas's (1987) groundbreaking evaluation of the impact of comprehensive ABA-based intervention on young children with autism, more than a dozen controlled research studies, carried out primarily in the USA, UK, Norway, Israel, and Canada have demonstrated similar effects. In the past 3 years, several meta-analysis reviews have summarised this evidence and estimated the "effect size" (potency) of the outcomes achieved. Although the evidence is impressive, a more complete understanding of the delivery and outcome of ABA-based intervention awaits further research. This presentation will begin with recent meta-analytic evidence before presenting two new lines of research evidence from UK studies. The first question concerns whether the improvements in functioning achieved as a result of a 2 year "fixed dose" of early intervention are maintained once the "treatment" has come to an end. We will present post-intervention follow-up data from the Southampton Childhood Autism Programme (SCAmP), obtained after children had been in school for 2 years. We believe that the SCAmP follow-up design is unique in the research literature at the present time. The second question concerns whether positive outcomes can be achieved by delivering a comprehensive ABA-based model within the school system. There are surprisingly few data addressing this question, either in the UK or internationally. We will present outcomes for 11 children who received a comprehensive ABA-based education at the mainstream Westwood School ABA class project in North Wales. The results of both these lines of research indicate some positive outcomes for ABA, but they also raise several questions about the most effective forms of service delivery, which we will outline and discuss.

Professor Bob Remington

Bob Remington has been at the School of Psychology at the University of Southampton since 1975, where he became Professor of Psychology in 1993. He is a Fellow of the British Psychological Society and of the Royal Society of Arts. Bob received his PhD from the University of Exeter where, as the cognitive revolution raged around him, he developed an interest in radical behaviourism and behaviour analysis, under the tutelage of Professor Leslie Reid. Since the early 'seventies, he has published widely on learning and applied behaviour analysis. As a postdoctoral research fellow at the Hester Adrian Research Centre, Manchester University, his work focused on intellectual and developmental disabilities, and he has been a strong advocate for ABA in these areas ever since. In 2001, encouraged by several highly committed parents, Bob, with Professor Richard Hastings—his exceptional former student—established the Southampton Childhood Autism Programme (SCAmP), conducting the first controlled evaluation of early behavioural intervention (EBI) in the UK and running several spin-off projects. Bob regards it as essential to ensure that ABA becomes more firmly embedded in UK education, an outcome he believes will require further persuasive research and continuing advocacy. In addition to pursuing these goals, he is involved in behaviour analytic research in other domains, including projects with Professor Sue Clarke, another gifted former student, developing ACT and DBT-based interventions with Axis-II clinical populations.

Professor Richard Hastings

Richard Hastings completed his PhD in 1994 in behavioral psychology working on the topic of challenging behavior in adults with intellectual disabilities. His focus was the extension of functional analysis to include an understanding of staff and other carers' responses to challenging behaviors. Since that time, he has continued to carry out research in the field of intellectual and developmental disabilities. He now has over 120 peer review journal publications in the field, and has received in excess of £4million external grant funding to support his work with colleagues. Professor Hastings is an associate editor or on the editorial board for 14 international peer review research journals, and also acts as a consultant to several ABA organizations in the UK and to autism organizations internationally. With Professor Bob Remington at Southampton University, Professor Hastings co-directed the first and largest controlled evaluation of early intensive behavioral intervention for children with autism in the UK. Since that research, Professor Hastings has published leading meta- and mega-analysis reviews of the evidence for comprehensive ABA intervention for children with autism, and has presented on this topic extensively in the UK, Europe, and North America.

DAY 2

LECTURE THEATRE: LOWER GROUND FLOOR

Symposium: Cultural and linguistic diversity issues in Applied Behaviour Analysis

Chair: Elin Walker-Jones

BCBA CE: 1

9:00

Implementing ABA procedures to support a language delayed child with social communication deficits within a mainstream school setting

BEVERLEY JONES¹, Bethan Mair Williams², and J. Carl Hughes¹
 Bangor University¹, Betsi Cadwaladr NHS Trust²

This single subject study aimed to teach a number of skill deficits to a language delayed child with social communication difficulties attending a mainstream primary school in Wales. Targets included generalising spontaneous manding using prompt fading techniques, differential reinforcement, time delay and blocking using a multiple baseline design. Improving conversational skills using video modelling and a tactile prompt on initiations to peers and adults. The development of a home/ school questions book targeting WH questions and curriculum topics, sequencing and assistance with mental imagery and conceptualization of time, implemented using discrete trials on each target question with the assistance of an adapted diary page. Additionally, the study examines the use of SAFMEDS (Say All Fast Minute Every Day Shuffle) and precision teaching to teach various curriculum targets to fluency. Results showed significant improvement in all target areas. Social interactions and conversational skills also improved significantly across subjects and settings.

9:20

Defining the organism-environment interaction exactly: Translating and developing the terminology of behaviour analysis to another language

MARTTI T. TUOMISTO and Lauri Parkkinen
 University of Tampere, Finland

Terminology has been largely developed to a technical level with precise definitions in behaviour analysis. Fluent and exact communication is important between scientists and practitioners to enable best application of behavioural principles in practice. Exact and fluent communication will be the more important in the future as behaviour analysis is spreading its influence around the world. Therefore it will be necessary to translate or develop behavioural terminology into languages that have a limited

behavioural terminology or hardly any at all. Such languages may have rich own vocabularies and terminologies and creative ways to express concepts, but the connections of these with behaviour analytic research and practice may be weak. In Europe, many projects in this area are going on. In Finland, we have developed the first dictionaries of behaviour analysis in Finnish: The first one, a general dictionary of behaviour analysis appeared in 2008. Another dictionary was published in 2009, a dictionary of applied and clinical behaviour analysis. We will describe the process of constructing and editing the dictionaries and our experiences related to our own language, culture, but also behaviour analysis in general. We hope that this will stimulate behavioural processes in other behaviour analysts doing similar work with behaviour analytic terminology.

9:40

New for old: developing novel reading resources in Welsh based on learning principles: a challenge for minority languages?

YVONNE MOSELEY and J. Carl Hughes
Bangor University and Ysgol Hafod Lon

Many resources are available to teach children to read in the medium of English, as it is an international language. A common challenge for a minority language such as Welsh is to develop a financially viable, effective set of resources, based on technology developed from learning theory. Decoding skills, identification of phonics and fluency are all core reading skills, and such skills cross language boundaries. Cultural and political sensitivity demands that reading is a skill that is taught in an individual's first language, and therefore, a current opportunity in Wales arises for the development of a behavioural reading technology, based on Direct Instruction programmes, with additional table top activities and computer based exercises. Developing a Welsh reading programme involves much more than the straight translation of the English manual, with the starting point being the identification of common phonemes and words.

10:00

Delivering ABA in a special educational needs context: some achievements and challenges

CERIDWEN HUGHES,^{1,2} Bethan Mair Williams³ and J. Carl Hughes¹
Bangor University¹, Ysgol-y-Bont² & and Betsi Cadwaladr NHS Trust³

Education is delivered through the medium of Welsh in Anglesey, Wales the workplace of the presenter. Children who attend special schools are taught in the language of the home, if that is Welsh or English. As many of these children have additional complex speech, language and communication needs (SLCN), meeting all their needs presents a considerable challenge. The speaker, a teacher at Anglesey's only Special Needs school, shall discuss and present data on some of the

behavioural methods used to teach bilingual children with additional learning needs, as well as provide a general overview of prevailing challenges and how these have been addressed.

