

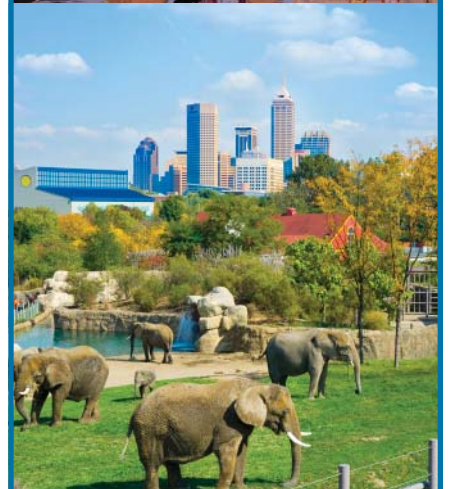
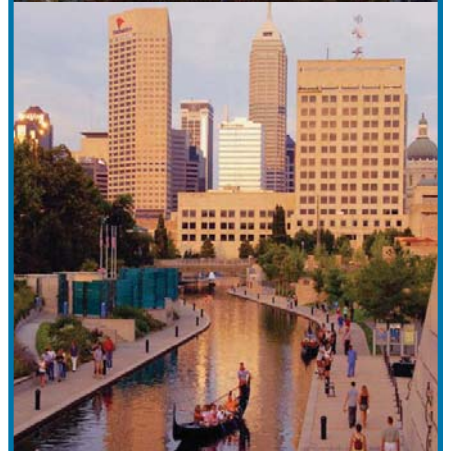


**isaz**  
international society  
for anthrozoology

20TH ANNIVERSARY  
**Human-Animal  
Interactions:  
Challenges  
and Rewards**

Indianapolis, Indiana USA  
August 4-6, 2011

[www.isaz.net](http://www.isaz.net)





### **About the International Society for Anthrozoology**

The International Society for Anthrozoology (ISAZ) was formed in 1991 as a supportive organization for the scientific and scholarly study of human-animal interactions. ISAZ is a nonprofit, nonpolitical organization with a worldwide, multi-disciplinary membership of students, scholars and interested professionals.

Our mission is to serve the growing community of scholars and scientists working in the field of Anthrozoology (the study of human-animal interactions and relationships) by supporting research, publishing and disseminating new insights and discoveries, and promoting the exchange of knowledge and expertise within the field.

To learn more, please explore our web site: [\*\*www.isaz.net\*\*](http://www.isaz.net)

# International Society for Anthrozoology (ISAZ)

*Human-Animal Interactions: Challenges and Rewards* • August 4-6, 2011

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## Thursday, August 4

8 a.m.-6 p.m. **Registration**, Cosmopolitan Foyer

9 a.m.-5 p.m. Board Meeting, Studio 1

Noon **Optional Excursions**

4 p.m. **Film – PROJECT NIM Showing 1**, Vision  
**Moderator: Cheryl Krause-Parello**

On behalf of Roadside Attractions and HBO Documentary Films, you are invited to a screening of PROJECT NIM, the latest film from James Marsh and the Oscar-winning team behind MAN ON WIRE. Winner of the Best Directing Award for World Documentary at the 2011 Sundance Film Festival and voted the #1 documentary at the festival in the indieWIRE critics poll, the film opened on July 8 in NY and LA and will appear on HBO in the fall.

PROJECT NIM is the extraordinary story of Nim Chimpsky, the chimpanzee who in the 1970s became the focus of a landmark experiment which aimed to show that an ape could learn to

communicate with language if raised and nurtured like a human child. Following Nim's picaresque journey through human society, and the enduring impact he makes on the people he meets along the way, the film is an unflinching and unsentimental biography of an animal we tried to make human.

5:45 p.m. **ISAZ Opening Event/ISAE Closing Event  
Cookout and Baseball Game**

See the **Indianapolis Indians** play the **Toledo Mud Hens**

Walk three blocks from the conference hotel to Victory Field

*"The best minor league ballpark in America"*

501 West Maryland Street, Indianapolis  
(dress casually for the outdoors)

10 p.m. **Film – PROJECT NIM Showing 2**, Vision  
**Moderator: Cheryl Krause-Parello**

See above for information about the film

## Friday, August 5

- 7:30 a.m. -5 p.m. **Registration**, Cosmopolitan Foyer  
Hang Posters: Poster display runs continuously through the conference
- 8:30 a.m. **Welcome**, Cosmopolitan B
- 8:40 a.m. **Keynote I: Stanley Coren**  
Case notes on how dogs changed human history: The story of a bond  
**Moderator: Dennis Turner**
- 9:25 a.m. **Podium Session I: Evolution and Co-evolution**  
**Moderator: Hal Herzog**  
Cosmopolitan B
- James Serpell** & Elizabeth Paul  
On the evolution of pet keeping
- Christy Hoffman**, James Serpell, Royce Lee, & Kristen Jacobson  
Dogs resembling their owners: Associations between dogs' and owners' behaviors and traits
- Heather Frigiola**  
Housecat origins revisited: commensalism, co-domestication, and behavioral evolution
- 10:25 a.m. **Break**, Cosmopolitan Foyer
- 10:40 a.m. **Podium Session II: Attitudes**  
Moderator: Mara Baun  
Cosmopolitan B
- Lindsay Madden**, Heidi Keen, Paulette Mills, Jerry Newman, Francois Martin, & Ruth Newberry  
Participation in 4-H dog clubs is associated with emotional intelligence and positive attitude towards companion animals
- Kristen Jacobson**, Christy Hoffman, & Royce Lee  
They call it puppy love: A community-based study of influences of pet ownership and attachment on behavior and psychosocial characteristics in children and adolescents
- Michelle Lem**, Jason Coe, Bill O'Grady, Derek Haley, & Elizabeth Stone  
Effects of pet ownership on street-involved youth
- Sandra McCune**  
A 'Lifestyle' model of pet ownership: Lifestyle vs relationship factors influencing time of acquiring a 'replacement' pet after loss

## Robert M Carini & Jonetta Weber

Socialization of female anglers into and via recreational fishing: Portrayals of women in five popular magazines

- 12:25 p.m. **Lunch Sponsored by:** American Humane Association  
Cosmopolitan C&D
- Optional Discussion Sessions**, Cosmopolitan C&D
- 12:45 p.m. **A: Waltham-NICHD Session Peer Review and HAI Research Applications: Promise and Pitfalls**  
**Presenters: Layla Esposito, James Griffin, Karyl Hurley, & Sandra McCune**
- B: "Project Nim" Q&A & Discussion led by Stephanie LaFarge**
- 1:45 p.m. **Podium Session III: Horses**  
**Moderator: Mariko Yamamoto**, Cosmopolitan B
- Beth Daly** & Stacie Clark  
A home for every horse: Developing a thoroughbred Industry standard for lifetime care
- Claire Scantlebury, Elizabeth Perkins, Gina Pinchbeck, David Archer, & Robert Christley**  
The human-horse relationship; perspectives and implications for equine colic
- 2:35 p.m. **Podium Session IV: Healing**  
**Moderator: Beth Daly**, Cosmopolitan B
- Jess Bibbo**  
Staff perceptions on the addition of an animal-assisted activity at a regional cancer center
- Harold Herzog**  
The healing power of pets: Fact, fiction or somewhere in between?
- 3:15 p.m. **ISAZ 20th Anniversary Celebration**  
**Moderator: Erika Friedmann**  
Studio Lounge
- ISAZ-Waltham Collaborative Research Award**
- ISAZ AGM**
- 4 p.m. **Break** – change into casual clothing for our evening at the Indiana State Fair
- 4:20 p.m. **Indiana State Fair, Indiana State Fairgrounds**  
Bus Departure Time 4:30 PM  
Parade at 6:30 PM
- Conference Dinner** 7:15 PM, Hospitality Pavilion at the Indiana State Fairgrounds  
Buses Return 8:30 PM and 10 PM



## Saturday, August 6

- 7:30-11 a.m. **Registration**, Cosmopolitan Foyer
- 8 a.m. **Posters – Meet the Authors** (authors at posters for questions; poster display continues until 4:45 PM), Cosmopolitan Foyer
- 8:45 a.m. **Moderated Poster Discussion Sessions for Selected Posters**, Cosmopolitan A  
**Welfare - Moderated by Patricia Anderson**  
**Children/Child Development - Moderated by Rebecca Johnson**
- 9:20 a.m. **Podium Session V: Children/ Child Development**  
**Moderator: Nancy Gee**, Cosmopolitan A  
**Cosmin Coltea** & Shelley Parlow  
Companion dogs as social support for families with children with and without Autism  
**Kate Trujillo**, Walter Lamendola, Frank Ascione, & Nicholas Lange  
Developing emotional security among children who have been adopted  
**Karina Hurley** & Lisa Oakes  
Experience with pets and infants' cognitive development about animals  
**Clarissa Uttley** & Dustin Ahadi  
Animals in the early childhood classroom: Challenges and rewards for all parties
- 10:40 a.m. **Break**, Cosmopolitan Foyer
- 10:55 a.m. **Panel: Challenges and Rewards of Group Housing**  
**Moderator: Penny Bernstein**, Cosmopolitan A  
**Frank McMillan (Best Friends Animal Sanctuary)**  
Best Friends: Housing for a high quality of life over the long term  
**Jeremy Marchant-Forde (USDA-ARS/Purdue University)**  
The benefits and challenges of group housing in farm animals  
**Stacey Green (Indianapolis Zoo)**  
More than just a cute face  
**John Rawlings (Waltham)**  
Can group housed dogs be pets?
- 12:05 p.m. **Lunch**, Cosmopolitan C&D

- Optional Roundtables**, Cosmopolitan C&D
- 12:20 p.m. **A: Group Housing - Facilitator - Penny Bernstein**  
**B: Exercise with Animals - Facilitator Mara Baun**
- 1:10 p.m. **Keynote II: Nigel Rothfels**, Cosmopolitan B  
The elephant remains  
**Moderator: Ben Hart**
- 1:55 p.m. **Podium Session VI: Welfare**  
**Moderator: Yoshi Kakuma**, Cosmopolitan B  
Jenny Newman, **Carri Westgarth**, Gina Pinchbeck, Kenton Morgan, Susan Dawson, & Robert Christley  
Human directed dog aggression; a systematic review  
Margaret Slater, **Katherine Miller**, Emily Weiss, Alex Mirontashuk, & Kathleen Makolinski  
Unsocialized or simply scared? The validity of methods commonly used to determine socialization status of shelter cats at intake  
**Chris Degeling**, Melanie Rock, & Lorraine Toews  
Portrayals of canine obesity in English-language newspapers and in leading veterinary journals, 2000-2009: Implications for animal welfare organizations and veterinarians as public educators
- 3:15 p.m. **Break**, Cosmopolitan Foyer
- 3:40 p.m. **Podium Session VII: Exercise**  
**Moderator: Lynette Hart**, Cosmopolitan B  
Ellen Netting, Cindy Wilson, **Jeffrey Goodie**, Mark Stephens, Christopher Byers, & Cara Olsen  
Attachment, social support, and mental health of dog walkers  
**Carri Westgarth**, Jihong Liu, Jon Heron, Andrew Ness, Peter Bundred, Rosalind Gaskell, Karen Coyne, Alexander German, Sandra McCune, & Susan Dawson  
Pet ownership and maternal activity during pregnancy  
**Jeffrey Goodie**, Cindy Wilson, Mark Stephens, Christopher Byers, Cara Olson, Ellen Netting  
Owners and pets exercising together: Dog owner self-report and pedometer-based physical activity changes following veterinary counseling  
**Susan Shea**, Mara Baun, Nancy Bergstrom, Rebecca Johnson, & Lynette Hart  
Effects of a dog-walking program with older adults in long-term care
- 4:30 p.m. **Closing Remarks**, Cosmopolitan B







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# *Meet Your Conference Organizers*

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**Dr. Penny L. Bernstein** Associate Professor of Biology, Kent State University at Stark (on right). She received a Ph.D. in Biology from the University of Pennsylvania with a specialization in animal behavior. She has conducted research on the behavior of animals ranging from sea gulls to house cats, written articles and book chapters on both research and teaching, incorporated research into science education, and taught courses on animal behavior for 25 years. Dr. Bernstein has served in numerous capacities in the Animal Behavior Society, including former chair of the education committee; she continues to serve on that committee, currently implementing its popular Teaching Animal Behavior workshops. The past Secretary of the International Society for Anthrozoology, Dr. Bernstein is a member of the Board and an Associate Editor of *Anthrozoos*, the Society's scholarly journal.

**Dr. Erika Friedmann** Professor, University of Maryland School of Nursing (on left). She received a Ph.D. in Biology from the University of Pennsylvania. She has been conducting research on the health benefits of contact with and ownership of companion animals since the 1970s. Her research indicating that pet ownership is associated with increased likelihood of one-year survival of heart disease patients is seminal to the field. Dr. Friedmann has a strong commitment to furthering and strengthening anthrozoological research. She is an active researcher, conducting NIH funded research, contributing over 80 papers to refereed journals and mentoring students in anthrozoological research. For over two decades she was a faculty member at Brooklyn College, CUNY, serving as chair of the Department of Health and Nutrition Sciences from 1992 to 2003. A founding member and the first President of ISAZ, she is currently President of the Society for the second time.





## **The ISAZ/WALTHAM® Human-Animal Interaction Collaborative Research Award**

The WALTHAM® Centre for Pet Nutrition and the International Society for Anthrozoology (ISAZ) congratulate Drs. Larry Hill and Linda Lord as recipients of the third annual ISAZ/WALTHAM® Human-Animal Interaction Collaborative Research Award for their study, “The Effect of Adopting a Shelter Cat on Loneliness, Depression and Perceived Physical Health of the Elderly.”

The study by Drs. Hill and Lord, Associate Professors at The Ohio State University College of Veterinary Medicine, in collaboration with Dr. Keith Anderson, Assistant Professor in the College of Social Work, was selected for the award after a peer review panel chose to support their project, which aims to assess whether placement of a cat in the home of an elderly person will improve that person’s psychological and perceived physical well-being by decreasing their overall loneliness, depression and anxiety.

The award, presented at the 2011 annual ISAZ meeting in Indianapolis, recognizes the mutual benefit of providing good homes for shelter cats while providing social support for elderly people. The meeting will bring together international researchers and practitioners to hear results of groundbreaking research on human-animal interaction and its impact on human health and well-being.