10:20

Behaviour Analysis in Ireland: Past, present and future

MICHELLE KELLY, NUI, Galway

This paper explores the history of behaviour analysis in Ireland. The Behaviour Analysis in Ireland (BAI) group was set up in 1977 and ran three successful meetings per year. Since this group had no formal membership register, it was decided to go through the process of turning BAI into the Division of Behaviour Analysis (DBA) within PSI. The aims and activities of this division are described. This paper investigates the lineage of ABA schools in the Republic of Ireland, both funded and not funded, from a backyard in Dublin up to their present day status. The increasing number of these ABA schools led to the need for qualified behaviour analysts. This paper examines the development of ABA postgraduate courses in Ireland, and looks at the number of students and BCBA's from each course as well as giving a sample of where past students now work. Finally, this paper considers the future of behaviour analysis in Ireland. The development of the social networking group ABA-Ireland into a registered charity is discussed, with a focus on future endeavors.

10.40 – 11.40: REFRESHMENTS (common room floor 3) AND POSTER SESSION (Room 305)

General symposium

Chair: Andrea Deering

BCBA CE: 1

12:00

Using SMS messaging to increase physiotherapy exercise compliance between sessions

ANDREA DEERING, David Shaw and Sinead Smyth

Excell education services

Research suggests that physiotherapy recommended home exercise programs have a low adherence rate despite being an influencing factor in recovery from injury and long term pain relief. The current study consisted of a comparison of the relative efficacy of two behavioural interventions designed to increase clients' adherence to a physiotherapist recommended home exercise program. Participants were attending chartered physiotherapists for injuries with predicted long term recovery times and were assigned to either one of three groups; a control group; self graphing with private review; and SMS text

messaging. It was found that SMS text messaging, as a prompt to engage in an exercise program, resulted in a greater increase in compliance with the home programme than either the control or self-graphing and private review groups. These findings indicate that SMS messaging may provide a useful means to maximise the effectiveness of physiotherapy recovery programs.

12:20

Is offering fruit and vegetables at school a good way to teach kids to eat fruit in the long term? The Food Dudes studies in Italy

GIOVAMBATTISTATA PRESTI and Silvia Cau,
IULM University, Milan

A number of programs aimed to prevent child obesity offer free tasting of fruit and vegetables at school, however fail to demonstrate long-term effects in establishing healthier eating behaviors. Previous research in the UK and Ireland has shown that the Food Dudes (FD) program, developed by the Food Unit at the Department of Psychology, Bangor University, North Wales (UK), substantially increases children's long-term fruit and vegetable consumption. Our aim was to evaluate the effectiveness of the program in Italy, in a different cultural environment and under the autonomous management of different school teams, in a series of studies. A typical FD program includes a 16 days phase during which children watch motivational videos of peers eating fruit and vegetables, the Food Dudes, and receive small rewards for eating 1 portion of each. Additional material is sent home to stimulate parents to expand at home the healthy behavior acquired at school. A maintenance phase is established at the end of the training phase. The aim of the first study was to establish if the FD program is effective in a different cultural and school environment. We evaluated it in 6- to 10-year-old children, attending three schools randomly assigned to intervention or control conditions (n=297 and n=315 respectively). In the control school, only fruits and vegetables were provided for the same period and no intervention. Primary end-point was parental provision and children consumption assessed at baseline, at 17 days and 1 month after intervention. Questionnaires were also distributed at the end of the research for the families of the children of the intervention group. Relative to baseline, at 17 days and 1-month follow-ups a statistically significant ($p < .0001$) difference in consumption of provided food was observed in the experimental, but not in the control, schools, with a 50 fold change observed in poor eaters. Food eating patterns at break time changed from junk food to more healthy choices. Data from questionnaires distributed after one year demonstrated changes in the family routine too. In a second, and ongoing, study we evaluated the effectiveness of the program in the control school of the previous study. The program was autonomously managed by a school team and supervised by a project manager. The fruit was provided by families and teachers instructed the parents about which and how much fruit and vegetable they should give to their children. Teachers were trained to measure the eaten portion. Teachers measured the fruit and vegetable presence in the children snacks during the 4 days baseline. Then they measured the portion percentage eaten during the 16 days and at 1-month follow-up.

12:40

Using functional analysis to assess the effects of Naltrexone on the environmental mediation of self-injurious behaviour

PETER BAKER

Sussex Partnership NHS Foundation Trust, Tizard Centre University of Kent

Symons et al. (2004) in a recent quantitative synthesis of peer reviewed published literature on the efficacy of Naltrexone in the treatment of self injurious behaviour in people with intellectual disabilities reported that 80% of subjects were reported to improve relative to baseline. In spite of this encouraging data, they argued that the most pressing needs were to establish which people are responsive to the medication and to have a better understanding of the drug's mechanism of action in different environmental contexts. Very few studies addressed the effect of environmental mediation and the function of the behaviour on the effect of Naltrexone on self-injury. A single case study is presented using a multi-element reversal design utilising blind ratings. Differential responding was observed across experimental conditions. This has important implications for prescribing practice and the identification of behavioural markers correlated with positive treatment responses.

PARALLEL SESSION: LECTURE THATRE, GROUND G03

Symposium: Communication and social skills training

Chair: Amy Hulson-Jones

BCBA CE: 1

9:00

Learning to communicate: PECS vs SIGN LANGUAGE A work with children with delay of functional communication skills

Chiara Ferrari, RITA NASI and Silvia Marchesi,
IESCUM-MIPIA

An estimated one third to one half of all children who have ASD do not use functional speech to communicate (Light, Roberts, DiMarco, Greiner, 1998; National Research Council, 2001). When children with ASD do not readily acquire speech, teaching them to use an augmentative and alternative communication system (AAC) is an appropriate option. There are several procedures and processes by which an individual's communication skills can be maximized for functional and effective communication, but how does one discriminate between these for teaching a child? The purpose of this study was to compare the effects of the Picture Exchange Communication System (PECS) and sign

language training on the acquisition of mands (requests of preferred items) for three students with autism and one student with developmental disabilities (ages 3, 4, 4, & 5). All of them were attending nursery school five days a week. The experimental design used was an alternating treatment design with an initial baseline. This study was structured in different phases: stimulus preference assessment (Pace, Ivancic, Edwards, Iwata & Page, 1985), fine motor imitation skills assessment, baseline and training. The study was conducted in the same setting for two students and in different settings for the other two students. The training sessions involved presentation of preferred items and using prompting and prompt fading procedures for teaching either PECS or signs as mands for the items.

9:20

I NEED YOUR HELP! How to teach social skills behaviors to children with autism

FRANCESCA FRANCIOSI¹, Cristina Copelli², Barbara Lucchini³ and Giovambattista Presti²
 IESCUM-MIPIA¹, IULM-IESCUM-MIPIA², IESCUM³, Italy

Children with autism make and accept fewer social initiations and spend more time playing alone compared to their peers (Koegel, Koegel, Frea, & Fredeen, 2001; Shabani et al., 2002). Video modeling is a promising method for promoting social skills in these children (LeBlanc et al., 2003; Sherer et al., 2001). Social skills is a term related to a broad category of behaviors that include both verbal and non verbal interactions that need to be specifically taught to children with autism. We evaluated the use of video modelling to promote social interaction in 2 children with autism, 7 and 8 years old, using a multiple baseline across behaviors design. In the first study we examined the effects of video modelling training of 3 behaviors with peers: manding, responding to mands, and turn taking while playing. Videos showed peers performing the target behaviors. After observing the video children were tested for acquisition and generalization of those behaviors. In the second study we examined the effects of video modelling training of 4 interactions with peers: 2 children greet each other, 2 children who don't know each other have a brief interaction, a request for help and manding for information. Results showed that these procedures enhanced the social initiation skills of one child. It also facilitated reciprocal play engagement, manding to peers and responding to mand.