*For the latest research, news, funding opportunities and events, register for the WALTHAM® Human-Animal Interaction e-Newsletter. To subscribe, contact [info@WALTHAMe-newsletter.com](mailto:info@WALTHAMe-newsletter.com).*

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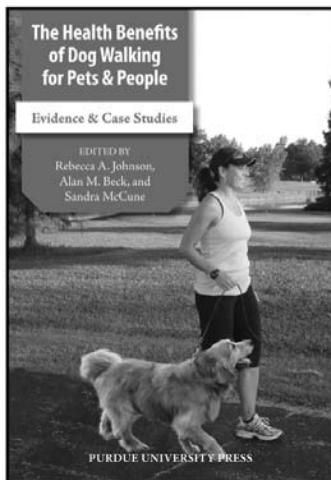
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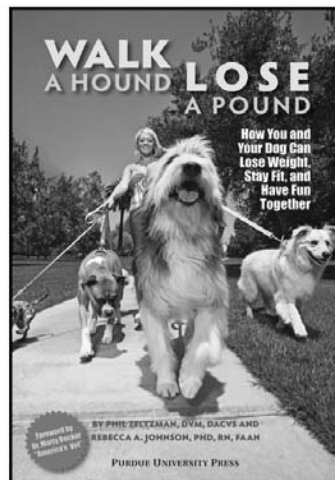
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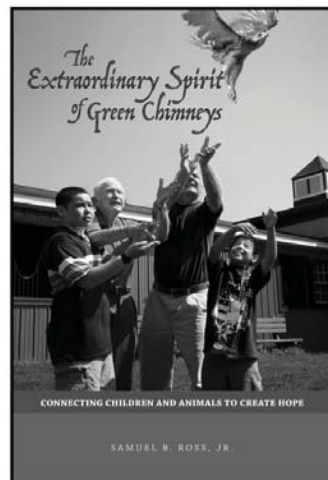
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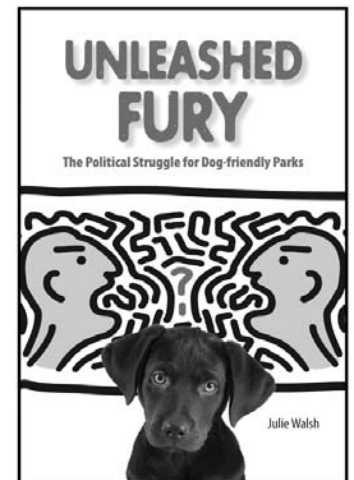
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# *Keynote Presentations*

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## KEYNOTE 1

Friday August 5, 8:40 AM

*1. Case Notes on How Dogs Changed Human History: The Story of a Bond*

**Author: STANLEY COREN**

## KEYNOTE 2

Saturday August 6, 1:10 PM

*2. The Elephant Remains*

**Author: NIGEL ROTHFELS**



## KEYNOTE 1

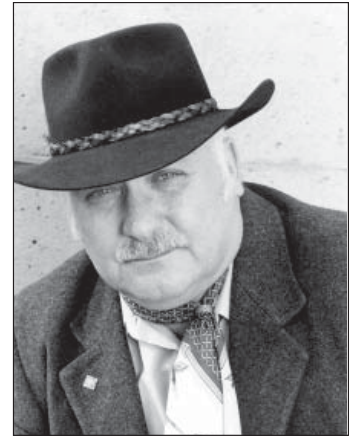
### **1. Case Notes on How Dogs Changed Human**

#### **History: The Story of a Bond**

**Author: STANLEY COREN**

**Affiliation:** Department of Psychology, University of British Columbia, Vancouver, Canada

**Correspondence:** Scoren@psych.ubc.ca



Humans and dogs have been living together for at least 14,000 years. They have worked together, fought together, and formed a bond based upon companionship and more. What is relatively unrecognized by academic historians is the fact that dogs have changed the history of mankind by changing the lives of those people who would go on to shape our history. The human canine bond has had an influence on many major historical events. Alexander the great might not have had his broad expanse of conquest had it not been for a dog, and Napoleon would have lived a much happier existence but for dogs in his life. Richard Wagner's dogs helped him compose music, Picasso's dogs influenced many of his images, and dogs have also appeared in the political realm as companions of Kings and presidents. It even may well be the case that the actions of a dog influenced the separation of the United States from England. This brightly illustrated talk will explore the nature of the human canine bond, and the influence that dogs have had on human history by exploring some of the significant cases which appear to be relatively unknown by the public, and ignored by the academic community.

Coren, S. (2003) *The Pawprints of history: Dogs and the course of human events*. New York: Free Press (pp. i-xiii, 1-322)

Stanley Coren is Professor Emeritus in the Department of Psychology at the University of British Columbia. Best known to the public for his popular books on dogs, he is also a highly respected scientist having done research on a wide range of topics including sensory processes, neuropsychology, and cognition. He has published over 400 scientific reports as well as 19 books for students and professionals. In addition to many honors and awards for his scientific work he has been named a Fellow of the Royal Society of Canada. His research on dogs and the human canine bond has become well known through his bestselling books including, *"The Intelligence of Dogs," "How to Speak Dog,"* and *"How Dogs Think"*. His book for children, *"Why Do Dogs Have Wet Noses?"* was given the *Animal Behavior Society's* award for "Best Children's Book of the Year" and he received the "Writer of the Year" award, from the *International Positive Dog Training Association*, for his most recent works.

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## KEYNOTE 2

### 2. *The Elephant Remains*

**Author:** NIGEL ROTHFELS

**Affiliation:** University of Wisconsin-Milwaukee

**Correspondence:** rothfels@uwm.edu



About ten years ago, I began a long project about elephants which has focused on a basic historical question: why do we think about elephants in the ways we have and do? It seemed obvious enough at the start that a great deal of what most people in the West think about elephants has very little to do with the animals' actual lives and experiences in either their native range countries or in all the other places they have lived in traveled over the last couple of hundred years. Simple questions about where such ideas as elephants never forget or elephants never strike out without cause seemed to beg for some kind of historical study, especially since it was clear that ideas about elephants (like so many other animals) had obviously changed so much in recent centuries. This presentation is a bookend to a paper I gave at the 2002 ISAZ meeting in London, and focuses on the parts of elephants preserved in private and public collections, and what these collections can tell us about the ways we have come to think about these animals. If the elephants of hunting accounts, zoos, circuses, and Hollywood have been asked (and some would say forced) to perform, if their apparent resistance could even become an important part of the spectacles, in this paper I will look at what is left of elephants after they have died, after they have become *almost only* a part of human history.

Nigel Rothfels is the author of a history about the origins of naturalistic displays in zoological gardens, *Savages and Beasts: The Birth of the Modern Zoo* (2002), and the editor of the collection, *Representing Animals* (2002). He received his Ph.D. in history from Harvard University and has been the recipient of research fellowships from the Shelby Cullom Davis Center for Historical Studies at Princeton University, the Humanities Research Centre at the Australian National University, the US National Endowment for the Humanities, and the University of Oslo. He is a member of the editorial boards of several journals in Animal Studies and is the co-editor of a new book series published by the Pennsylvania State University Press: ANIMALIBUS: Of Animals and Cultures.



# *Panel: Challenges and Rewards of Group Housing*

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Saturday August 6, 1:10 PM

## **FRANK MCMILLAN**

Best Friends Animal Society, Kanab, Utah, USA.

*3. Best Friends: Housing For a High Quality of Life Over the Long Term*

## **JEREMY N. MARCHANT-FORDE**

USDA-ARS, Livestock Behavior Research Unit, Purdue University, USA.

*4. The Benefits and Challenges of Group Housing in Farm Animals*

## **STACEY GREEN**

Indianapolis Zoo, Indianapolis, Indiana, USA.

*5. More Than Just a Cute Face*

## **JOHN M. RAWLINGS**

WALTHAM Centre for Pet Nutrition, Waltham-on-the-Wolds,  
Melton Mowbray, LE14 4RT, UK.

*6. Can Group Housed Dogs Be Pets?*





**3. Title: Best friends: housing for a high quality of life over the long term**

**Author: FRANK MCMILLAN**

**Affiliation:** Best Friends Animal Society

**Correspondence:** dr.frank@bestfriends.org

Best Friends Animal Sanctuary houses approximately 1700 animals, made up of dogs, cats, rabbits, birds, horses, donkeys, pigs, and goats. Originally established in 1984 as a permanent home sanctuary for homeless animals, Best Friends has expanded its goal to include the adoption of difficult-to-place and special needs animals into private homes – with long-term sanctuary care being an ever-present safety net for those animals who for any reason are unable to be placed in homes. Group living is the primary method of housing, the primary purpose of which is to maintain high psychological well-being among the social animals by fulfilling a substantial part of their social and emotional needs for companionship and stimulation. Moreover, recent research demonstrating the benefits of social companionship as a buffer against stress and a promoter of health makes group housing contribute in a variety of ways to an improved quality of life.

Best Friends recognizes that there are differences between short-term care for the more readily adopted and long-term sanctuary care. As the length of time in sanctuary (and shelter) care increases, the needs of the animal – both psychological and physical – also change. Long-term care requires an understanding of the effects of extended confinement and chronic medical disorders.

Dr. Frank McMillan has been the Director of Well-Being Studies at Best Friends Animal Society since October 2007. The focus of Dr. McMillan’s studies is the mental health and emotional well-being of animals who have endured psychological trauma, with the goal of better understanding the effects of trauma and developing new therapies.

Dr. McMillan is a board-certified specialist in veterinary internal medicine. Before coming to Best Friends, Dr. McMillan was in private practice in Los Angeles for 23 years and was a clinical professor of medicine at the Western University of Health Sciences College of Veterinary Medicine. Dr. McMillan lectures worldwide and has published dozens of scientific journal articles on the subjects of emotional health and suffering, stress, and quality of life in animals. Dr. McMillan is the author of the textbook *Mental Health and Well-Being in Animals*, and a book for the general public titled *Unlocking the Animal Mind*.

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#### **4. Title: The benefits and challenges of group housing in farm animals**

**Author: JEREMY N. MARCHANT-FORDE**

**Affiliation:** USDA-ARS, Livestock Behavior Research Unit, Purdue University, USA.

**Correspondence:** Jeremy.marchant-forde@ars.usda.gov

All major farm animal species are social by nature; naturally, some would be involved in group living throughout their life-cycle (for example, sows), others may only be part of a group at specific times and for a specific purpose (for example, mature boars at mating). From an evolutionary perspective, group living conveys a number of benefits, but potentially some disadvantages, especially for certain group members (Mendl & Held, 2001). The issue of group housing has become increasingly contentious over the last few decades, as livestock systems have moved from extensive to intensive, primarily driven by economics, which in turn has been driven by consumers. The major impact has been a reduction in the amount of space each animal is given, and a reduction in the complexity of that space. The normal social behavior of farm animals, including aggression, suits their natural environment – i.e. fairly limitless, complex space. When housed, aggression can impact the profitability of a farming system, and the welfare of the animals themselves, and has been a major factor in the development of housing systems designed to reduce the size of the social group (for example, battery cages) or to house the animals individually (for example, gestation crates). This may have been successful in terms of economic return, but has led to increased public concern about animal welfare and a re-examination of farm animal housing system acceptability, including the adoption of legislation. We are currently investigating group housing system design and also social behavior, particularly aggression, in infinite detail so as to gain better understanding of how and why aggression occurs and to determine what management strategies we can employ, that reduce the likelihood of aggression occurring at all, or escalating if it does occur.

Mendl, M. T. and Held, S. Living in groups: an evolutionary perspective. In: Keeling, L.J., Gonyou, H.W. (Eds.) *Social Behaviour in Farm Animals*, CABI Publishing, Wallingford, UK. 2001, 7-36.

Jeremy Marchant-Forde was raised in Suffolk, U.K., spending as much time as he could at his cousin's 250-sow, farrow-to-finish farm. He graduated with a BSc from the University of Bristol and a PhD in sow welfare from the University of Cambridge Veterinary School, under the supervision of Prof. Don Broom. After a Post-Doc working on farrowing systems, in conjunction with ADAS Tarrington, he moved to a faculty position at De Montfort University, spending time as a visiting scientist at the University of British Columbia, Canada and at Purdue University, U.S.A. Jeremy moved to his current position as Research Animal Scientist with the USDA-ARS, Livestock Behavior Research Unit in 2001, based in West Lafayette, Indiana where he is also an Adjunct Professor in Purdue's Department of Animal Sciences. His particular research interests focus on social behavior of swine, including aggression and maternal behavior, and the impacts of stress on animal welfare.

**5. Title: More than just a cute face**

**Author: STACEY GREEN**

**Affiliation: Indianapolis Zoo**

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The Indianapolis Zoo is home to over 200 animals that are divided up into different biomes, plains, oceans, deserts, and forests. Within the Ocean biome is a unique group of animals, the marine mammals. The group includes California sea lions, harbor seals, Atlantic Bottlenose dolphins, a grey seal, a polar bear, and a walrus. The most high profile of these is the Atlantic Bottlenose Dolphin. The Indianapolis Zoo is home to eight Atlantic Bottlenose Dolphins which are the ambassadors for their cousins out in the ocean. Of the eight dolphins we have here at the zoo the four adult dolphins, who are in their mid twenties, were collected from the Gulf of Mexico, our three juvenile dolphins, whose ages range from 9-10, were born at the zoo, and our youngest member new to our pod is a little over a year old. He was a stranded dolphin that was deemed non-releasable and was placed with our dolphin pod. Over fifty years ago these wonderful animals were brought to marine parks, zoos, and aquariums to entertain the public, but in the last twenty years that has changed dramatically. The focus has now changed from entertainment to education, and visitor programs provide information about dolphin care, social behavior and ecology.

We give the highest priority to trainer/dolphin relationship building with our eight dolphins. All of the training that is done is based on relationships that the trainers have built with these animals over the last twenty years. Training can range from getting them adjusted to a new program to training a new behavior. The most important of these behaviors is their husbandry. Husbandry behaviors are trained to help us take better care of them. Another type of behavior is their show behavior; show behaviors help us to keep the dolphin mentally challenged and to stay physically fit. A third set of behaviors involves trainers getting in the water and swimming with them; this helps increase the bond we have with them. One of the greatest challenges we face when working with these animals is their ability to mask any illness they may encounter, which is why the trainer/ dolphin relationship is so important. The trainer can usually tell from very subtle signs that a dolphin might not be well. Environmental parameters are also very important. The dolphins that live at the Indy Zoo live in 2.1 million gallons of salt water which is made up of four interconnecting pools. The interconnecting pools give us a chance to separate dolphins so that they can have time to themselves. The interconnecting pools also help when we have a dolphin birth; it separates the mom away from the pod so that mom and calf can get better acquainted. The pools are monitored twenty four hours, seven days a week. The Indianapolis Zoo has spent over twenty years mastering how to take care of these wonderful animals and continues to make changes as the zoo community and industry matures.

Stacey Green grew up in Chicago with the hopes of becoming a veterinarian due to her love of animals. She worked at a veterinary hospital for seven years going from kennel kid to veterinary technician. She graduated from Iowa State University with a Bachelor of Science degree in 1998, and attended College of Du Page in Chicago to study dolphins and whales. An internship at Walt Disney World In the summer of 1999, involving dolphin research, was followed by an internship at Gulf World Marine Park, which became a full-time position. In the winter of 2003, Stacey came to the Indianapolis Zoo as a trainer; she was recently promoted to Area Manager of the dolphin group.

## **6. Title: Can group housed dogs be pets?**

**Author: JOHN M. RAWLINGS**

**Affiliation:** WALTHAM Centre for Pet Nutrition, Waltham-on-the-Wolds, Melton Mowbray, LE14 4RT, UK.

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Understanding the nutritional requirements of domestic dogs at different life-stages involves collection of valid scientific data under conditions under which all the variables can be controlled or accounted for. Often the best way of achieving this is by housing dogs within a kennel environment. This environment can be very different from that experienced by dogs within the home environment so the data may not be directly relevant to pet dogs. Our challenge is to develop confident and social animals that not only reflect dogs within the home environment, but are also suitable for re-homing. The type of research performed by WALTHAM means that we are able to home our dogs once their contribution to our research is finished. Our success at finding homes is dependant on a significant investment in socialisation and training from an early age and throughout their time spent with us. Socialisation begins from birth where possible, taking advantage of the first 12 week sensitive period. A programme of positive reinforcement is used and each dog is treated as an individual, with their specific needs addressed. This training and socialisation also means we are able to conduct research in a way that minimises the impact on the dog, by habituating the animal to the procedures, so allowing us to generate quality data and knowledge in our field of interest.

John Rawlings is a Physiology graduate of Glasgow University (BSc, MSc) and Manchester University (PhD), with additional postdoctoral experience in pharmaceutical toxicology. He joined WALTHAM (Mars) in 1994 studying many aspects of the nutritional management of canine and feline health and disease states. He has a long standing interest in animal welfare and ethics in a research environment and currently is Head of Welfare & Ethics for WALTHAM. John is a member of The Physiological Society, The Laboratory Animal Science Association (LASA) and the Universities Federation of Animal Welfare (UFAW). He is also a lay member of the British Veterinary Association Ethics and Welfare Group. Currently, John has over 100 publications, 41 of which are full peer-reviewed papers, with 13 of these having first authorship.

# *Podium Session Presentations*

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Friday, August 5

**Podium Session I: *Evolution and Co-evolution* 9:25 AM**

**Podium Session II: *Attitudes* 10:40 AM**

**Podium Session III: *Horses* 1:45 PM**

**Podium Session IV: *Healing* 2:35 PM**

Saturday, August 6

**Podium Session V: *Children/ Development* 9:20 AM**

**Podium Session VI: *Welfare* 1:55 PM**

**Podium Session VII: *Exercise* 3:10 PM**



**7. Title: On the evolution of pet keeping**

**Authors: JAMES A. SERPELL<sup>1</sup> & ELIZABETH S. PAUL,<sup>2</sup>**

**Affiliation:** <sup>1</sup>School of Veterinary Medicine, University of Pennsylvania, USA

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Pets are such a common component of modern life that we tend to take them for granted. Nevertheless, from an evolutionary standpoint, pets present us with a puzzling paradox comparable to that posed by the phenomenon of adoption. In the latter case, it has been argued that adoptive parents may derive deferred fitness benefits from the future contribution of adopted children to the family economy. But in the case of adopted pets, such contributions appear to be minimal at best, whereas the level of investment in their care and sustenance is sometimes considerable. The paradox further intensifies when one considers that pet keeping is not confined to modern, affluent societies, but is widespread among subsistence hunters and horticulturalists whose opportunities to engage in non-fitness enhancing behavior would appear to be much more constrained. This paper reviews five distinct theories—social buffering, parenting experience, honest advertisement, social parasitism, and meme theory—that purport to explain how pet keeping evolved and why it continues to persist and flourish in a wide range of cultures. Based on current evidence, it is difficult to choose among these various competing hypotheses, and the task is further complicated by the fact that the functional value of pet keeping in modern Europe or North America (i.e., its current utility) may be different from its adaptive value in the past. Additional research into the history and prehistory of pet keeping, as well as its current functions, is needed to properly evaluate these various alternatives.

**8. Title: Dogs resembling their owners: Associations between dogs' and owners' behaviors and traits**

**Authors: CHRISTY L. HOFFMAN<sup>1</sup>, JAMES A. SERPELL<sup>2</sup>, ROYCE LEE<sup>1</sup>, & KRISTEN C. JACOBSON<sup>1</sup>**

**Affiliation:** <sup>1</sup>Department of Psychiatry and Behavioral Neuroscience, University of Chicago; <sup>2</sup>School of Veterinary Medicine, University of Pennsylvania

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Human personality traits have been related to individuals' levels of attachment to their pets and to individuals' preferences for different types of pets, but little is known about how owners' reports of their own behaviors and traits relate to their reports of their dogs' behaviors and traits. In this study, 12 dog-owning women between 32 and 49 years of age ( $M=42.7$ ,  $sd=5.8$ ) completed the Canine Behavioral Assessment & Research Questionnaire (C-BARQ; Hsu and Serpell, 2003) and self-report questionnaires on aggression, hostility, anxiety, emotionality, and childhood relationships with mothers (care/involvement and overprotectiveness). The C-BARQ is a validated, owner-completed survey that provides information on dogs' levels of aggressive behaviors, fear of strangers, separation anxiety, attachment, excitability, and trainability. Preliminary Pearson correlation statistics with  $p$ -values  $< .05$  revealed the following: Stranger-directed canine aggression positively correlated with owner verbal aggression ( $r=0.65$ ). Canine fear of strangers was associated with owner hostility ( $r=0.59$ ), as well as with owner affect intensity ( $r=0.70$ ) and affect lability ( $r=0.70$ ). Canine separation anxiety was associated with owner perceptions of maternal overprotectiveness ( $r=0.77$ ). Canine attachment correlated with owner affect intensity ( $r=0.86$ ), and canine trainability was associated with owner perceptions of maternal care/involvement ( $r=0.77$ ). Canine excitability correlated with owner affect intensity ( $r=0.62$ ) and owner perceptions of maternal overprotectiveness ( $r=0.69$ ). These results suggest strong relations between canine and owner behaviors and traits, but the causality of such associations has yet to be determined. Updated results will be presented, and potential explanations and implications of these findings will be discussed.



**9. Title: Housecat origins revisited: Commensalism, co-domestication, and behavioral evolution**

**Authors: HEATHER NICOLE FRIGIOLA**

**Affiliation:** Purdue University

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Understanding of the origin of the domestic cat has increased dramatically over the past decade, yet there is some disagreement over the interpretation of data. This warrants a reevaluation of the perspective on animal domestication. Recent genetic evidence (Driscoll et al. 2007) places the origin of the housecat in the Middle East, outside of Egypt. The same researchers also suggested that the domestication of the cat is “incomplete,” (Driscoll, MacDonald, & O’Brien 2009:9977). This is based on the popular technical definition of domestication put forth by the zooarchaeologist Juliet Clutton-Brock, emphasizing the controlled breeding of animals to maximize their utility to humans (Clutton-Brock 1987). It is worth questioning the definition of domestication as it applies to housecats. Cats differ dramatically from their wild counterparts, not only in their fur colors and texture, but perhaps more importantly, in their social behavior. Domestic cats are prone to living in groups, even when feral, whereas their wild primogenitors are not. Additionally, certain social behaviors in housecats are exhibited more frequently toward humans than toward conspecifics. These behavioral characteristics suggest an evolutionary change resulting from interaction with humans, which constitutes domestication according to a different definition. The present researcher proposes that domestication be defined in relation to the particular history of interaction between a given species and humans, rather than based on a one-size-fits-all definition for all species. This perspective favors an alternative theory of domestication (Coppinger & Smith 1983), in which the process is viewed as the coevolution of interdependent species within a human-made ecosystem. Domestication can be described more effectively if it is understood as a cultural and ecological process with differing histories for each case. People researching the history of the cat should also focus more on the housecat as a social animal.

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**10. Title: Participation in 4-H dog clubs is associated with emotional intelligence and positive attitude towards companion animals**

**Authors: LINDSAY A. MADDEN<sup>1</sup>, HEIDI A. KEEN<sup>1</sup>, PAULETTE E. MILLS<sup>2</sup>, JERRY NEWMAN<sup>3</sup>, FRANCOIS MARTIN<sup>4</sup>, & RUTH C. NEWBERRY<sup>1,5</sup>**

**Affiliation:** (1) Department of Animal Sciences, Washington State University, Pullman, WA (2) Department of Teaching and Learning, Washington State University, Pullman, WA (3) WSU Extension, Washington State University, Pullman, WA (4) Nestle Purina PetCare Product Technology Center, St Joseph, MO (5) Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology, Center for the Study of Animal Well-being, Washington State University, Pullman, WA

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Self-esteem, empathy, resiliency, and learning-to-learn are life skills that play a pivotal role in the development of psychologically healthy youth who are compassionate and caring towards both people and animals. Companion animals play an important role in the lives of youth by providing positive social feedback and emotional support. We hypothesized that youth participating in 4-H dog clubs would show evidence of improved life skills when compared to youth who do not participate in these programs. We surveyed Washington State youth (N=150, 6-17 years old) in three populations: (1) 4-H clubs conducting projects on dog obedience training, showing, and humane education, (2) 4-H clubs conducting projects not involving dogs, and (3) youth in school not involved in 4-H programs, for self-esteem, empathy, resiliency, learning to learn, emotional intelligence, attachment to and attitude toward companion animals using the *Social Skills Rating System*, *BarOn Emotional Quotient Inventory Youth Version*, *Harter Self-Perception Profile*, *Lexington Attachment to Pets Scale*, and *Pet Attitude Scale*. ANOVA indicated differences between the groups. The strongest differences were found between 4-H dog clubs when compared with 4-H non-dog clubs and school groups, with participants in dog clubs having scores indicating a more positive attitude towards ( $F_{1,135}=11.54, p<0.001$ ) and attachment to ( $F_{1,137}=17.44, p<0.0001$ ) pets, and higher emotional intelligence ( $F_{1,146}=7.18, p<0.01$ ). The extent to which these results represent an interest in participation in 4-H dog activities due to pre-existing characteristics as opposed to changes occurring as a result of the 4-H experience is unclear. Nevertheless, all but 20 participants indicated that one or more dogs lived at their home, suggesting that participating in 4-H activities involving dogs may have beneficial effects over and above any benefits resulting from dog contact *per se*. *Funded by Kenneth A. Scott Charitable Trust*

**11. Title: They call it puppy love: A community-based study of influences of pet ownership and attachment on behavior and psychosocial characteristics in children and adolescents**

**Authors: KRISTEN C. JACOBSON, CHRISTY L. HOFFMAN, & ROYCE LEE**

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There is growing evidence that pet ownership and human-animal interaction (HAI) have positive benefits for child behavior problems and psychological well being, but evidence from diverse, community-based samples is less common. This presentation reports results of an ongoing, community-based study of dog ownership and attachment on child outcomes. Preliminary results are based on a sample of N=94 children (58.5% female) aged 10-18 (M=13.4, sd=1.7) from 57 families. Approximately one-third (35.6%, N=20) of families currently own dogs. The sample consists of African American (49.1%), Hispanic (21.1%) and Caucasian (28.1%) families. There are no differences between dog-owning and non-dog-owning families on race/ethnicity or on Caregiver reports of marital status, education level, or income. Children from dog-owning families report significantly more positive attitudes towards pets than children from non-dog-owning families ( $F[1,45] = 4.17, p < .05$ ). There is a trend towards lower rates of depressed mood among children from dog-owning families ( $F[1,91] = 3.34, p = .07$ ), and these children also report significantly more positive attachment to their biological mothers ( $F[1,87] = 4.84, p = .03$ ). However, attachment towards pets among the dog-owning children (N=34) is not correlated with individual differences in attachment towards biological mothers ( $r = .06, p = n.s.$ ). While children from dog-owning families do not differ significantly from non-dog-owning children on mean levels of empathy, antisocial behavior, or psychopathy, there is a trend for higher levels of empathy to be correlated with attachment to dogs within the dog-owning families ( $r = .41, p = .08$ ). Finally, there are emerging gender differences in relationships between dog ownership and attachment and child outcomes, but the sample is currently too small to test these differences statistically. Updated, expanded results will be presented, and implications of these results will be discussed.

**12. Title: Effects of pet ownership on street-involved youth**

**Authors: MICHELLE LEM<sup>1</sup>, JASON B. COE<sup>1</sup>, BILL O'GRADY<sup>2</sup>, DEREK B. HALEY<sup>1</sup>, & ELIZABETH STONE<sup>1</sup>**

**Affiliation:** <sup>1</sup>Ontario Veterinary College, University of Guelph, Canada; <sup>2</sup>College of Social and Applied Human Sciences, University of Guelph, Canada

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The impact of pet ownership on homeless youth is not well understood, for both its benefits and liabilities. Although there are 150,000 homeless youth in Canada on any given night<sup>1</sup>, the prevalence of pet-owning youth is unknown. A recent study in Toronto found that 8% of homeless adults and 11% of vulnerably housed owned pets<sup>2</sup>. In this qualitative study, 10 street-involved youth (7 male, 3 female ; 16 to 24 years-old) and 7 youth service professionals (3 male, 4 female) were purposively sampled to participate in one-on-one semi-structured interviews at three youth drop-in centres, one in Ottawa and two in Toronto, Canada. Youth participants were asked to describe the role, relationship and effect that pet ownership has had in their lives and their concerns and needs as pet owners. Youth service professionals were asked about their perceptions or experiences involving pets and youth, and their perception of the well-being of animals. Interviews were analyzed using latent and content analysis. Substantive themes of “Physical and emotional effects”, “Benefits and liabilities of pet ownership”, and “Pet before self” emerged, with physical sub-themes of effects on housing, income generation, activities, drug use and arrests, and emotional sub-themes of stressors, roles of pet and the human-animal relationship. Findings of this research include previously unidentified benefits that pet ownership may have for street-involved youth, such as creating structure and routine, and decreasing their use of drugs. In contrast, a number of negative effects, such as the impact of pet loss were also identified. Youth consistently reported making choices to stay with their pet regardless of the liabilities pet ownership may have for their own health or success. In order to engage and successfully serve this sub-population of homeless youth for whom a significant human-animal bond exists, acceptance and support of this relationship are needed.

**13. Title: A 'Lifestyle' model of pet ownership: Lifestyle vs relationship factors influencing time of acquiring a 'replacement' pet after loss.**

**Authors: SANDRA MCCUNE**

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Pet loss is widely believed to parallel human bereavement. Numerous publications have documented common reactions that resemble reactions to loss of a human companion.

Despite similarities, there are notable differences. Human bereavement usually requires a considerable time before a person feels able to re-invest in another relationship. In contrast, there is a discernible pattern for many pet owners to rapidly acquire a new pet. One possible explanation is that pet ownership is a major component in a chosen lifestyle.