9:40

Do you want to play with me? A specific training focused on developing social skills to autistic children

Cristina Copelli¹, MELISSA SCAGNELLI², Paolo Moderato¹ and Giovambattista Presti¹
 IULM-IESCUM-MIPIA¹ and IULM-IESCUM²

Several studies demonstrate that autistic children show highly impaired social and communication repertoires (Schopler, Mesibov, 1986; Koegel, Koegel, Hurley & Frea, 1992). Though a definition of

social skills is not an easy task since it is a broad category that includes multicomponent behavior repertoires, Lowry (2010) underlines how early interventions may improve these core symptoms of the autistic disorder. This exploratory research is an attempt to explore ways of systematically studying and teaching social skills. Three children, 4-5 year old, with a diagnosis of autism, all of following an EIBI-ABA program were enrolled in a “social skill workshop”, a behavioral training specifically devoted to improve social skills. The purpose of this explorative research is to identify pivotal behaviors involved in social skills in order to target them in a more structured social skill training. The workshop started in November 2010, it took place once per week and lasted three hours. Data collected thus far show that using behavioral techniques can produce an increase in spontaneous manding to peers, parallel play and spontaneously approaching peers.

10:00

The use of matching-to-sample to teach real-world object categorisation in preschool children with ASD

RONDA BARRON and Sinead Smyth

University of Ulster

The present study evaluated whether real world categories could be established in preschool children with Autistic Spectrum Disorder (ASD), using matching to sample but without the use of naming as a criteria. Two pre -experimental tests consisting of a language assessment and a categorisation sort test were conducted. A computerised matching-to-sample (MTS) procedure was used to train three-member equivalence classes (A1, B1, C1; A2, B2, C2; A3, B3, C3) using pictures from real world categories (e.g., fruit, clothing toys etc.) as stimuli. Participants were tested for the emergence of derived symmetry and transitivity relations and subsequently received category training for the three C stimuli (e.g., if category C1 is apple then the category would be fruit). The language assessment and categorisation sort task were then re-administered. Two participants demonstrated categorization, one after remedial action. The remaining participant did not demonstrate symmetry following three sets of remedial action.

10:20

Increasing social communication in children with autism using a tactile prompt.

AMY HULSON-JONES, Corinna Grindle, Pagona Tzanakaki, J. Carl Hughes, & Richard Hastings, Bangor University

Increasing the level of verbal communication in a child with autism will generally have beneficial effects on future social skills. The present study attempted to increase the level of verbal communication using a tactile prompt known as the Motivaider®. The discrete vibrating device was used to elicit appropriate behaviours, defined here as verbal initiations and responses to peers. An ABAB design was used to compare the level of verbal communication during baseline (prompt absent) and intervention (prompt present). Participants were four males with autism, ranging between the ages of four and seven.

Results found the prompt to be an effective tool, in that it significantly increased their level of verbal communication. However, the maintenance of high levels of verbal communication was unsuccessful during return to baseline, suggesting the need for a gradual withdrawal.

10.40 – 11.40: REFRESHMENTS (3rd floor common room) AND POSTER SESSION (Room 305)

LECTURE THEATRE, GROUND G03

Symposium: Stimulus equivalence

Chair: David Dickins

BCBA CE: 1

11.40

Transitive inference in stimulus equivalence and serial learning

DAVID DICKINS

University of Liverpool

The logical and behavioural properties of stimulus equivalence (SE) and serial learning (SL) sets are different, yet both can be derived from a randomly presented minimum number of overlapping premise pairs, and both show transitive inference (TI). I attempted to base both types on the same stimuli in the same brain. To provide an 'ecologically valid' context the stimuli were photographs of 2 groups of 7 students ordered by 'exam grades'. During acquisition participants were assigned either an SE or an SL response requirement, based upon the parallel study of 12 randomly presented premise pairs. Prior to TI tests, participants had to sort the 14 photos on a screen. Then, after a second sort, the opposite type of TI test was given. A final sort test preceded debriefing. Broadly initial set formation and positive transfer were greater when SL preceded SE than vice versa. The implications will be discussed.

12:00

**The relatedness of stimuli in equivalence classes and other categories:
Toward a comprehensive theory of equivalence**

LANNY FIELDS

Professor of Psychology

Queens College/CUNY

In 1987, Fields and Verhave described four independent variables that define the structures of all equivalence classes. These were number of stimuli in a class or class size, number of nodes which determines nodal separation of class members or nodal distance, directionality of training which

differentiates transitive from equivalence relations, and nodal density which specifies the number of stimuli linked to each node in a class. This presentation considers recently collected data that demonstrates how two of these variables, number of nodes and directionality of training influence the relatedness of stimuli in equivalence classes. The effects of both variables were measured using post class formation within class preference tests. Nodal distance effects were measured with preference tests that contained a sample with two comparisons, each of which differed in nodal separation from the prevailing sample. Under these conditions, participants selected the nodally proximal comparisons, showing that relatedness among members of an equivalence class is an inverse function of nodal distance. Compatible results were also obtained using post class formation semantic differentials which documented the spread of connotative meaning across members of an equivalence class that was also an inverse function of nodal distance. With regard to directionality of training, the preference tests contained a sample with two comparisons: one constituting a transitive relation with the sample and the other constituting an equivalence relation with the sample. Under these conditions, participants selected the comparison that was transitively related to the sample, showing that relational type also influences the differential relatedness of stimuli in equivalence classes. Thus, differential relatedness is influenced by at least of the two variables that define the structure of equivalence classes: nodal number and training directionality. These outcomes were obtained using post class formation within class tests. In contrast, typical cross class emergent relations tests show that all of the stimuli in an equivalence class were interchangeably and thus, appear to be equally related to each other. The presentation will conclude with considerations of (1) a unified model that integrates all of the phenomena mentioned above, thereby resolving the apparent contradiction of stimuli concurrently being equally and unequally related to each other, and (2) the relevance of these notions for the analysis of stimulus relatedness in perceptual classes.

PARALLEL SESSION: ROOM 305

Symposium: Fluency-based instruction and precision teaching

Chair: Bernie Kirkpatrick

BCBA CE: 1

9:00

Fluency training on math skills to increase on-task behaviour of a young person with Attention Deficit Hyperactivity Disorder

BERNIE KIRKPATRICK and Claire McDowell

University of Ulster

A single subject design conducted over 7 weeks. The participant set goals, self-monitored and graphed responses onto a standard celeration chart. Recording correct and incorrect responses of multiplication

and division facts during daily 1 minute trials using SAFMEDS and worksheets produced a learning picture which guided the programme. The Precision Teaching instructional programme was designed to use fluency based learning and measurement strategies to investigate the effectiveness of PT on increasing fluency in math skills and endurance in a young person who was dysfluent in component math skills and who was experiencing behaviours associated with ADHD. Research has indicated that students with ADHD may be at a higher risk of academic failure (Barkley et al 1991), which can have devastating results on future life outcomes. This present study indicates that the PT programme positively contributed to the student's increase in fluency of composite math skills and thus enhanced the participant's duration of endurance in mathematics. The results support the experimental hypotheses that PT is effective in increasing fluency of math composite skills and endurance.

9:20

Increasing staff knowledge of Applied Behavior Analysis terminology using Precision Teaching

MICHELLE KELLY

National University of Ireland, Galway

The aim of this study was to increase staff knowledge of 40 terms from the applied behaviour analysis (ABA) literature. Twenty Irish staff members working in a school for children with autism, that utilises ABA techniques, participated. Baseline consisted of the staff members reading the ABA definition and saying the answer aloud. This see/say learning channel was used throughout the study. Pre-intervention scores showed an average across all participants of 5.73 answers correct and 5.97 answers incorrect in a one-minute timing. A multiple probe design was utilised across four groups of five participants. Each week a new group began using SAFMEDS for three one-minute timings every morning, five days a week. Staff recorded their own number of correct and incorrect answers. Probes were conducted at the start of every week of the study. Inter-observer agreement was obtained for 25% of the participants' probes and was 93.5%. Post-intervention correct scores increased by 325% to an average of 18.57 per minute. Incorrect scores decreased by 227% to an average of 2.63 per minute. All results were displayed on Standard Celeration Charts. Results showed that SAFMEDS was an effective and time-efficient tool for staff training.

9:40

Sport performance and fluency training: from volleyball to skate

FRANCESCA CAVALLINI¹, Iris Pellizzoni² and Silvia Perini¹,
Università degli Studi di Parma¹, Centro Tice²

In 2 experiments, each involving different sports, we compared 2 training procedures for teaching component volleyball and skate skills in terms of their effects on the learning and application during the

match. The dependent variables were learn units to composite task mastery and performance on the composite task 2 months later. The independent variables were instruction in component sports skills under (a) fluency and (b) mastery conditions. The experiments used a simultaneous treatment design in which the students were selected for participation according to prerequisite skills and instructional histories and randomly assigned to receive 1 of the 2 training procedures.

10:00

Do you want to chart with me?

FRANCESCA CAVALLINI¹, Sara Andolfi² and Martina Nani¹,
Università degli Studi di Parma¹, Centro Tice²

Progress monitoring can give you and your child's teacher information that can help your child learn more and learn faster, and help you make better decisions about the type of instruction that will work best with your child. We investigated the differential effects of teacher's compliance in charting data using two kind of graph (standard celeration chart versus interval graph). Subjects were four teachers in a learning centre. Results indicated significant increases in compliance in the interval graph conditions.

10.20 Poster room set up time.

10.40 – 11.40 REFRESHMENTS (3rd floor common room) AND POSTER SESSION (Room 305)

PANEL DISCUSSION: LECTURE THEATRE GROUND G03

2.00

Working as a behaviour analyst in a changing economy

Chair: Marguerite Hoerger

Panel discussants: Dr Sandy Toogood, BCBA-D, Nick Barratt, MSc, BCBA, & Dr Marguerite Hoerger, BCBA-D

BCBA CE: 1

Recent budget cuts are affecting many front line services in the UK, and local authorities are looking for ways to reduce their budgets. While these cuts can be difficult for behaviour analysts, they can also be an opportunity for us to work more closely with local authorities to provide ABA as a standard, cost-effective treatment for people with learning disabilities and challenging behaviour. The panelists will each discuss how the current economic climate has affected their work and provided new opportunities and challenges.

PARALLEL:

INVITED TUTORIAL: LOWER GROUND FLOOR LECTURE THEATRE.

2.00

Some public perspectives on the problem of privacy

M. Jackson Marr

Georgia Tech

BCBA CE: 1

The "radical" in radical behaviorism has its origin in Skinner's 1945 paper on operationism. Contra "methodological" behaviorism, Skinner treated so-called private events: thinking, imaging, and the like as covert behaviors. Such behaviors then had no special status other than their privacy and thus could not be said to be essential origins of overt behavior. I will review briefly some of the controversies engendered by Skinner's views on privacy. Two independent scholarly communities have vigorously challenged Skinner's stance: (1) behaviorally-oriented philosophers like Norman Malcolm, and (2) some "dissenting" behaviorists like Baum who has called Skinner's treatment of private events a "mistake." I will argue these and other such challenges leave Skinner's treatment relatively unscathed.

Professor M. Jackson Marr, Ph.D

M. Jackson (Jack) Marr is Professor Emeritus of Psychology at Georgia Tech where he has taught physiology and behavior, behavioral pharmacology, probability & statistics, and continues to teach the experimental analysis of behavior. He is one of five founding Fellows of the Association for Behavior Analysis, a Fellow of Division 25 (Behavior Analysis) of the American Psychological Association, Past-President of the Society for the Advancement of Behavior Analysis, Past-President of both the Association for Behavior Analysis and Division 25 of APA. He is the former Editor of Behavior and Philosophy and has served as Review Editor of the Journal of the Experimental Analysis of Behavior since 1998. He was an Associate Editor of the Journal of the Experimental Analysis of Behavior and The Behavior Analyst. He was Experimental Representative to the Executive Council of the Association for Behavior Analysis, served on the Board of Directors of The Society for the Quantitative Analysis of Behavior (SQAB), and currently serves on the Board of Trustees the Cambridge Center for Behavioral Studies. He has been active in the international support and development of behavior analysis in many countries. Since 1991 he has been involved in the assessment and improvement of engineering education, in particular, engineering physics. Other current research interests include dynamical systems theory, comparative behavior analysis, and theoretical/conceptual issues in behavioral analysis.

INVITED TUTORIAL: LOWER GROUND FLOOR LECTURE THEATRE.

2.45

Measuring behaviour is behaviour: Notes on teaching behaviour analytic measurement procedures

Mecca Chiesa

University of Kent

BCBA CE: 1

Data from a variety of exercises designed to teach students behaviour measurement procedures clearly demonstrate the need for extended discussion and practice of such procedures. Typically, the first opportunity to measure behaviour produces alarmingly variable results. Those results provide a starting point from which to explore important conceptual and practical issues relating to behaviour measurement, observed behaviour and the behaviour of observers. Subsequent practice produces less variable/more stable and thus more reliable results. This presentation describes the measurement exercises and discusses implications of their results for teachers and students of Applied Behaviour Analysis as well as for the quality of services provided in the name of Behaviour Analysis.

Dr. Mecca Chiesa

Mecca Chiesa completed her Ph.D at Cardiff University in 1990 and has since held lecturing posts at the University of Glamorgan (Wales) and the University of Paisley (Scotland). Since 2003 she has worked at the Tizard Centre, University of Kent (England). The Tizard Centre is one of the leading academic groups working in services for people with learning disabilities and autism spectrum disorders. Members of the Centre are selected both for their academic record and for their practical experience in services. The Centre has a thriving programme of training and consultancy to local authority providers, social service departments, health authorities and charities providing education and care for vulnerable groups. Mecca was one of the founding members of the UK ABA Lecturers Cooperative in 1999. The Cooperative taught the first BACB-approved course in the United Kingdom. Since 2006 Mecca has convened the Graduate Diploma in Applied Behaviour Analysis at the Tizard Centre. Her students come from all over the United Kingdom and serve diverse populations with special needs: very young autistic children on ABA home programmes, children and adolescents in schools for various kinds of disabilities, day and residential services for adults with learning disabilities and/or autism spectrum disorders, and specialist units for people whose behaviour challenges services. The combination of teaching ABA to practitioners and providing ABA services directly leaves no doubt that, no matter one's job title, one is always a student of Applied Behaviour Analysis.