257 subjects who had lost a previous pet ( cat or dog) within the previous 12 months were recruited from animal shelters in Ross-shire ( Scotland) and Warwickshire (England). Subjects completed a questionnaire which examined how soon they decided to acquire a 'replacement' pet. Clusters of questions examined the closeness of the relationship with the lost pet; grief-like reactions to the loss; and the importance they attached to pet ownership as part of their chosen lifestyle. ( Cronbach's alpha exceeded 0.73 for all clusters) Results indicate that the decision to acquire a pet is rapid. Over one third actively sought a new pet within one month, rising to 67% within 3 months. High closeness of relationship with a previous pet reliably predicted higher grief responses to pet death  $F(1,253)=3.96, P=0.05$  but these owners embarked on a replacement pet within one month. Subjects scoring lower on closeness of the pet-person relationship were more likely to seek a new pet within 2 weeks. Results indicate that a chosen lifestyle which includes pet ownership may be a dominant factor in acquiring a 'replacement' pet.

**14. Title: Socialization of female anglers into and via recreational fishing: Portrayals of women in five popular magazines**

**Authors: ROBERT M. CARINI & JONETTA D. WEBER**

**Affiliation:** Department of Sociology, University of Louisville, USA

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Like many traditional outdoor activities, recreational fishing participation has declined over the last 20 years in the United States. Since females comprise only 25 percent of anglers (U.S. Fish and Wildlife Service 2006), fisheries managers and fishing-related organizations have increased efforts to recruit females into fishing. Female participation galvanized public interest in February 2009 when Kim Bain-Moore became the first woman to compete in the *Bassmaster Classic* tournament. Fishing-themed magazines represent a central source of information about angling and a means of socialization into/via the activity. However, few studies have investigated the extent to which these magazines depict female anglers, or whether female anglers are portrayed as role models. We content analyzed five popular magazines from 2009 and the first half of 2010 (71 issues in total) to study coverage of female anglers subsequent to Bain-Moore's *Classic* appearance. We found considerable evidence of Tuchman's (1978) "symbolic annihilation" in these magazines. Women appeared in less than 10 percent of: (1) covers portraying anglers, (2) in-magazine photographs of anglers, and (3) "hero shots." Women were often characterized as not understanding the appeal of fishing, squeamish, and critical of their partner spending too many hours on the water and too much on equipment. Other depictions cast women as sexualized objects. Yet there were recurring themes that were more favorable, such as valued fishing partners, fearless adventurers, or experts with specialized knowledge. Notably, prominent husbands were often included when female experts were spotlighted. While there was variability across different magazines, the medium overall presented mixed messages to its readers and may thus offer a lukewarm reception for women interested in fishing – and at worst – counter efforts to recruit and retain female anglers. Our study suggests how one element of the mass media may promote or discourage interactions between humans and wildlife.

**15. Title: A home for every horse: Developing a thoroughbred industry standard for lifetime care**

**Authors: BETH DALY & STACIE CLARK**

**Affiliation:** University of Windsor & Adena Springs Retirement

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Historically, people have a paradoxical relationship with horses: they love and depend on them, but fail to provide consistent adequate lifetime care (Darling 2011). Recent media coverage has exposed widespread drug use to improve racing performance in Thoroughbred racing, at the expense of horses' health (Friedman 2010). However, this negative publicity has actually led to an acknowledgment of the problem from within the Thoroughbred community, and a swift implementation of changes: in 32 of 36 the racing states (Friedman, 2010), steroids are now regulated; and there is growing demand for federal intervention to impose an industry standard (Breslin 2010). Another problem garnering recent public attention is that of the startling number of horses-- those who have never raced, or have been retired from their racing career—who are homeless, neglected, or unwanted. While opponents of the *Horse Slaughter Prevention Act* argue that slaughter is the only viable option (Durfee 2009), there are others. A deliberate reduction in breeding, for instance, has resulted in consistently smaller foal crops from 2009 through 2011. There has also been a rise in charitable organizations whose mandates include matching horses with new owners, retraining them, and ensuring they are placed in dignified and comfortable environs for their lifetime. In February 2011, Gulfstream Park racetrack announced the creation of an After-Care program, committing to the health and well-being of every racehorse through the funding of horse retirement, rehabilitation, or retraining initiatives using a designated portion of the track's racing purses. The goals include generating public awareness, setting a model encouraging other racetracks to follow suit, and paving the way for the ultimate goal of establishing an industry standard to ensuring all horses enjoy care for their lifetime. Details and implications of the Gulfstream After-Care Program will be discussed.

**16. Title: The human-horse relationship: Perspectives and implications for equine colic**

**Authors:** CLAIRE E. SCANTLEBURY<sup>1</sup>, ELIZABETH PERKINS<sup>2</sup>, GINA PINCHBECK<sup>1</sup>, DAVID ARCHER<sup>1</sup>, ROBERT CHRISTLEY<sup>1</sup>

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Previous research has focused upon physiological and epidemiological factors surrounding colic risk within the horse. However, as owners play a key role in equine care, an increased understanding of horse-owner experience and perceptions will support appropriately targeted colic advice and prevention messages. In-depth, qualitative interviews were conducted with horse owners purposively selected for their different colic experience including; surgical or recurrent colic, one off episode of colic and no colic experience. Key interview themes included: owners' relationship with their horse; definitions of colic; the signs associated with colic; attitudes to colic; knowledge of colic aetiology; understanding of preventive measures and; factors that may encourage or discourage implementation of preventive measures. Interviews were recorded and transcribed verbatim. Data were analysed using the grounded theory approach. Theoretical saturation of concepts was achieved after analysis of 15 interviews. The human-horse relationship was a unique experience for each individual and was linked to the purpose for which the horse was kept. Owners believed their bond and knowledge of their horse enhanced their ability to detect cues of change in health status including presumptive signs of colic. 'Colic' elicited an element of fear among horse owners regardless of colic experience. Owners with colic experience expressed varying degrees of distress, fear, self blame and trauma in response to the colic. The human-horse relationship influenced decisions surrounding colic management, including when to call the vet and consent for colic surgery. Owner considerations included: the role and utility of the animal; the emotional impact of potentially losing the horse and an anthropomorphic evaluation of the horses' experience.

This study enhances understanding of the context within which colic is perceived and managed by horse-owners in north-western UK and has led to a large postal survey. It has implications for veterinary-client communication and to support educational initiatives relating to colic.



**17. Title: Staff perceptions on the addition of an animal-assisted activity at a regional cancer center**

**Author: JESSICA BIBBO**

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This study is grounded in the emerging view of animal-assisted interventions as a complementary and alternative therapy for cancer patients. A regional cancer center recently adopted a patient-centered care model and staff at this facility provided their perceptions on the addition of a volunteer animal-assisted activity program. Staff perceptions regarding the effects of the intervention on patients and informal caregivers, as well as staff pet ownership were also examined. It was hypothesized that staff who currently have companion animals and have a close relationship with their animals would have more positive perceptions toward the addition of the volunteer animal-assisted activity. Descriptive statistics (based on a 9-point scale) suggest that the staff had a positive perception of the animal-assisted intervention. Staff believed that the intervention was beneficial to both patients ( $M=6.97, SD=1.68$ ) and informal caregivers ( $M=6.97, SD=1.80$ ) and that the program should continue at the facility ( $M=7.82, SD=1.74$ ). It was also noted that most staff currently lived with one or more pets (85.3%). Results of a one-way ANOVA indicated that staff who currently owned only dogs were significantly more likely to suggest that the intervention had been beneficial to patients ( $M=8.89, SD=0.33$ ) as compared to staff who owned only cats ( $M=7.57, SD=1.72$ ),  $F(2, 23)=4.72, p<.05$ . Staff who owned both cats and dogs were not significantly different from either cat-only or dog only owners. Not all staff perceptions of the intervention were positive. The perception that animals should not be allowed in healthcare setting was negatively correlated with the perception that the animal-assisted intervention should continue at the facility,  $r(31)=-.601, p<001$ , and was also negatively correlated with the perception that the intervention had been beneficial to both the patients,  $r(29)=-.401, p<.05$ , and care-givers,  $r(30)=-.397, p<.05$ . These findings illustrate the importance of assessing staff perceptions in order to introduce successful of animal-assisted interventions.

**18. Title: The healing power of pets: Fact, fiction or somewhere in between?**

**Author: HAROLD HERZOG**

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Fueled by media reports extolling the medical and psychological benefits of companion animal ownership, large segments of the public now believe that pet owners are healthier, happier, and longer-lived than non-pet owners (Herzog, 2010). Statements assuming the positive health effects of pet ownership are also common in journal articles on human-animal interactions (e.g. Shipman, 2010). Here I argue that journalists and researchers often make misleading and overly simplistic claims about the health and psychological benefits of living with animals. Over the past 30 years, many positive effects of pet-ownership on humans have been documented. These include lowered blood pressure, increased resistance to stress, and higher survivorship from heart attacks (see review by Friedmann, Barker & Allen, 2011). Less widely known, however, are the substantial number of reports in which living with animals had no effect or even negative effects on people. For instance, Wells (2009) reported that while pet owners with chronic fatigue syndrome believed their animals provide them with a wide range of health benefits, objective evidence indicated they were just as tired, depressed, and stressed out as non-pet owners in a control group. Parker et. al. (2010) recently found that pet-owning heart attack victims were significantly *more* likely to suffer death or readmission to the hospital than non-pet owning victims (22% versus 14%). And several large-scale epidemiological studies have linked pet-ownership with high blood pressure, depression, migraines, obesity, and panic attacks. Finally, there is little or no evidence that pet owners live longer than non-pet owners. Ioannidis (2005) recently examined factors that can produce spurious results in science. These include small and non-representative samples, lack of appropriate control groups, the “file drawer effect,” small effect sizes, and researcher expectations. I argue that all of these may compromise the results of research on the health benefits of pets.

**19. Title: Companion dogs as social support for families with children with and without autism**

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Previous research has shown that companion dogs provide a form of social support for many individuals (e.g., McNicholas & Collis, 2006). The present study investigated the possible role of companion dogs as social support in families with children with and without an Autism Spectrum Disorder (ASD). In-depth interviews were conducted with 14 families of children with ASD and 6 families with typically developing children. A total of 19 mothers, 7 fathers, and 8 children reported on how they and other family members interacted with their companion dogs. All together, these families had 27 dogs ( $M_{age} = 5.5$  yr), 21 of them obtained after the children's birth. We collected and analyzed the data using the Grounded Theory of Glaser and Strauss (1967). The results of the analyses suggested that the effects of companion dogs within our sample were conceptually related to the core category, *match*, which represented the fit between *dog, child, and parent characteristics*. The quality of the *match* influenced human-canine attachment relationships and participant benefits associated with the dog (including direct and indirect social support, physical benefits). For parents, the quality of the *match* was moderated by *family stages* and by *expectations*. The latter was moderated by *knowledge of dog behaviour*. The better the *match*, the better the benefits for the family as a whole. We conclude that (1) the presence of companion dogs is beneficial for most but not all individuals; (2) companion dogs affect individuals, as well as families; (3) children with an ASD and their parents may benefit even more from the presence of companion dogs than families with typically developing children. Theoretical implications for the development of human-canine relationships are discussed, as well as practical implications for involving companion dogs to promote the well-being of families with children with ASDs.

**20. Title: Developing emotional security among children who have been adopted**

**Authors: KATE TRUJILLO, WALTER LAMENDOLA, FRANK ASCIONE, & NICHOLAS LANGE**

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Replicating aspects of Melson, Kahn, Beck, Friedman, Roberts, and Garrett’s (2009) study, this study investigated the development of emotional security among 6-10 year old children who have been adopted by exposing them to an opportunity to interact with either a live dog or a robotic dog. The live dog was a certified therapy dog; the robotic dog was a FurReal® toy. Utilizing a mixed-method embedded experimental design, the experimental condition was intentionally structured to promote engagement between the participant and the dog or robot. 43 children who had been adopted from the child welfare system were randomly assigned to one of two groups. One group was exposed to a therapy dog (n=22), another to the social robotic dog (n=21). The development of emotional security was measured using the “Reading the Mind in the Eyes Test,” a test of social understanding that has been linked in the literature to oxytocin— a hormone premised to be a marker of the development of emotional security. Physiological anxiety was also measured as an indicator of emotional security using the Revised Child Manifest Anxiety Scale-2 (RCMAS-2). Both measures were administered pre and post exposure. A linear mixed-effect regression analysis showed that for boys, there was a significant effect of engagement with either animal on social understanding ( $p < .01$ ); social understanding decreased as engagement increased. A second model indicated that for boys, history of animal cruelty had a significant effect on physiological anxiety ( $p < .05$ ). If boys had an animal cruelty history, anxiety was reduced after the exposure to either dog. Interpretations of the findings suggest that there are characteristics of children who have been adopted and who have a history of animal cruelty that differentially influences their development of emotional security. Implications for HAI models and animal welfare considerations will be discussed.

**21. Title: Experience with pets and infants' cognitive development about animals**

**Authors: KARINNA B. HURLEY & LISA M. OAKES**

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We have been exploring how experience with cats and dogs influences how infants remember and categorize animal images in the laboratory (Hurley, Kovack-Lesh, & Oakes, 2010; Kovack-Lesh, Horst, & Oakes, 2008; Kovack-Lesh & Oakes, in press). This work has uncovered that infants' pet experience is related to *what* they learn (i.e., if they remember individual animals). The current study extends this work to examine how pet experience is related to *how* they learn. We used an eye-tracking procedure to ask whether 4-month-old infants with and without pet experience scan images of animals differently. In particular, we asked whether infants with and without pets looked differently at the heads and faces of animals; the regions most important for infants' memory and categorization of animal images (Quinn, Doran, Reiss, & Hoffman, 2009). We predicted that more sophisticated learners—presumably those with pets—would focus more attention to the head and face regions than would less sophisticated learners. We used an ASL pan/tilt eyetracker to record the eye-movements of 4-month-old infants who had pets at home ( $N=25$ ) and those who did not ( $N=14$ ) as they visually inspected images of cats, dogs, human faces and vehicles. Although infants with and without pets did not differ in their scanning of human faces and vehicles, infants with pets directed a greater proportion of their looking toward the heads of animals than did infants without such experience,  $F(1, 37) = 4.64, p = .04, \eta_p^2 = .11$ . These results are the first to suggest infants look differently at animal stimuli as a function of previous dog and/or cat experience – suggesting that interactions with pets are salient even for young infants. Results will be discussed in the context of ongoing qualitative work in our lab aimed at better understanding infant-pet interactions.

**22. Title: Animals in the early childhood classroom: Challenges and rewards for all parties**

**Authors: CLARISSA M. UTTLEY & DUSTIN AHADI**

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Numerous and varied Human-Animal Interaction (HAI) programs have been created to support the development and learning of young children in educational settings. Examples include programs focusing on reading enhancement and social-emotional skills. What has not been systematically researched is the inclusion of animals in the early childhood classroom on a daily basis or the importance of classroom pets to the early childhood curriculum. This mixed-methodology study sought to develop, and validate, a survey to assess the types and number of animals in early childhood classrooms and how the animals are included in these settings. Through both online and paper surveys, 5698 National Association for the Education of Young Children accredited centers were invited to participate. A survey of 46 questions was completed by 1361 center directors, yielding a response rate of 23.89%. Study participants consisted of center directors across the United States and with an age range of students from infants to school-age children. Results indicate that 819 (60.18%) centers maintain animals in their classrooms. These centers reported having fish (50% of respondents), rodents (19%), and insect species (12.3%) in their classrooms. Several curricula purposes were identified by the participants and included developmental goals such as increasing a child's sense of responsibility (86.5%), empathy (85.4%), and learning (83.8%). Included in the survey were questions assessing the barriers, or challenges to maintaining animals in the early childhood classroom. Benefits, or rewards, for including animals in the classroom included teaching children respect for all living beings, responsibility of caring for a pet, and creating connections between animals and curriculum. Participants reported financial constraints, teacher responsibility, and ethical concerns as the three highest areas of challenges. Psychometric properties of the survey will be briefly discussed with the majority of this presentation focusing on the findings from the study and implications for researchers.

**23. Title: Human directed dog aggression: A systematic review**

**Authors: JENNY NEWMAN, CARRI WESTGARTH, GINA PINCHBECK, KENTON MORGAN, SUSAN DAWSON, & ROBERT CHRISTLEY**

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Human directed dog aggression (HDDA) has major public health and animal welfare implications, yet risk factors for aggressive events are poorly understood. We undertook a systematic review to investigate current knowledge of risk factors for HDDA. Multiple online literature databases were queried using a high-sensitivity low-specificity strategy. The titles and abstracts of 27,565 records were evaluated; 192 relevant papers underwent detailed appraisal. The majority of studies evaluated provided low quality evidence; a small number were regarded as providing moderate quality evidence. Thus, the literature identified was unable to provide robust evidence of risk factors for HDDA. As a narrative systematic review, we identified for inclusion a subset of studies scored as being of at least moderate quality (SIGN grade 2+, 2++, 1+, 1++). Reasons for study exclusion included: poorly defined or inappropriate outcome measures or measures of exposure; inadequate control of potential confounding; and inappropriate selection process, study design or analysis. Where two studies investigated the same risk factor, findings were generally non-comparable due to variation in outcome definition (eg. aggression toward known or unknown people) or the way in which the risk factor was measured or categorised (e.g. breed categories differed between studies). For many risk factors (e.g. breed or age of dog, or its early environment) we found no clear evidence of an effect. However, the failure of these studies to identify an effect is not evidence of no effect. There was some evidence of a complex effect of sex and size, with one study reporting small female dogs at most risk of HDDA. We found some evidence of heredity of HDDA. A key finding of this systematic review was of the need for higher quality research into the factors affecting the risk of HDDA.

**24. Title: Unsocialized or simply scared? : The validity of methods commonly used to determine socialization status of shelter cats at intake**

**Authors: MARGARET SLATER, KATHERINE MILLER, EMILY WEISS, ALEX MIRONTASCHUK, & KATHLEEN MAKOLINSKI**

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Free-roaming cats are often brought to U.S. animal shelters by people who know little about their history. The handling and disposition of a free-roaming cat depend heavily on where the cat appears to fall along the socialization spectrum from truly unsocialized to well-socialized with humans. However, accurately determining the socialization status of a cat entering a shelter can be difficult because many cats behave fearfully upon arrival in the novel shelter environment. This may result in pet cats being euthanized accidentally. There are currently no validated methods of determining cats' socialization status upon shelter intake. Socialization status for 253 cats was determined through a survey of their caregivers. We investigated behavioral, physical, and environmental measures within 5-6 assessment situations for 2 time periods each day for their ability to accurately determine caregiver-defined socialization status within 3 days of arrival in a shelter setting using multivariable forward selection logistic regression analyses. Results indicate that cats' behaviors changed over the 3-day period, altering the ability to accurately predict socialization. Variables significantly associated with moderate to high-socialization status included affiliative behaviors, sleeping, sniffing of and not withdrawing from a plastic rod held near the cat's nose, ear position, head, body and tail position, eye position and eating. Different assessments and time periods produced different models with some overlap of variables. Predictive accuracy was about 75% for all models and AUC ranged from 0.76 to 0.83. Some behaviors commonly used by shelters to determine socialization such as cage condition, cleanliness of haircoat, and vocalization were not predictive in a multivariable model.



**25. Title: Portrayals of canine obesity in English-language newspapers and in leading veterinary journals, 2000-2009: Implications for animal welfare organizations and veterinarians as public educators**

**Authors: CHRIS DEGELING, MELANIE ROCK & LORRAINE TOEWS**

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In industrialized societies, more than one in three dogs as well as people currently qualify as overweight or obese. Experts in public health expect both these figures to rise. While clinical treatment remains important, so are public perceptions and social norms. We present a thematic analysis of English-language mass media coverage on canine obesity from 2000 through 2009, and compare these results with a thematic analysis of articles on canine obesity in leading veterinary journals during the same time period. Drawing on Giddens' (1984) theory of structuration, articles that emphasized individual agency, environmental structure or both as contributors to canine obesity were identified. Comparisons with weight-related health problems in human populations were virtually absent from the veterinary sample. While such comparisons were almost always present in the media sample, veterinarians and other animal welfare spokespeople were quoted in ways that emphasized the agency of individual owners over structural influences. Now that weight gain and obesity have been established as a pressing animal welfare problem, these results suggest a need for research and for interventions such as media advocacy that emphasizes intersections between animal-owner agency and socio-environmental determinants, and connections between animal welfare and human health.

**26. Title: Attachment, social support, and mental health of dog walkers**

**Authors:** F. ELLEN NETTING<sup>1</sup>, CINDY C. WILSON<sup>2</sup>, JEFFREY L. GOODIE<sup>2</sup>, MARK STEPHENS<sup>2</sup>, CHRISTOPHER G. BYERS<sup>2</sup>, & CARA OLSEN<sup>2</sup>

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As part of a larger study of dog walking as a physical activity intervention we assessed levels of attachment, social supports, and perceived health of pet owners. Dog owners (DO) were identified through a veterinary referral hospital and were randomly assigned to a physical activity or standard-of-care group. Participants completed the Medical Outcomes Study (MOS) Social Support Survey, the physical and mental health components of the SF-12, and the Lexington Attachment to Pets Scale (LAPS). Seventy-five (75) individuals began the study, with an average DO age of 43.5 (range 18-73) and an average dog age of 3 years. A typical DO was female, single, and living with others. Only 15 owners indicated they had no close friends. Fifty-two DO (72%) indicated that their pet meant more to them than any of their friends and 59 (81%) agreed with the statement "I believe my pet is my best friend." Sixty-three DO (89%) loved their pets because they never judged them, and 67 (92%) indicated that their pet knows when they are feeling badly. All DO indicated that they believed that loving their pets helped them to stay healthy and that their pet is part of their family. Of particular interest was that younger owners had stronger attachments to their dogs (Spearman correlation  $-.488$ ;  $p < .000$ ) and less social support (Spearman correlation  $.269$ ;  $p < .021$ ); and that owners' mental health scores were higher when they had more friends/relatives (Spearman correlation  $.235$ ;  $p < .048$ ).

The positive health effects of human-animal companionship and the benefits of having a companion to provide socio-emotional support are well-known. Our study adds additional information describing how important pets may be for younger owners, particularly those without friends/relatives in close proximity.

**27. Title: Pet ownership and maternal activity during pregnancy**

**Authors:** CARRI WESTGARTH<sup>1</sup>, JIHONG LIU<sup>2</sup>, JON HERON<sup>3</sup>, ANDREW NESS<sup>3</sup>, PETER BUNDRED<sup>1</sup>, ROSALIND GASKELL<sup>1</sup>, KAREN COYNE<sup>1</sup>, ALEXANDER J. GERMAN<sup>1</sup>, SANDRA MCCUNE<sup>4</sup>, & SUSAN DAWSON<sup>1</sup>.

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It is recognised that maternal obesity has adverse outcomes for both mothers and offspring, and clinicians should advise pregnant women to manage their weight and to exercise (Sayburn, 2010). This study examined whether pregnant women that own pets, particularly dogs, were more active and less likely to be obese in a cross-section of 14,273 pregnant women enrolled in the Avon Longitudinal Study of Parents and Children (ALSPAC). Outcome measures were self reporting of strenuous (enough to work up a sweat) activity (hours per week) at 18 weeks of gestation, types and hours spent in leisure-time physical activities, and maternal overweight defined as pre-pregnancy BMI  $\geq 25$  and obese BMI  $\geq 30$ . The assumption was made that pre-pregnancy BMI was a proxy for weight status during pregnancy. Pet ownership was self reported at 8 weeks gestation. After adjustment for confounding factors known to be associated with pet ownership, activity and weight status, there was evidence for a positive relationship between participation in activity at least once a week and dog ownership (OR=1.27, 95% CI=1.11-1.44,  $P < 0.001$ ). Dog owners were 50% more likely to achieve the recommended 3 hours activity per week, equivalent to 30 minutes per day, most days of the week (OR=1.53, 95%CI=1.35-1.72,  $P < 0.001$ ). Dog owners were more likely to participate in brisk walking activity than those who did not have a dog, (compared to none; 2-6 hrs per week OR=1.43, 95%CI=1.23 to 1.67; 7+ hrs per week OR=1.80, 1.43 to 95%CI=2.27). No association was found between dog ownership and other types of activities such as jogging, keep fit classes or swimming. There was no evidence of an association between dog ownership and weight status pre-pregnancy. Although the effect sizes were modest, encouraging pregnant women to walk their dogs might help to increase their activity levels.

**28. Title: Owners and pets exercising together: Dog owner self-report and pedometer-based physical activity changes following veterinary counseling**

**Authors:** JEFFERY L. GOODIE<sup>1</sup>, CINDY C. WILSON<sup>1</sup>, MARK B. STEPHENS<sup>1</sup>, CHRISTOPHER G. BYERS<sup>1</sup>, CARA H. OLSEN<sup>1</sup>, F. ELLEN NETTING<sup>2</sup>

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Sedentary behaviors contribute adversely to the health burden of owners and their animal companions. The prevalence of overweight and obesity has grown among both dog owners and their pets. Increasing physical activity is important for reversing these trends. We conducted the randomized-controlled trial Owners and Pets Exercising Together (OPET) to examine the impact of veterinary counseling on the physical activity of owners of overweight dogs. Owners were randomly assigned to receive either standard health counseling (SC) about their dog or standard health counseling plus guidance to increase physical activity with their dog (PA). Owners completed the International Physical Activity Questionnaire (IPAQ), a self-report measure of physical activity, and wore a pedometer before and after the veterinary counseling intervention. Three months after the completion of the intervention, self-reported and pedometer-based physical activity outcomes were compared. At the three month follow-up meeting 32 participants had pedometer data and 21 participants had completed the IPAQ. Although self-reported metabolic equivalent of tasks (METs) increased in the PA group ( $M=1908.5$ ;  $SD=3826$ ) and slightly decreased in the SC group ( $M=-130.8$ ;  $SD=2080$ ) this large difference was not statistically different. Analyses of total steps from the pedometer revealed no significant differences between groups. There was, however, a significant increase in steps for all participants ( $M=+746$  steps/day;  $SD=1715$ ;  $t=2.46$ ;  $p=0.02$ ). Similarly, statistically significant reductions in weight (2% loss;  $t=-2.14$ ,  $p=0.04$ ) and the dog's body condition score (4% reduction;  $t=-2.88$ ;  $p=0.007$ ) were found for all participants, but no between-group differences were found. Overall, veterinary counseling did not differentially affect physical activity outcomes, although there was a trend for increased self-reported physical activity among those receiving veterinary-directed counseling. Both groups showed improvements in physical activity and health status, as measured by weight. This suggests that veterinary counseling using pedometry may contribute to improved health behaviors.

**29. Title: Effects of a dog-walking program with older adults in long-term care**

**Authors: SUSAN SHEA, MARA M. BAUN, NANCY BERGSTROM, REBECCA JOHNSON, & LYNETTE HART**

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The purpose of this study was to determine if walking a dog would increase motivation to adhere to a walking program and result in an increase in walking endurance and mobility among institutionalized elderly. An experimental pre and post test two group randomly assigned design was utilized. Thirty subjects, 20 females and 10 males with an average age of 72, were enrolled from three long-term care facilities. The walking program was 3 times a week for 6 weeks. The experimental group walked with a certified therapy dog and handler. The control group walked with only the handler. The Outcome Expectations for Exercise Scale (OEE) was used to measure the perceived benefits of exercise. The 2-minute walk test and the 30 second chair stand test were administered before and after the walking program. OEE scores did not significantly predict adherence to the program. The pre- and post-chair stand test and 2-minute walk test did not show statistically significant differences between groups. All of the participants did show an increase (7 minutes) in walking time during the 6 week period ( $p=0.048$ ). The mean pre and post walk test scores for participants with stroke/arthritis were significantly less than those without stroke/arthritis ( $p=0.013$ ). The experimental group had 12 subjects with stroke/arthritis compared with 6 in the control group. The walk test means in feet walked were  $362.44 \pm 130.36$  (control) vs.  $201.27 \pm 106.25$  (experimental),  $p=0.001$ . Results indicate that practice in social walking has the potential to increase walking time and endurance. Because residents of long term care facilities were not allowed outside the facilities without accompaniment, the presence of the dog handler was key to their walking. Analysis of conversations during the walks indicated that for participants who walked with dogs, the dogs did serve as motivation for continuing in the program.



# Poster Presentations

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Posters are available for viewing throughout the conference.

Poster presenters will be available for discussion during the poster session on Saturday morning.

The two following moderated sessions will be held on Saturday morning.