3.30 – REFRESHMENTS

KEYNOTE ADDRESS**4.00****New Technologies and Behavioral Cusps: A New Era for Behavior Analysis?****Dr. Janet Tywman****BCBA CE: 1**

A behavioral cusp is any behavior change that brings an organism's behavior into contact with new contingencies that have far-reaching consequences, as it opens access to new reinforcers and new environments, occasions new behaviors and behaviors in new classes, and it impacts those around the organism. New technologies (e.g., software development, social networking, smart phones, tablet computers, remote controllers) are already in use in education, organizational behavior, self-management, and personal improvement domains, but rarely with the benefit of a thoroughgoing behavior analytic model. The emergence of these new technologies may be viewed as a sort of “cusp” for behavior analysis, providing opportunities for unheralded access, measurement, and analysis of a world of behavior in real time, opening the door for far-reaching consequences for the individual and society. By bringing about robust, reliable, socially valid behavior change, behavior analysis has the potential to become the next “killer app” in that it has the power to be both integral and desired across a wide-domain of new technology applications.

Janet S. Twyman, Ph.D., BCBA

A long time educator and proponent of effective instructional practices, Dr. Twyman currently is an Associate Professor of Pediatrics at the University of Massachusetts Medical School/E.K. Shriver Center. Her research interests involve the continuum from understanding basic processes related to learning and communication to ultimately building meaningful instructional programs with broad-based application and sustainability. Dr. Twyman has a strong record in the transfer of instructional technology and developing web-based programs for wide-scale distribution. She spent the last decade as the Vice President of Instructional Development, Implementation and Research at Headsprout, where she led the design, development, and dissemination of the company’s award-winning, highly effective educational programs. She developed the research methods and systems supporting Headsprout’s distinctive scientific formative evaluation model and oversaw program implementation in over 1,000 public and private schools. Formerly a public school classroom teacher, the Executive Director of a non-profit special needs preschool program, and an adjunct professor at Columbia University Teachers College, Dr. Twyman has spent her professional career designing, developing, researching, and advocating for research-based instructional systems, especially in unique settings or those serving atypical or difficult-to-teach learners. Dr. Twyman is widely published in the areas of effective instruction, instructional design, systems approaches, reading and language, and on topics of broader

conceptual interest. Frequently invited to present in the education and psychology domains, and she has delivered over 150 presentations (over 40 invited or keynote) to educators, psychologists, business leaders and parents around the world. In 2008 she organized and hosted a national conference on Evidence-based education, and consults nationally with programs to develop or improve instructional practices for their students. Dr. Twyman serves on the boards of numerous organizations including the Cambridge Center for Behavioral Studies (where she chairs the Education Group) and PEER International (assisting township schools in Port Elizabeth, South Africa). In 2007-08 she served as President of the Association for Behavior Analysis International.

POSTER PRESENTATIONS: DAY 1**Evaluating preference assessment procedures for use in clinical settings**

Denise Foran, Saskia Dodebier and Marguerite Hoerger
Bangor University

Reinforcement is central to any behaviour change program; the identification of reinforcers should be a priority for professionals working within the field. A number of preference assessments have been evaluated, however the use of choice boards (CB), a procedure which is brief and easy to implement has not been empirically assessed. This study used a multiple treatment design to compare the effectiveness of stimuli identified using the CB, to those identified using a multiple stimulus without replacement (MSWO) with two children with global developmental delays. As predicted, results indicated that the CB identified stimuli, which were at least as reinforcing as those identified in the MSWO; dependent measures percentages of correct trials and DTT session duration were comparable in both procedures. Furthermore, implementation time was less for the CB. As the first empirical evaluation of the CB this research contributes to empirical knowledge and could impact significantly on clinical practice.

An educational way to say and solve clinical problem

Roberto Cattivelli¹, Valentina Tirelli² and Cavallini Francesca¹
Università degli Studi di Parma¹, Centro Tice²

ACT studies and research focus on behavioral flexibility as a core skill correlated with better quality of life and satisfaction. To improve flexibility in children and teenagers at the learning centre TICE we have started to apply ACT-FAP strategies. This study describes a case of severe school anxiety and learning difficulties. The subject was a 12-year-old male junior high school student who, over a period of two months, had either not attended school or had attended under duress and fled for home. Procedures included relaxation, systematic desensitization, in vivo desensitization, positive reinforcement and social skill training and study training. After 2 weeks' sessions the child was able to attend school without anxiety. Follow-up one year later indicated that all gains had been maintained.

Learning speed while learning reading

Valentina Tirelli¹, Sara Andolfi¹ and Martina Nani²,
Centro Tice¹, Università degli Studi di Parma²

Celeration is all about reaching performance fluency in a timely manner. Ogden Lindsley related celeration to agility. In business and other organizations, agility is the capacity to rapidly and efficiently adapt to changes. Precision Teaching encapsules the concept of agile performance in its measurement of celeration. The study describes the effects of precision teaching training with multiple exemplars on reading skills in children with learning disabilities. Data show how the training not only promotes acquisition and retention of target words but it works on building an untaught repertoire. Children learn to read new sets of words faster and to reach the aim in less time. According with RFT, the intervention

promotes the acquisition of higher order verbal operant (reading) with fluency building strategies and a multiple exemplars training.

Autoclitic training on children with Down Syndrome

Federica Berardo¹, Laura Pignoli² and Vanessa Artoni¹,
Università degli Studi di Parma¹, Centro Tice²

Children with Down Syndrome often experience significant communication impairments especially in the production of multi-word utterances. The study describes the effects of autoclitic training on the mean length of utterance (MLU). A multiple baseline design across subjects was used. The participants were two children with Down Syndrome with moderate Mental Retardation and the same level of vocabulary acquisition. They were able to use word combinations but they produced a reduced number of morphologically correct sentences. During the discrete trial procedure the students received 3 sets of tacts with autoclitics in a multi-exemplar training. Each set was composed of 5 targets and the participants were expected to produce a 3-word utterance (article, substantive, verb). The results show a significant increase of the use of autoclitic frames also with untaught stimuli.

Behavioral definition of symbolic play skills

Mónica Rodríguez-Mori and Luis Antonio Pérez- González
University of Oviedo

Playing is an important set of skills in development; for that reason, teaching playing skills should be included in the curricula of children with disabilities. Playing often appears as a functional skill that allows children to engage in interactions with their peers. Many interventions target these skills, but the definitions, measurement, and name of the behaviors involved in playing vary across studies. The purpose of the present study was to find a behavioral definition of pretend acts and symbolic play behaviors showed by a group of typically developing children with an age between 18 and 36 months. To observe and measure the behaviors emitted by the children, they were individually scored in play situations with two sets of props. The results allow clarification of some initial stages of playing and a better definition of the skills involved in these stages.

Bringing data to life, a new way to display and present data

Nicola McAuley, Nichola Booth, Mickey Keenan and Stephen Gallagher
University of Ulster

Training professionals, students or parents to treat individuals with a diagnosis of Autism Spectrum Disorder has sparked a significant amount of research. Current findings suggest that the various training tools each have their advantages and disadvantages. When dealing with complex skill acquisition, treatment integrity is paramount. One factor that reduces treatment integrity is poor training or the level of understanding after any given training course. The level of competency following training is

dependent on the way the materials have been presented. One possible solution to compensate for a lack of competency is to present the training in a more interactive and multifaceted manner. When it comes to a complex topic such as behaviour, it is essential to use the correct stimuli to teach students the applications of the Science of Behaviour. The ultimate goal of teaching the Science of Behaviour is that the students will be able to take the theory and apply it to real life situations. Traditional teaching methods tend to have a one-tiered approach that has a tendency not to be user friendly. Instead of looking at a data point on paper we could make the dot active and show video footage of the data summarised by the data point. Our aim is to give a group of peer professionals the opportunity to discuss alternatives to traditional teaching methods.

Developing a Local Specialist Challenging Behaviour Support Service

Maria Saville¹, Kath Devonshire¹, Sandy Toogood² and Paul McWade¹

Halton Borough Council¹, Bangor University²

Many individuals with Intellectual Disability under local authority care, reside out of borough (Whelton, 2009), particularly those who exhibit behaviour that challenges services (Emerson & Robertson, 2008). The Mansell Report (Revised edition: 2007) recommends specialist challenging behaviour services work intensively with a small number of individuals and help strengthen mainstream services. Research suggests effective services are likely to be peripatetic, psychology-led, grounded in behaviour analysis with strong case management (Forrest et al. 1993). Halton Borough Council has commissioned a specialist peripatetic, cross-borough, Local Authority led lifespan challenging behaviour support service. It is the first in the UK to be led by BCBA's. The Service aims to work collaboratively across four areas: Early intervention; Crisis prevention; Technical support and Placement development. Preliminary results discuss outcomes for 4 individuals where Active Support, Person Centred Planning, Functional Assessment and intervention were implemented. Outcome data on engagement, community involvement and challenging behaviour are discussed.

Primary School Teachers' Knowledge of and Attitude Towards Applied Behaviour Analysis in the Republic of Ireland.

Trish Carolan and Claire McDowell
University of Ulster

This research was divided into two phases. Participants in Phase 1 (N = 158) were tested using a questionnaire, on their knowledge and attitudes towards ABA. Assessment of the group revealed a low understanding, and a neutral attitude towards the subject. Phase 1 also tested for between-group differences in participants who trained pre & post the new Primary School Curriculum (1999), in an endeavor to discover whether the new curriculum had led to an improved awareness of ABA. Results showed some between-group differences. Teachers who trained after the introduction of the new curriculum had a marginally greater knowledge base of ABA. Attitude measures for both groups were similar with no conclusive negative or positive results recorded. In Phase 2 participants (N = 11) completed 4 hours of workshop training on ABA and afterwards were re-administered the original questionnaire from Phase 1. Results showed that training, tailored specifically to the needs and interests of primary school teachers led to an improvement in both knowledge of, & attitudes towards ABA.

Emergent slot machine gambling

Simon Dymond, Kate McCann, Joanne Griffiths and Victoria Crocker
Swansea University

A contemporary behavior-analytic model of emergent slot machine gambling is described. Three laboratory experiments investigated the conditions under which stimuli correlated with different payout probabilities come to have new, emergent functions without those functions being trained directly. Following a successful test for derived relations, gamblers and non-gamblers were exposed to a task in which high- and low-payout probability functions were established for two slot machines labelled with members of the derived relations. In Experiment 1, participants provided ratings and chose between concurrently presented slot machines labelled with indirectly related stimuli; in Experiments 2 and 3, participants chose between slot machines under conditions of non-reinforcement and matched payout probabilities, respectively. Across all experiments, participants made more selections of, and gave higher liking ratings to, the machine indirectly related to the trained high-payout probability machine. Implications for the development of verbally based interventions for disordered gambling are discussed.

Incorporating ABA into the Foundation Stage in a special needs school

Yvonne Mosely^{1,2}, Marguerite Hoerger^{1,2}, Donna Rees-Roberts², Bethan Mair Williams³, Elin Walker-Jones^{1,2}
Bangor University¹, Gwynedd LEA², Betsi Cadwaladr University Health Board³

We have been very successful using ABA in a Key Stage one classroom at Ysgol Hafod Lon in Gwynedd. The staffing in the class is typical of special schools. A consultant behaviour analyst visits the school weekly and the class teacher is studying towards her MSc in ABA. The children all have

educational goals based on the VB-Mapp and other behavioural assessments. For about one hour a day, each child is taught using 1:1 discrete trial or precision teaching methodology. During the remainder of the day they are taught in groups on ABA or foundation stage targets. The children have made significant gains as measured by the VB-Mapp, and IQ testing. The provision for children with autism in Key Stage 1 at Ysgol Hafod Lon received the highest possible marks in a recent ESTYN inspection. This model for using ABA in a special needs classroom is an affordable option for delivering ABA to all children with special needs.

POSTER PRESENTATIONS: DAY 2

Child safety in shopping carts: An effective intervention to avoid accidents

Árni Þór Eiríksson and Zuilma Gabriela Sigurðardóttir

University of Iceland

Each year around 100 children are injured in Iceland when they fall out of shopping-carts. The aim of this study was to try to affect the behavior of parents who place their children into the shopping-carts. A picture-card was put on the rear side of shopping-carts in four supermarkets in the Reykjavík's metropolitan area such that they faced the parent when rolling the cart. The picture-card showed a child standing in a shopping-cart but had a diagonal line across the picture and a circle around it as is typical of traffic signs that note a ban. A mixed multiple-baseline across shops and ABA withdrawal design evaluated the effect of the intervention. Results indicated that the intervention had a major impact on parents' behavior, which decreased dramatically. This simple procedure has the potential to decrease accidents that take place as a consequence of parents placing children in shopping-carts.

How can the Mantel-Haenszel methods help us to improve our data analysis?

Ángel M. Fidalgo and Jaqueline M. Madeira

University of Oviedo

It is well known that applied behaviour analysis follows, basically, an inductive data analysis strategy. For this reason statistical methods have been largely ignored or misused. It is out of any question that the single subject researches are optimal for the verification, prediction and replication of the functional relationships between variables. However, we think that statistical methods can be used to improve the analysis of data collected in such researches. Specifically, we want to illustrate how the Mantle-Haenszel methods (Fidalgo, 2005) can be used to explore the relationship between two variables, controlling for confounding factors, in an applied behaviour analysis context.

Increasing compliance with children with autism: Effects of programmed reinforcement for high-probability requests and varied inter-instruction intervals

Laura Pitts and Simon Dymond
Swansea University

The effects of implementing high-probability request sequences, with and without programmed reinforcement for compliance to low-probability requests, were evaluated using a reversal design with three children with autism. Results showed that high-probability request sequences were most effective in increasing compliance to low-probability requests, and reducing compliance latency and task completion time, when implemented with programmed reinforcement. Results of generalisation probes indicated that generalised responding occurred for all but one of the participants' low-probability requests. The effect of varying inter-instruction intervals (5 and 10 s, respectively) within the request sequence was further investigated with one participant using a combined alternating treatments and reversal design. Results demonstrated that the request sequence was most effective in increasing compliance to low-probability requests when implemented with 5 s inter-instruction intervals and programmed reinforcement. The findings of the present study highlight the importance of using programmed reinforcement within the request sequence and add to the literature on compliance by incorporating supplemental measures of latency and total task duration.