## **Moderated Poster Session I: Welfare**

**Moderator: Patricia Anderson**

### ***37. Child behavioral patterns that trigger shelter canine bites***

Authors: KERRI DUTCHER, ALYSSA CODES, & CHARLES W. GUNNELS IV

### ***38. Measuring attachment behavior and adoption time in shelter cats***

Authors: K. DYBDALL & R. STRASSER

### ***51. Recent trends of relinquishment, euthanasia, and adoption of dogs and cats in Japan: the roles of national and local governments and legislation***

Authors: YOSHIE KAKUMA

### ***55. Behavior, management and welfare of sled dogs in the Netherlands***

Authors: PAUL KOENE & DEVI HERMSEN

### ***72. Meet your match: An Investigation of an adoption program based on animal personality***

Authors: R. STRASSER, W. FRANK, & N. HARRIS

### ***73. Relationship between owners' neuroticism and their dogs' behavior problem: in the case of aggression behavior***

Authors: KANAKO TATEISHI, NOBUYO OHTANI, & MITSUAKI OHTA

## **Moderated Poster Session II: Children/Development**

**Moderator: Rebecca Johnson**

### ***33. Exploring potential benefits of pet dog ownership for families of children with autism spectrum disorder***

Authors: GRETCHEN K. M. CARLISLE, REBECCA A. JOHNSON, MICAH O. MAZUREK, JESSA LOVE, & CHARLOTTE MCKENNEY

### ***41. The Presence of a Therapy Dog Improves Memory Performance in Preschool Children***

Authors: NANCY R. GEE, JONELL BELCHER, WHITNEY RILEY, MIKE DEJESUS, & JENNIFER GRABSKI

### ***46. Dogs as a means to help at-risk youth develop empathy and self-esteem***

Authors: AUDREY S. HENDLER & CHERYL A. KRAUSE-PARELLO

### ***48. The impact of animal assisted interactions on the behaviors and attitudes of identified at Risk Youth: A three year study***

Authors: KELSEY HOPSON & CHUCK THOMPSON

### ***67. Do dolphins do it: Comparison of three novel to one control condition on motivating multiply-disabled adolescents***

Authors: MELISSA SHYAN-NORWALT, REBECCA SMITH and JOYCE LEVY, JOHN SODERBERG





**30. Title: When the horse is used by urban poor for generating income: Learning on rewards and challenges**

**Author: JOSE AZOH BARRY**

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Since their domestication, horses (*Equus caballus*) have been used for diverse purposes such as breeding, recreation, sport and competition, warfare, companionship, therapy, and feeding in all social classes. Lower classes, however, may have taken a different pace in a situation of transition with a shift in the horse as a work non human animal to a companion for play. In this paper, rewards and challenges related to these differing uses of the horse are addressed from a contemporary perspective in a developing urban context. More specifically, it aims to describe an example of human animal interaction based on animal exploitation for human survival among the urban poor in Nuevo León, Mexico. Data collection and analysis were derived from a qualitative approach implemented through extensive fieldwork (four years) in the metropolitan area of Monterrey (General Escobedo). Evidence was generated from a purposive research sample using a mix of semi-structured and open-ended interviews, and direct observations of 13 horses and their owners/workers (*carretones*) both at work and at rest. Horses are involved in income generation and used as a means of transportation to collect domestic waste from households in the neighborhood and carry it to an official dumping area. They are properly fed, but incur the risk of being hurt by modern vehicles in the road traffic. The relationship of long-term bonds between the horse and the owner has more an economic value than a social or recreational one, and holds rewards and challenges for both and the collectivity. Findings suggest that for these urban poor, survival not only depends on mutual support among friends and family, but also on resorting to animal force to perform their manual labor. This kind of animal human interaction is likely to bring a relief to the stress placed on family structures in cities.

**31. Title: Encounters with exotic animals in the united states: how the missions of zoos and Sanctuaries Shape the Visitor’s Experience**

**Author: PAUL J. BECKER**

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This research, which is part of a larger study on exotic animals, explores how the missions of various types of zoos and sanctuaries shape visitor encounters with exotic animals in captivity. Data for this study was collected through on-site observations and interviews with administrators at 50 zoos and sanctuaries between 2009 and 2011. In addition, content analysis was conducted of each facility’s website to supplement observation and interview data. The study has resulted in a continuum in which typologies have been developed and organized around the following variables: stated mission (mission statements, goals, objectives, etc), accessibility (regular open hours, limited access, closed to the public), opportunities for direct contact with animals (educational, photo ops, etc.), visitor rules and regulations (roam at own pace, guided at all times), delivery of education (signs, guides, internet/social media), types of educational messages (species, threats such as loss of habitat or exotic pet trade, individual animal stories, conservation, etc.), and special events (behind-the-scenes tours, on-site fundraising events, speakers). A major contribution of this continuum and the typologies it presents is to provide a model for researchers, animals practitioners, and the public that illustrates differences between various types of zoos, such as accredited and roadside zoos, and various types of sanctuaries, such as true sanctuaries that do not breed, buy or sell, and places that call themselves sanctuaries yet breed or sell animals. It also outlines differences between zoos and sanctuaries as well as showing how they may overlap by using the same or similar practices to meet their missions.

**32. Title: Are owners less attached to biting dogs that they consider a burden?**

**Authors: ALICIA PHILLIPS BUTTNER<sup>a</sup>, NATASHA FIELDS<sup>a</sup>, KRISTIE BIODROWSKI<sup>b</sup>, & ROSEMARY STRASSER<sup>a</sup>**

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Pet owners that are less satisfied with their pets' behavior (Serpell, 1996) and perceive their pets as burdensome (Raupp, 1999) have reported weaker attachment to their pets. We examined the relationship between owners' attachment to their dogs and the perception of their dogs as a burden among a biting dog population. 132 owners that reported bite incidents to animal control officers completed questionnaires regarding their attachment to the dog. Responses to these questions were analyzed to determine the relationship between the owner's perception of the dog as a burden and how attached or involved they were with the animal using Spearman correlations and Kruskal-Wallis tests. Owners that considered their biting dogs more of a burden felt they did not have enough time to spend with their dogs [ $r_s(121) = .34, p < 0.001$ ], reported that they took their dogs fewer places [ $r_s(119) = -.32, p < 0.001$ ], spent less time each week exercising their dogs [ $H = 7.66 (2, n = 130) p = 0.022$ ], exposed their dogs less often to strangers or new places [ $r_s(121) = -.23, p = 0.011$ ], and considered their dogs to be less important as members of the family [ $r_s(125) = -.20, p = 0.024$ ]. They also reported that their dogs spent more time alone, they used punishment more often, and they spent less time interacting with their dogs, but these variables were only marginally significant ( $p = 0.06$ ). In sum, though most (95%) owners never or seldom consider their biting dog a burden, those who do consider their dog a burden more often may have a weaker attachment to the animal. As behavioral problems are one of the most common reasons for the relinquishment of pets, understanding attachment between owners and biting dogs may shed light on the surrendering of pets due to aggressive behavior.

**33. Title: Exploring potential benefits of pet dog ownership for families of children with autism spectrum disorder**

**Authors: GRETCHEN K. M. CARLISLE, REBECCA A. JOHNSON, MICAH O. MAZUREK, JESSA LOVE, & CHARLOTTE MCKENNEY**

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As increasing numbers of children are diagnosed with autism spectrum disorder (ASD), the need to effectively address the challenges faced by these families is critical. Current estimates from the United States Centers for Disease Control and Prevention (CDC) (2009) indicate that up to one in 110 children are diagnosed with ASD annually. Due to the significant variation in manifestations of ASD, no single method of treatment has been demonstrated to be universally effective. One intervention that has been shown to produce positive results in both adults and children is human-animal interaction. However, no study has investigated the role that pet dogs may play in the family context with children who have ASD. A pilot survey was conducted of parents of children with ASD, and health care professionals (HCP) who work with those children, to describe their perceptions of and experiences with pet dogs in this context (N=62). The average participant was highly educated and female. Findings showed that 67% of the parents believed that a dog would benefit a child diagnosed with ASD. Educational level and perceived benefits were positively and significantly correlated ( $P=0.03$ ). Participants reported both actual and perceived benefits to having a dog in a family with a child with ASD. Fewer than 18% thought that a dog would be a burden for the family. The findings support the need for further study of the potential role of pet dogs in this family context.

### **34. Title: How an animal communicator can help animal shelters prevent adoption failures**

**Author: LESLIE CORIN-ASH for the Editors**

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Animal shelters deal constantly with failed adoptions. Often the adopter misunderstands the animal which leads to animal misbehavior followed by surrender.

New adopters may not understand the language of behavior problems. Most shelter staff and volunteers have strong natural skills in animal communication and are generally well able to interpret the reasons for misbehavior and can teach the family how to 'read' their animals' behavior and make the necessary changes for the adoption to succeed. Additionally, shelters routinely make use of animal behaviorists to assess an animal's chances for successful adoption. Even with these safeguards in place, there are still situations where the animal has difficulty adjusting to the new setting and behaves in ways intolerable to the adoptive family. In some situations even highly skilled behavior trainers making post-adoption home visits to assess and treat the problem are unable to fix it. When an animal has undergone repeated trauma from sustained abuse or neglect, the resultant emotional problem may take longer to resolve than the family can tolerate. While animal care workers are quick to pick up on signs of abuse, they may not get the information about what actually happened. Well-trained animal communicators can learn exactly what happened from the animal itself. Those communicators are in a unique position to treat the animal for the specific trauma that triggered the misbehavior. Once the animal has been treated, the family and the animal can start the work of rebuilding trust and pave the way for a long-term successful placement.

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Kidd, A. H., Kidd, R. M. & George, C. C. 1992. Successful and Unsuccessful pet adoptions. *Psychological Reports* 70: 547-561

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Shore, Elsie R. 2005. Returning a Recently Adopted Companion Animal: Adopters' Reasons for and Reactions to the Failed Adoption Experience. *Journal of Applied Animal Welfare Science* 8(3), 187-198.

DiGiacomo, N., Arluke, A., & Patronek, G. 1998. Surrendering pets to shelters: The relinquisher's perspective. *Anthrozoos*, 11. 41-51.

Kidd, A. H., Kidd, R. M. & George, C. C. 1992. Successful and Unsuccessful pet adoptions. *Psychological Reports* 70: 547-561

Mondelli, F., Previde, E. P., Verga, M., Levi, D., Magistrelli, S., & Valsecchi, P. (1994) Adoption and Relinquishment of dogs in a rescue shelter. *Journal of Applied Animal Welfare Science* 7, 253-266.

Patronek, G. J., Glickman, L. T., Beck, A. M., McCabe, G. P., & Ecker, C. 1996. Risk factors for relinquishment of cats to an animal shelter. *Journal of the American Veterinary Medical Association* 209, 582-588.

**36. Title: When the bond breaks: Variables that influence grief in companion animal loss**

**Authors: DAWN COWLING & MARGARET SCHNEIDER**

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This study reports preliminary results from a web based survey which assessed variables that influence grief after companion animal loss. Early literature has revealed that guilt is an important aspect of pet bereavement, which has been acknowledged by practitioners, but has received little academic attention. The psychological processes by which people deal with companion animal loss needs to be better understood. The goal of this study was to provide greater insight into the variables which influence grief after the loss of a companion animal. Specifically, the survey assessed *type* of human–animal relationship (i.e. pets who are perceived as children compared with pets who are perceived as good companions) and owner grief. The study also investigated how personality and social variables such as attachment, guilt and loneliness modify owner grief. Male and female participants ( $N = 25$ ) who had lost a companion animal in the last six months completed the survey. A main effect was observed for type of relationship and level of grief  $F(3,20) = 7.005, p = 0.002$ . It was found that individuals who classify their pets as “a good companion” had significantly lower grief scores relative to those who considered their pets to be their children and best friends. Type of relationship and level of attachment also approached significant levels  $F(3, 20) = 2.524, p = 0.087$ ; although a larger sample size is needed to elucidate the findings concerning attachment, guilt and loneliness. The results also indicate that owner age is negatively correlated with guilt  $r(24) = -0.435, p = 0.034$ . These preliminary findings offer valuable insight into the emotional challenges experienced while grieving the loss of a pet. It appears that those who label their pet as “companion” are affected less by the loss of their companion animal than those that view their pets as their children.

**36. Title: Differences in emotional reactions between incidents of animal cruelty and infant cruelty**

**Authors: BETH DALY, NIK TAYLOR, TANIA SIGNAL**

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Widespread media scrutiny of intense public reactions to horrific incidents of animal cruelty has led to speculation that people react more strongly to animal abuse than to similar incidents of child abuse. However, this is largely anecdotal, and in fact, there is virtually no academic research supporting the perception. As such, this pilot study was undertaken to explore whether differences existed between individuals' reactions to media accounts of animal abuse, and to child abuse, which were presented in two vignettes to all participants (n = 123). One described a media account of an abused infant, and the other of an abused puppy. Other than interchanging "puppy" and "infant," the scenarios were identical. Respondents ranked how "bothered" they were by what they read, and rated their emotional reactions. Preliminary descriptive analyses revealed no remarkable differences between initial reactions, with more than 90% indicating they were bothered "extremely" or "a lot" by both scenarios. Categorized emotional responses showed that feelings related to Helplessness and Disgust were similarly ascribed to both scenarios. However, responding to the puppy-abuse vignette, 24% were "sad" or "upset," as opposed to only 12% in response to the infant scenario. Further, 16% expressed anger toward the puppy situation, as opposed to 9% for the infant cruelty. Notable differences were also gleaned from qualitative responses: of the 42 optional comments, two referred to human suffering, whereas 21 expressed concern for the treatment of animals. While differing responses to animal and child cruelty may not be clearly delineated, these initial findings suggest that: (1) there may be unique patterns of categorized emotions, each of which align more closely with one type of cruelty over the other; and (2) that individuals may be more inclined to express concern for animal welfare than for child welfare.

**37. Title: Child behavioral patterns that trigger shelter canine bites**

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Domestication created an intimate relationship between human adults and canines. During domestication, adult humans used canines for working tasks and it appears that children interacted rarely with canines. This changed during the Victorian Era some 200 years ago when canines were brought into the home and brought into close contact with children. Behavior typical of children appears to be unintentionally provocative to canines, which makes children more vulnerable to dog bites than adults. In this study, seven child typical behavioral patterns were simulated to see which actions were most likely to trigger a negative response in canines. This study was conducted with shelter canines (n=10) at the Gulf Coast Humane Society. Preliminary results show that canines took the longest to habituate to being grabbed in their body and mouth ( $F_{6,78} = 2.528, p = 0.027$ ), which suggests that these behavioral patterns may be associated with biting. In addition, canines presented an inactive tail during the "Child Screaming Test" ( $F_{6,78} = 2.060, p = 0.068$ ), suggesting that they were tense. Canines bit during the "Oral Tactility" and "Territorial Behavioral" tests, which further indicates the danger of these behaviors. This study is ongoing and more complete results will be provided during the conference. A better understanding of how canines respond to children from studies such as ours should help prioritize humane education efforts.