Effectiveness and feasibility of a Relaxation clinical training for anxiety and depression symptoms reduction in a psychiatric setting. Preliminary results

Roberto Truzoli, Cecilia Rovetta, Alessandra Roaro, Matteo Zambotto, Federica Re, Caterina Viganò and Gabriella Ba
University of Milan

Relaxation Training is an effective and well-known cognitive-behavioral intervention (Benson, 1975) for symptoms reduction and emotion management in a variety of clinical conditions. The purpose of this study was to evaluate whether a Relaxation Training would also be effective in a short-term version (8 sessions) within a sample of psychiatric patients and the feasibility for the psychiatric setting as a complementary cognitive-behavioral intervention. Participants were assessed at baseline and again at the completion of the Training: efficacy measures included self-report and structured interview rating scales; feasibility has been measured by recruitment rates, number of drop-out and adherence. Preliminary results suggest that even a brief intervention in Relaxation offers a simple and cost-effective way to improve the quality of life and reduce the discomfort of somatic symptoms for our outpatients.

MSc Applied Behaviour Analysis at the University of Ulster, Coleraine

Claire McDowell, Sinead Smyth and Julian Leslie
University of Ulster

The MSc in Applied Behaviour Analysis offered by the University of Ulster at Coleraine is a 2-year part-time course. It provides students with the opportunity to maximise their theoretical and conceptual

knowledge in behaviour analysis, develop their skills in behavioural assessment and acquire the ability to work in partnership with clients as they plan and implement programmes aimed at establishing or weakening targeted behaviours. The course is approved by the Behavior Analyst Certification Board (bacb.com) as satisfying the coursework requirements for the Board Certified Behavior Analyst (BCBA) examination. In order to sit the examination, the candidate is required to have completed a considerable number of hours of supervised work experience and such experience is available in the placement module of the course. Supervision of fieldwork is included in the course fees. The course has developed strong links with several professional settings, including the Saplings Schools for Children with Autism in Ireland, and the New England Center for Children in Boston MA., who have provided placement opportunities for several students in past years.

Flash Cards at University: an application for teaching educational psychology

Roberto Cattivelli¹, Gianluca Amato² and Francesca Cavallini¹,
Università degli Studi di Parma¹, Centro Tice²

We tested the effect of a fluency-building strategy with implementation of Flash Cards to promote the learning of basic principles of behavior analysis with college students. This study was conducted with a comparison of the results of the votations for the exam of psychology of the education, for the graduations in psychology at University of Parma, in Italy. During the lessons we provided to college students 40 definitions of basic aspects of behavior analysis including these definitions in the program for the course. At the end of the course we compare the results of the exams of the first semester of 2009 with the same results of 2010 (after the introduction of the FlashCard). There were no other variations in the programs, teachers, or exams modalities. The results show a statistically significant improvement of the votation with the introduction of the Flash Card.

Staff motivation in services for children with autism

Rossana Somalvico & Paolo Moderato
IULM, IESCUM

The scholars in the Behavioral Systems Analysis field suggest some key features that an organization should have in order to survive and in order to maintain work behavior of their personnel functional to the purpose of the organization: human and economic resources, functional internal processes, internal and external feedback (Brethower 1972, 1982, 2002; Rummler & Brache, 1995; Austin, 2000). Our research uses a between-subjects design to assess staff motivation in three different services (in Italy, the United States and Switzerland) that serve children with autism, two of which provide early intensive behavioral treatment. The level of motivation is measured through Discretionary Effort (Daniels, 2007) and through the Minnesota Satisfaction Questionnaire. Results suggest that in the more structured services, which have the basic elements of the self-modifying system that work well and which allow for more control over reinforcing and punishing stimuli in the workplace, the staff are also more satisfied.

ABA schools census -UK

Gemma Griffith, Richard Hastings, Rachel Fletcher
Bangor University

The aim of the census project was to give a snapshot of ABA schools/classes for children with autism in the UK. The census was completed for the date of 1st March 2010. All staff and pupils registered or employed by schools on this date were included in the census. A total of 14 schools and ABA ‘classes’ within larger schools in the UK were identified, and all ABA schools participated in the census (100% return rate). The census was piloted with three ABA schools, revised, and then mailed to all schools at the end of February 2010. The census was organised into three sections: (1) Structure of the ABA school, (2) Pupils in the school, and (3) Staff employed at the school. Of the participating settings, 10 were dedicated ABA schools, two were ABA classrooms within a special school setting, and two were ABA classrooms within a mainstream setting or linked to a mainstream setting. The census recorded a total of 258 pupils (219 male, 39 female) registered at ABA schools/classes throughout the UK. A total of 382 staff members worked directly with pupils in ABA schools/classes (334 of these were staff directly contributing to ABA provision). Additionally, topics such as pupil diagnosis, ability level, socio-economic status, ABA qualifications of staff, and years of ABA experience were explored. These data highlight some interesting trends among ABA schools throughout the UK.

Reducing delay in worker payment in an agency setting: The effects on worker attendance and the resultant cost implications

Rachael Whitaker, & J. Carl Hughes, Bangor University

A modeling agency operating in the UK was found to have a high rate of workers dropping out of bookings with little or no notice to the employer. We used an ABAB reversal design to study the effects of implementing a short-delay fee payment. Under standard company policy (baseline conditions: A), workers at the agency (n=1,049) received payment for each booking approximately six weeks after the job completion. During the short-delay phases (intervention: B) the workers were paid the next day following the completion of a booking. Worker ‘drop-out’ rates decreased from between 15 and 66.5% in baseline to between 4 and 28.5 % during the first and the second intervention phase. The decrease in workers ‘drop-out’ rates further resulted in a decrease in the amount of hours used by office staff to rectify the problems, from an average of 4.8 per week down to an average of 0.33 per week. The combined effects of both resulted in an average weekly savings of £138.00 and a potential annual savings of over £7,000.00. Results are discussed in terms of the practicalities of short-delay payment for companies, the implications of high rate cash flow, the relation to net profit as well as turnover, and the potential effects on company reputation that are more difficult to quantify.

Using Applied Behaviour Analysis to improve autism teaching and reduce pupil exclusion in a special school

Denise Foran and Marguerite Hoerger
Bangor University and Ysgol y Gogarth

Ysgol y Gogarth in Conwy has employed a full time assistant behaviour analyst and an ABA consultant for one day a week to 1) improve assessment and teaching for children with autism and 2) to help the school retain children that may have previously been excluded for challenging behaviour. Most of the children with autism have been assessed using the VB-Mapp and Vinelands. The behaviour analysts are working with staff to identify appropriate teaching targets and helping them implement discrete trial teaching and programs using behaviour change procedures. Experimental functional analyses are run as a standard provision for children with challenging behaviour. In the first year the incidence of severe challenging behaviour and restraint has been significantly reduced. We will discuss data showing that the children are making real progress on academic targets and appropriate behaviour. We will discuss the benefits and challenges in trying to establish ABA as a standard provision in a large, special needs school with a large staff to student ratio.

Masters Programme in Applied Behaviour Analysis at Bangor University, UK.

J. Carl Hughes, BCBA-D, Sandy Toogood, BCBA-D, Marguerite L. Hoerger, BCBA-D, Professor Richard Hastings, Steve Noone, BCBA-D, Corinna Grindle, BCBA-D, & Sigmund Eldevik, BCBA-D
Wales Centre for Behaviour Analysis, School of Psychology, Bangor University, Wales.