**38. Title: Measuring attachment behavior and adoption time in shelter cats**

**Authors: K. DYBDALL & R. STRASSER**

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Little research exists on the attachment relationship between cats and their human-caregivers and what information people use to select one companion animal over another. Some studies suggest that social support and attachment are prevailing principles for keeping companion animals. Could social behaviors influence which companion animal an individual chooses and are there measurable differences in behaviors of those companion animals selected for adoption over others? We measured adoption time differences between owner-surrendered and stray shelter cats. In both experiment 1 (N= 1089) and experiment 2 (N=57) data revealed owner-surrendered cats were adopted significantly sooner than stray cats. Additionally, in experiment 2 we measured pre-attachment behaviors (approach and proximity to a human in a room). A linear regression indicated a quicker approach significantly reduced adoption time. A hierarchical regression indicated that latency to approach significantly improved the prediction model over entry type (owner-surrendered or stray) alone, suggesting that approach behavior influences choice. In experiment 3, college students (N=120) completed a dual-image on-line survey picturing 12 cats. Results indicated that the same cat received higher adoptability ratings when presented as owner-surrendered than when presented as stray, suggesting that biases may exist about the adoptability of some companion animals. Overall, data from these studies indicate that both entry type and behavior underlie the decision about adoptability. This is the first study to examine how attachment behavior of the cat influences adoption and provides a greater understanding of factors influencing adoption choices of shelter cats. Decreasing adoption time positively impacts a cat's outcome by reducing risk of contracting illness, developing negative behavior, and poor welfare. Strategies to enrich cat-human interactions may increase chances for a successful outcome of the cat and reduce adoption time. A few days, or even one day, can make a significant impact on the animal shelter and the companion animal.

**39. Title: Deliciae Romanorum: Roman attitudes towards companion animals**

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This paper examines how the ancient Romans thought about and interacted with animals, particularly companion animals. It also discusses which animals were most popular, the qualities of these animals which were most admired, and the importance of these relationships to the people of the Roman world.

I rely chiefly on primary sources from the Ancient Roman world, both written and visual. Written sources range from treatises composed by Roman authors on animals to funerary inscriptions. Visual sources include funerary monuments and other forms of art. Secondary sources discussing these topics have been beneficial, although this area has yet to be thoroughly examined by historians. Modern works on anthrozoology such as those by James Serpell, along with studies of Roman social interactions were used in interpreting the human-animal relationships present in the Roman world.

I found the Roman people to be adept at compartmentalizing their attitudes towards animals; they sacrificed animals, they delighted in animal blood sports, but they also loved animals as pets. These companion animals were valued as friends in a status-conscious society where friendship among humans was seldom uncomplicated. Qualities which were admired in companion animals were often similar to those qualities admired in Roman women; loyalty, chastity, exclusivity, beauty, cleverness. Fish, birds, and dogs were the most popular animals in the companion role.

**40. Title: “Pawsitive” living teaches life skills to at-risk youth**

**Authors: JADE FRANK & PAM HARDIN**

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Developing a pet therapy program at a residential treatment facility for at risk youth presents challenges in providing consistent and effective interventions. Through learning about, interacting with, and bonding with animals, students learn to cultivate compassion, kindness, and responsibility. At the program’s inception, sessions consisted of animal-assisted activities in a group setting with minimal staff input or involvement. After a year of visits to the facility, the program was suspended due to a drop in volunteer interest. Volunteer feedback indicated student interactions were not goal driven, lacked specific objectives and needed focus. Collaboration resumed when a key facility staff member, or “champion” was identified. New methods to re-introduce pet therapy visits as a structured, educational interaction with students were developed. Facility staff members identified core character development traits, based on treatment goals and objectives, utilizing strategies from their successful in-house equine assisted therapy program and integrating the AKC’s Safety Around Dogs Education Program for Children. In the restructured program, pet therapy volunteers provide educational sessions incorporating the character development traits, using dog behavior as a catalyst. For example, sessions on Respect focus on safe interactions with a dog; Responsibility promotes accountable pet care; Communication interprets canine and human body language. Additional guidelines were developed to help new teams and staff members work cohesively in maintaining safety, consistency and reinforcing student accountability. Volunteers received direct staff support including briefing and documenting of pertinent milieu issues prior to and post session. Also, an activity workbook was compiled to provide volunteers with tools to facilitate sessions. Outcomes have included renewed volunteer interest and participation, spurring program expansion. Conclusions indicate strong staff and volunteer buy-in, creativity, flexibility, and collaboration is necessary for the success of an educational animal-assisted activities program. A workbook is an effective tool to standardize sessions with this population.

**41. Title: The presence of a therapy dog improves memory performance in preschool children**

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The purpose of this study was to determine whether the presence of a dog would have an impact on the recognition memory performance of preschool children. This work represents an extension of previous research which found that preschoolers require fewer instructional prompts to complete a memory task in the presence of a dog. This finding indicates that the children may be better able to focus on the task itself and as a result improved memory performance is likely. The earlier experiment utilized a task that was readily completed by the preschool children, and thus the overall performance data were at ceiling. The current study added a manipulation of task difficulty by including Number of Distracters (1 versus 4) present at test as a variable. Increasing the number of distracters in a simple recognition task is known to make the task more challenging. The co-participant and the subject of the story in the task was, alternately, either a real dog or a human. The children were told that the co-participant went on a trip and saw many things. The children were shown the objects and then asked to help the co-participant recognize which objects they had seen on the trip. As expected the number of distracters did alter the difficulty level of the task such that the children performed significantly faster ( $F(1, 20) = 23.54, p < .01$ ) and more accurately ( $F(1, 20) = 13.01, p < 0.01$ ) in the 1 versus the 4 distracter condition. More notably, the results showed that the preschool children were faster ( $F(1, 20) = 4.97, p < 0.05$ ) and more accurate ( $F(1, 20) = 6.68, p < 0.05$ ) at completing this task in the presence of a dog relative to the human. Implications of this provocative new finding will be discussed.

**42. Title: The *HumAnimal-Interact*: A theoretical approach to behavioral assessment in AAT/AAA**

**Authors: LISA M. GLENK<sup>1,2</sup>, OSWALD D. KOTHGASSNER<sup>3,4</sup>, KRISTA ROTHSCHILD<sup>5</sup>, NATASCHA STEJSKAL<sup>4</sup>, ESRA SCHROFFENEGGER<sup>4</sup>, EVA BURGER<sup>4</sup>, KAROLINE TURNER<sup>4</sup>, & BIRGIT U. STETINA<sup>4,5</sup>**

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The positive effects of animal-assisted therapy for humans are well accepted and documented. Despite the growing popularity of animal-assisted therapy, evaluation tools for the interaction between humans and animals in this setting don't exist. The questionnaire, *HumAnimal-Interact*, covers different aspects of interaction and is designed for application in the context of animal-assisted activities. It focuses on dogs, since they are the most common animal associates in animal-assisted interventions. In addition the human-animal-interaction the questionnaire also examines the human-human-interaction, because they both happen at the same time during animal-assisted activities. The questionnaire is divided into three parts: behaviour, emotion and well-being/condition, and attribution. The first part includes items that can be summarized as physical contact, verbal behaviour, gesture, facial expression, posture and eye-contact based on recent psychological and ethological research. The second part contains the basic emotions, based on the work of Paul Ekman (1972), plus jealousy and feelings of activation and well-being. The frequency of the appearance of each point can be rated on a verbal scale with seven categories. Additionally estimations of the intensity of the emotions and conditions can be made on a continuous scale. In the third part of the *HumAnimal-Interact*, the raters' attitudes towards the interacting persons and the dog are evaluated, as well as, a general appraisal of the interactions. For this purpose, opposing adjectives pairs are used. The current version of the *HumAnimal-Interact* will be statistically tested, evaluated and consequently refined. The instrument is used to assess the impact and quality of animal-assisted interventions and to discover connections between aspects of the interactions and positive as well as negative outcomes for humans and animals.

**43. Title: Salivary cortisol in dogs and their handlers during dog-assisted interventions in prison, inpatient substance abuse treatment and geriatrics**

**Authors:** LISA MARIA GLENK<sup>a,b</sup>, BIRGIT STETINA<sup>c</sup>, BERTHOLD KEPPLINGER<sup>a,b</sup>, & HALINA BARAN<sup>a,b</sup>

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Dog-assisted therapy (DAT) incorporates specially trained dogs and their handlers into a therapeutic intervention. DAT aims to facilitate therapeutic progress by improving physical, social, cognitive and emotional conditions in patients. The establishment of a relationship with a dog through guided interaction is particularly effective in patients who are unwilling to form a bond with a human therapist. Here, the inclusion of a dog has proven especially successful in enhancing human responsiveness and motivation. In contrast, it is still uncertain whether there are notable welfare implications for the participating dogs and their handlers. Suggestions have been based primarily upon conclusions drawn from a limited number of studies. The secretion of the adrenal hormone Cortisol is related to a cascading physiological and emotional response of arousal. Salivary Cortisol has gained wide acceptance as a non-invasive indicator used in human and animal welfare assessment. The purpose of this study is to approach dog and human welfare by identifying levels of salivary Cortisol associated with subsequent DAT sessions in prison, inpatient substance abuse treatment and geriatrics. In our ongoing investigation, the participating dogs (n=19, different sex, age, breed and castration status) are privately-owned by their human handlers (n=12, all female, different age). We used saliva collection devices to collect pre-post and baseline salivary samples. Cortisol levels were determined with an enzyme immunoassay. Preliminary results and conclusions of the study will be presented.

**44. Title: Case study of camelid therapeutic interactions**  
**Authors: LORI GREGORY, TONI WOODARD, & ROBERT WOODARD**  
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The benefits found in Animal-Assisted Interactions (AAI) using members of the Camelidae family have received limited recognition despite llamas having been used in this capacity for nearly 20 years. Over the past four years, three therapy llamas (two which are Delta Society-certified) from Mountain Peaks Therapy Llamas have made over 350 visits in the Portland (OR) metropolitan area. Rojo and Smokey, both 9-year-old geldings, and 2-year-old “rescued” gelding named Beni, bring unique traits beneficial for AAI. Their appearance, size, fiber, and personalities set them apart from other animals commonly used for therapy. Subjects of all ages demonstrate a natural curiosity about llamas. We often witness a sense of delight and wonder as these well-trained, gentle animals visit hospital rooms, special needs classrooms, bedsides in rehab facilities, senior communities, and other unexpected locations. Llamas are exceptionally gentle when hand-fed, reducing human fear and fostering interaction and trust. Well-trained llamas can be easily led, trained to pull a cart, and ridden (by a small child). These activities foster self-confidence and a sense of empowerment. Remarkable transformations have been observed and noted by nurses, teachers, and others familiar with subject behavior prior to llama interactions. Improvement in motor development, vocalization, increased socialization, reduced self-stimulation, and increased self-control and socialization in autism-spectrum individuals have all occurred during our visits. Additional studies are needed to document the effectiveness of using llamas for therapy in various groups. We plan to partner with professionals to conduct research on the health benefits of using llamas for therapy.

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**45. Title: Compatible interactions of young children with family cats**

**Authors: LYNETTE A. HART, BENJAMIN L. HART, & LESLIE A. LYONS**

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As part of a larger project assessing the role of a family cat for children with special needs, a 35-item web-based survey was posted on appropriate list serves to reach households having at least 1 child, 3-12 years of age, and a cat 1 year of age or older. The 730 respondents referred to the cat that interacted with children the most. Typically, the children and cats resided in busy human-animal households, over half of which had one or more dogs and 65% had multiple cats. The cats most affectionate towards adults and/or children (N=265) were predominantly 1-6 years of age. Cats rated as very aggressive to adults and/or children (N=35) were predominantly in the age category of 6-10 years. Affectionate behavior directed towards adults did not assure that the cat would be affectionate towards young children. In fact, only 18% of 203 cats highly affectionate to adults were also highly affectionate to children aged 3-6 years, though 43% were affectionate to children aged 6-12 years. Of 57 cats highly affectionate to children aged 3-6 years, however, 65% were also highly affectionate to adults. Cats without fear of visiting children were most likely to be affectionate to 3-6 year-olds in the family and the most aggressive cats typically lived with no other cats or dogs. Tentative conclusions were: 1) to predispose cats to interacting affectionately towards young children, cats should be well habituated (as kittens) to several children and even dogs and other cats; 2) one should not assume that a cat affectionate towards adults will also be affectionate to young children; and 3) cats in the age range of 1- 6 years will be more affectionate than cats older than 6 years.



**46. Title: Dogs as a means to help at-risk youth develop empathy and self-esteem**

**Authors: AUDREY S. HENDLER & CHERYL A. KRAUSE-PARELLO**

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Studies demonstrate that dogs can improve the physical, mental and/or emotional well being of children whether they are hospitalized, abused, autistic or struggling to read. Across the country, prison inmates prepare dogs to be working dogs or make shelter dogs more adoptable; in the process many develop empathy, responsibility, and self-esteem. However, few dog programs exist to help at-risk youth develop the empathy and self-esteem that might keep them from ever going to prison. Growing up without foundational elements such as safety and having one’s physical and emotional needs consistently met, makes it more difficult to develop empathy (Ascione, 2005). A Fair Shake for Youth uses a combination of hands-on work with therapy dogs and humane education to help teens develop critical prosocial skills. Studies show that children who form bonds with animals score higher on empathy, demonstrate greater self-esteem, are less likely to be aggressive, and are better able to look beyond their own needs when making decisions (Doris Day Animal Foundation, 2005). In weekly sessions, A Fair Shake for Youth works with males and females, 13-18, mandated by the juvenile justice system to attend community-based intervention programs. Youth practice basic commands, teach tricks, and simply play with the dogs. A session might be devoted to a guide dog team demonstrating their work and talking about the trust that is built; the group might take a field trip to the ASPCA or an agility center; or a YouTube video about greyhound racing or PTSD service dogs be shown to launch discussion about the rights or capabilities of dogs. Research is being conducted with a target population of 50 participants over an 18-month pilot period to assess changes in participants’ attitudes toward animals, capacity for empathy, and feelings of self-esteem using pre and post-survey measures and qualitative interviews.

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**47. Title: The psychological and physiological effects of using a therapy dog in mindfulness training: A case study**

**Author: COURTNEY L. HENRY & SUSAN L. CROWLEY**

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Research from a variety of fields has demonstrated the benefits of human-animal interaction for physical and mental health (Katcher & Beck, 1983). As evidence of its benefit increases, animal-assisted therapy (AAT) and animal-assisted activities (AAA) are becoming increasingly popular in a variety of healthcare settings, including residential care sites and outpatient mental care facilities. Therefore, it is necessary to empirically explore what and how therapy animals may contribute to specific treatment interventions with specific populations. This study examines the psychological and physiological effects of adding AAT to a modified Mindfulness-Based Stress Reduction program (MBSR; Kabat-Zinn, 1990) for a client experiencing psychological distress, including anxious and depressive symptoms. It was hypothesized AAT will be particularly complementary to mindfulness-based interventions because the therapy dog will provide a focus for attention to the client's current experience and exemplify acceptance and "being," enabling the understanding and practice of the main aspects of mindfulness. The client completed the intervention consisting of six 50-minute individual therapy sessions conducted by a graduate student therapist and a certified therapy dog under the supervision of a licensed psychologist. Each session consisted of a didactic and an experiential component modified to complement work with a therapy dog. Mindfulness, state anxiety, psychological distress, blood pressure, and heart rate were assessed at each session. Results of the case study will be presented. Findings of this study will provide information on the feasibility, acceptability, and utility of the intervention. Future studies will need to increase methodological rigor by including larger sample sizes and a randomized control trial design. Results of the study will aid in the development and examination of empirically-supported treatments complemented with AAT.