In 2003 we developed the first Masters course in Applied Behaviour Analysis in Europe. The course is designed and taught by Board Certified Behavior Analysts (BCBA) and has been approved by the Behavior Analysis Certification Board (BACB) as providing content eligibility for students to sit the full BCBA exam (3rd Task List). In line with the British University system, the course is offered at three levels: Post-graduate Certificate, Post-graduate Diploma, and Masters. In the design and running of the course we have attempted to use behavioural principles in the instructional materials, learning environments, and in the assessment of students learning. We utilise computer based instructional packages, direct instruction, and, Precision Teaching approaches, such as SAFMEDS and Standard Celeration Charting. The course can be taken in one year or on a part-time basis (either two or three years in duration). Each year we enrol approximately 50 students from a wide range of backgrounds: early autism intervention projects, challenging behaviour units, social services, special education, and new graduates. Our main aim is to make a significant contribution to training competent behaviour analysts in Europe.

WORKSHOP PRESENTATIONS: DAY 3**WORKSHOP 1: FULL DAY WORKSHOP: 9:00 – 3:30****Introduction to Precision Teaching and Standard Celeration Charting**

WORKSHOP 1: FULL DAY WORKSHOP: 9:00 – 3.30

Dr. J. Carl Hughes¹, BCBA & Mike Beverley¹, Dr Claire McDowell²Wales Centre for Behaviour Analysis, School of Psychology, Bangor University¹ & University of Ulster, Coleraine²**BACB CE 5*****Workshop description***

The Standard Celeration Chart (SCC), Precision Teaching and the principles of fluency-based instruction will be introduced in this workshop. The importance of using a clear data tracking system to ensure quality in the teaching process is emphasized. Implications of focusing on fluency rather than accuracy only will be discussed with particular importance for educational outcomes. The use of Precision Teaching and the SCC as a data collection and decision-making tool that can be introduced to any educational programme will be demonstrated and practiced. In addition, participants will be introduced to more advanced aspects of Precision Teaching including learning pictures and celeration analysis.

Learning Objectives

At the completion of the workshop, participants will be able to:

- List and describe the key principles of Precision Teaching
- Chart performance using the Standard Celeration Chart (SCC)
- Describe a learning channel analysis
- Identify and describe learning pictures and how they signal the need for instructional changes
- Use celeration as a decision making tool
- Use a frequency finder

Activities

- a combination of slides and hands-on practice will be utilised
- participants will engage in interactive exchanges with the presenters
- they will be required to engage in fluency building activities and chart their own learning

Audience: The workshop is of interest to all those who are interested in applying behavioural principles to education across all settings; Those seeking an introduction, or refresher, on the use of Precision Teaching and the SCC; BCBA or BCaBA certified behaviour analysts.

Level: Introductory to intermediate

Maximum number of participants: 20

Cost: £80; Student £40

BCBA - CEU – 5

WORKSHOP 2: FULL DAY WORKSHOP: 9:00 – 3:30**An Experiential Introduction to Acceptance & Commitment Therapy****FULL DAY WORKSHOP: 9:00 – 3.30****Eric Morris**

South London and Maudsley NHS Foundation Trust

Presenter: Eric Morris works as a consultant clinical psychologist for the South London & Maudsley NHS Foundation Trust, and has practised as an ACT therapist for the past 10 years, as well as providing teaching and training in ACT and other contextual behavioural therapies. Eric is involved in developing and researching mindfulness-based group and individual interventions for psychosis at the Institute of Psychiatry, King's College London.

Workshop description

Acceptance and Commitment Therapy (ACT) is a contextual cognitive behavioural therapy, developed within a functional contextual philosophy and based upon Relational Frame Theory, a contemporary behaviour analytic account of language. ACT uses acceptance and mindfulness strategies, together with commitment and behaviour change strategies, to increase psychological flexibility. Psychological flexibility means contacting the present moment fully as a conscious human being, and based on what the situation affords, changing or persisting in behaviour in the service of chosen values. ACT is an empirically supported intervention, with studies demonstrating good outcomes through increasing psychological flexibility across a range of problems, disorders and environments.

Based on Relational Frame Theory, ACT illuminates the ways that language entangles clients into futile attempts to wage war against their own inner lives. Through metaphor, paradox, and experiential exercises clients learn how to make healthy contact with thoughts, feelings, memories, and physical sensations that have been feared and avoided. Clients gain the skills to re-contextualize and accept these private events, develop greater clarity about personal values, and commit to needed behaviour change. ACT is based upon a normative model of human distress and introductory training sessions usually involve participating in experiential exercises. This allows participants to become familiar with the accepting and mindful stance of ACT, through the connection of personal suffering, shared humanity, and values as experienced in the present moment. The aim of this training session will be to connect these experiential exercises with the underlying theoretical and clinical issues that are involved in doing ACT.

Learning Objectives

At the completion of the workshop, participants will be able to:

- List and describe the ACT model, including the 6 key processes
- Describe how ACT processes support and augment the use of traditional behaviour therapy methods, such as exposure and behavioural activation
- Use mindfulness as a technique to build acceptance, defusion, present moment awareness

- Identify and describe personal values as chosen life directions, and how to create contexts for conversations that utilise values to enhance taking action
- Describe how ACT can be used to enhance wellbeing and productivity in workplace settings

Activities

- Presentations of didactic material
- experiential exercises
- small-group discussion
- interactive discussion of clinical methods and case examples

Audience: The workshop is of interest to all who are interested in clinical behaviour analysis, and the application of a contemporary account of verbal learning in therapy and organisational contexts. The workshop will be appropriate for those working in clinical and educational settings.

Level: Introductory to intermediate

Maximum number of participants: 40

Cost: £80; Student £40

WORKSHOP 3: HALF DAY WORKSHOP: 9:00 – 12:30

Functional behavioural assessment (FBA) and challenging behaviours; supporting behaviour change in children with autism

CE Instructor: Christos Nikopoulos, DPhil, BCBA-D

BCBA CE: 3

Workshop description

Challenging behaviours are a common characteristic of children and young people diagnosed with autism. In fact, almost everyone on the autism spectrum has at least some challenging behaviours. They are regarded as a hallmark of this condition which can be major impediments to learning and may put the affected person and/or care providers at risk for harm. Effective support and treatment of children with autism, who exhibit challenging behaviours in their daily lives, depend on the understanding of the function that such behaviours serve for the individual. Such understanding can be obtained through the administration of an evidence-based approach called Functional Behavioural Assessment (FBA). This workshop will focus on various methods used for conducting FBA (i.e., indirect, descriptive assessments & functional analysis). The indirect assessments discussed within this workshop will include the Motivational Assessment Scale and the Functional Analysis Screening Tool whilst the descriptive assessments will include scatter plots, structured A-B-C model, and antecedent assessments. A detailed examination of the components of functional analysis including the Function Matrix will also be provided.

Learning Objectives

- Attendees will become more aware of how challenging behaviours in children with autism interfere with the successful implementation of behavioural programs.

- Attendees will develop a critical understanding of the key components referring to FBA and ways of their application in clinical practice, including their advantages and disadvantages.
- Attendees will learn about the data collection methods associated with the FBA methods and they will practice in collecting assessment data, graphically reporting these data as well as analysing and interpreting the results.
- Attendees will explore the basic function-based intervention methods as these are directly linked to the information and data gathered during the FBA.

Activities

This workshop will include several exercises and handouts. Workshop activities include didactic instruction, large group question and answer, small group exercises, individual development of written assessment plans. Participants will practice using FBA methods and designing function-based interventions as well as collecting direct observation data.

Cost: £50; Student £25

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