**48. Title: The impact of animal assisted interactions on the behaviors and attitudes of identified at Risk Youth: A three year study**

**Authors: KELSEY HOPSON & CHUCK THOMPSON**

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This presentation describes the findings of a three year study by CBR YouthConnect on the impact of participating in humane education on identified at-risk youth. The sample (n=189) ranges in age from 7-18 years and is drawn from Denver-area community agencies serving “at-risk” youth. These agencies include transitional housing programs, residential and outpatient treatment centers, alternative schools, and children’s advocacy programs. Youth participated in the humane education program for 60-90 minutes weekly, for up to 12 weeks at a time.

A pre- and post-test was administered to all participants in the humane education program for the past three years and the results were analyzed by CBR YouthConnect staff. Analysis of these results indicates increased empathy, respect, and responsibility in youth towards animals, adults and peers. Participants also demonstrate increased awareness and understanding of how to care for animals in the home, and a decreased proclivity to use physical or verbal force to ensure compliance from animals, adults, or peers. It is believed that these findings are directly related to participation in humane education. Also, many youth express a desire to participate in the humane education program multiple times or to continue to volunteer to work with the animals following successful completion of the class series.

Staff members from agencies that provide participants informally report that youth in the humane education program are more likely to be compliant with agency expectations during and immediately following participation. Staff also report increased ease in working with and positive attitudes toward youth after being given the opportunity to view the participants in a fresh, positive context. It can be reasonably inferred from these results that participants in humane education may be more successful in completing treatment, or in minimizing self-imposed obstacles that may interfere with achievement in school, home, and the community.

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**49. Title: Anthropomorphism: Human attribution of emotional understanding to pet dogs**

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Literature in biology, ethology and psychology has long noted the existence of anthropomorphism (e.g., Darwin, 1898), but it has primarily been considered an experimental confound (Wynne, 2002). Recently the concept has been discussed as a useful tool in understanding human-animal interaction and promoting animal welfare (Watanabe, 2007). Studies of anthropomorphism have examined behavioral aspects such as dressing dogs in sweaters and having canine birthday parties, or social aspects such as nurturance and companionship. Another aspect involves our beliefs about dogs' mental and emotional life. The current study examines the degree to which people attribute emotional understanding to dogs and the evidence people present to support these beliefs. *Method:* 127 participants were asked to provide examples of when they felt a dog had and had not displayed emotional awareness. Independent judges categorized the responses using a rubric for scoring whether the participants indicated the dog understood human emotions and whether those emotions and behaviors were habitual or unusual. Additional data were recorded about the types of emotions and behaviors that were described. *Results and Discussion:* Most examples given described dogs understanding human emotions ( $X^2(1)=34.3, p<.001$ ). When compared with examples of dogs not understanding, these examples were more likely to describe changes in human emotional state ( $X^2(1)=46.25, p<.001$ ), to state that the dog understood this change ( $X^2(1)=78.9, p<.001$ ), and to state that the dog's behavior was caused by this change ( $X^2(1)=55.3, p<.001$ ). Descriptions of a dog behaving atypically at the same time a human displayed emotion also promoted the idea that dogs understood and reacted to human emotions ( $X^2(1)=6.31, p=.012$ ). The results indicate humans have a strong tendency to attribute emotional understanding to dogs, that this belief is comforting, and that dogs are reported to respond to human behavioral change in a way that provides evidence for social cognition.

**50. Title: Influence of observers' backgrounds for the evaluation of the stress in cats using the Cat-Stress-Score**

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The Cat-Stress-Score (CSS), developed by Kessler & Turner, is widely used as a rating scale of stress in cats. The CSS is based on posture and behavior of the cat for evaluation, but there is a risk that the evaluation may be dependent on the observer's subjectivity. This may cause difference in the scores obtained among observers. In this study, we examined if the evaluation of the stress in cats using CSS was influenced by observers' profile such as gender, experience of owning dogs or cats, and experience of learning animals. Fifty university students, whose profiles were obtained by questionnaire, rated the stress levels of cats on ten sheets of photographs according to CSS and gave ten scores. The standard score of each cat on the photograph was determined by two experienced observers. Ten points were gained if the score made the same as the standard, and five points were gained if it shifted by one, and the sum of points was calculated for each student. Thus the points represent each observer's accuracy of evaluation. We compared the mean score and total point between male and female, and senior and junior students, those with and without experience of keeping or learning animals, using t-test. We found that the mean score of senior students was significantly lower than junior students ( $p < 0.05$ ). The total point was significantly higher for female ( $p < 0.01$ ), those studying animal science ( $p < 0.01$ ), and the senior students ( $p < 0.05$ ), respectively. The experience of taking care of dogs or cats did not affect the score nor point, significantly. These results suggest that accuracy of evaluation of the stress in cats should be affected by observers' backgrounds such as gender, and experience of studying animals.

**51. Title: Recent trends of relinquishment, euthanasia, and adoption of dogs and cats in Japan: the roles of national and local governments and legislation**

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There are few studies showing recent actual condition of companion animal welfare in Japan as compared to those in Western countries. As reported by Hart, Takayanagi, and Yamaguchi (1998), the unique system of governmental network of animal shelters in Japan enables to grasp the trends of relinquishment, euthanasia, and adoption of dogs and cats. Last revision of the law in 2005 required the government to establish the basic guideline to promote animal welfare as nation-wide. The guideline clearly states policies such as reduction of the number of cats and dogs taken into shelters by half and increasing the return and adoption rates, and encouraged the municipal governments to establish action plans between 2008 and 2018 to work harder. The number of registered dogs according to the Rabies Prevention Law reaches as many as 6,880,844 at the end of March, 2010. This almost doubled the number of dogs Presented in the previous study. On the other hand, the number of cats and dogs admitted to shelters drastically declined from 420 thousand in 2004 to 310 thousand in 2009. Although the rate of euthanasia of cats is still as high as 96 percent, the return and adoption rate for dogs is 29 percent of 113 thousand dogs taken into shelters in 2009, increased from 10 percent in 1994. Japanese Ministry of Environment is preparing for amending the Act on Welfare and Management of Animals which has been often revised by demands by the general public and the animal protection societies. Recently private organizations play more significant roles in rehoming unwanted animals, although local governments keep to play the major roles. If intake of dogs continues to decline at the same rate, it may be possible for Japan to nearly abolish euthanasia of unwanted dogs shortly although issues will remain with cats.

**52. Title: Relationship between human-canine attachment and student perception of adjustment to college**

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The human-animal bond has been well researched in health care and there are great benefits to people both physiologically and psychologically. There are few studies that research canine use in the education system. Universities show a reduction in traditional-aged student enrollment during freshmen year related to multiple stressors, including homesickness. The human-canine attachment has shown to reduce feelings of loneliness and isolation. Little is known about the relationship between human-canine attachment and student adjustment to college. Understanding the phenomenon may lead to greater insights into ways for students to cope using innovative programs with canines. A sample of 300 freshmen students were given three instruments and a comparison of data was completed on demographics, attachment to their pet dog using the Lexington Attachment to Pet Scale (LAPS), and adjustment to college using the Student Adaptation to College Questionnaire (SACQ). Statistical analysis was completed using SPSS software. Findings showed no significant results when comparing SACQ scores to LAPS scores. Significant gender differences existed for pet attachment ( $p = .031$ ) with females showing stronger attachment to canines than males. Significant gender differences existed for Social Adjustment to College [ $F(1, 298) = 7.404, p = .007$ ] and Academic Adjustment to College, with males scoring higher than females on the Social Adjustment subscale and lower on the Academic Adjustment subscale of the SACQ. There was also significant differences among the groups "Weak Attachment" to canines and "Strong Attachment" to canines [ $F(4, 132) = 3.027, p = .020$ ].

**53. Title: Comparing the ‘ideal’ dog in Japan and Australia**

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The history of dog ownership in Japan and Australia differs, as do the cultures, yet in both countries the selective breeding of dogs for certain roles such as herding or hunting is no longer as prevalent as it was. Historically dogs were utilised for working roles. Nowadays, the most common role for dogs in both countries is that of human companion, yet this role is relatively undefined. As culture affects the perception of desirable behaviour and interactions in human social relationships, it is likely that these may be similarly reflected in the characteristics valued in canine companions. Results from a survey (2008) indicated that Australians (n = 661) prefer dogs that are medium sized, short haired, de-sexed, safe with children, housetrained, healthy, friendly, non-aggressive, relaxed, sociable, obedient and affectionate. A similar questionnaire study was recently conducted in Japan (n = 652) using a representative sample of the population. Data indicated that similarities (dogs that are safe with children, healthy and housetrained) and differences (dog size and neutering status) existed on the characteristics that Australians and Japanese regard as desirable in their companion dogs. Results from a similar survey conducted in America (2010) will also be compared with the Japanese and Australian data. Cross-cultural studies of this type are likely to provide valuable information for those seeking to improve owner-dog relationships internationally. The increase in popularity of international trade of companion dogs means that information on what different countries and cultures consider ‘ideal’ in companion dogs could help improve not only human-dog relationships but also dog welfare.





## 55. Title: Behavior, management and welfare of sled dogs in the Netherlands

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Few people - mushers - are actively involved in sled dog racing in the Netherlands. Studies in North America show that sled dog welfare may be suboptimal. In general there is very limited literature about behaviour and welfare of sled dogs. The aim of this study was to observe behaviour and assess welfare of sled dogs in their home situation. Our general framework for welfare assessment was a modified Welfare Quality® protocol. First a survey was distributed to sled dog owners to collect information about housing, handling and management procedures. One of the questions concerned visits for observation. The survey resulted in responses of 33 mushers (covering 236 sled dogs) and provided a first overview on Dutch sled dog husbandry. In general, health is taken care off very well, and doping use seems to be absent in The Netherlands. Behaviour was observed at the homes of 15 mushers covering 174 Siberian Huskies. Using scan and behaviour sampling, time budgets and social interactions of sled dogs were recorded. The time budgets found showed that sled dogs are very passive but that dogs kept on a field were less passive than in other environments (M-W, U=103, P=0.002). The frequency of social play interactions per hour was analysed using a linear mixed model ( $F(4,74) = 4.31, P=0.003$ ). On the field (7.80) and in the garden (8.78) more play interactions ( $P=0.047; P=0.026$ ) are recorded than in the kennels (1.57). The frequency of fight interactions per hour differed between housing conditions ( $F(4,44) = 2.65, P=0.046$ ). More fights ( $P=0.030$ ) are found in the field (0.59) than in the kennel (0.04). In summary, six sub criteria of the protocol indicated good welfare (dehydration, hyperthermia, sports injuries, absence of health problems, social behaviours and other behaviour) and 4 indicated suboptimal welfare (diet, comfort, movement and pain).

**56. Title: Human-canine interactions: examining biomarkers cortisol and immunoglobulin a in saliva**

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Stress can affect human health in a variety of ways. Stress also influences immune system function, hormones, and immunoglobulin levels. As a nurse scientist, it is necessary to investigate interventions that decrease stress and increase human health outcomes. Therefore, the purpose of this experimental study was to examine the relationships among stress indicators (as measured by stress indicators: salivary cortisol, salivary immunoglobulin A (IgA) before and after a 20 minute exposure to a certified animal assisted therapy (AAT) canine. The rights of human subjects were protected by obtaining approval from the Institutional Review Board (IRB) of Kean University prior to data collection. The participants who agreed to participate ( $N = 33$ ), pet owners and non-pet owners were exposed to an experimental condition (canine exposure) and a control condition (canine video); over a two-week period. Salivary cortisol and IgA levels were measured by using a commercially-available saliva collection device and enzyme immunoassay (EIA) technique. Data were analyzed using SPSS software. Analysis of variance yielded a significant interaction effect of salivary cortisol in non-pet owners, Wilks's  $\Lambda = .57, F(1,16) = 11.86, p = .003$ . Changes in IgA levels were not found to be significant. The significant result of this experiment provides a baseline for future study on using in vitro measures (biomarkers for salivary cortisol and IgA) to measure the relationships among stress indicators, pets as a coping resource, and human health outcomes.





**59. Title: Current perspective on asymptomatic carriage of Salmonella in canines**

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Epidemiological studies carried out 40 years ago suggest that *Salmonella* sp. may be carried asymptotically in canines at an infection rate of between 0 and 43% (Mc Elrath et al., 1952). Zoonotic transmission of *Salmonella* is an important route of infection for humans which highlights the importance of investigating its asymptomatic carriage in canines. In an increasingly hygiene concerned society, a major barrier to pet ownership is the perceived role of companion animals in contributing to the risk of exposure to bacterial pathogens. The aim of this investigation therefore was to gain a current perspective of the role of canines as reservoirs of *Salmonella* by determining the incidence of asymptomatic carriage of *Salmonella* in domestic canines. The asymptomatic carriage of *Salmonella* in canines was determined using standard culture techniques. Samples included rescue centre dogs, retired greyhounds, household dogs and dogs from the WALTHAM® Centre for Pet Nutrition. Faecal samples were added in a 1:10 ratio into Buffer Peptone Water (BPW) and incubated at 37oC for 24 hours. Following 24 hours samples were added to Rappaport Vassiliadis (RV) broth and were further incubated at 42oC for 24 hours and subsequently plated onto three selective agars Xylose lysine deoxycholate (XLD), Hektoen enteric, and Brilliance *Salmonella*. In total 462 faecal samples were tested for *Salmonella*; from these samples one *Salmonella enterica* Arizona (0.2%) was recovered from a household dog. The potential for intermittent shedding of *Salmonella* was investigated in a longitudinal study by collecting three consecutive faecal samples monthly for 9 months from 10 household dogs. No *Salmonella* was isolated from any of the dogs during this period. The results from this investigation demonstrate a significant decrease in the incidence of *Salmonella* carriage in dogs compared with previous studies from the 1950s. These findings put a current prospective on the role of domestic canines as reservoirs of *Salmonella* and will inform veterinarians, medics, public health scientists and pet owners with respect to zoonotic risk.







**62. Title: Recruiting and retention in a human-animal interaction study: Challenges and consequences**

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Dog walking may benefit human health by creating an effective behavioral mechanism of social support that increases physical activity (PA). The primary study objective is to determine whether veterinary-based counseling increases physical activity for overweight dogs and their owners. We will discuss operational challenges and their implications for achieving study objectives. Dog owners (DO) were recruited through a veterinary referral hospital. Financial incentives for both DOs and hospital staff, visual displays in the veterinary hospital, reminder emails, dinners and periodic meetings with hospital staff were used to encourage active recruiting. Questionnaires describing PA, social support, attachment to pets, and overall health were completed at baseline. Owners of overweight dogs were randomized to a PA intervention or standard care. Biomedical and physical evaluations of these owners and their dogs were conducted at baseline and after three months. Physical activity levels were monitored throughout. Recruiting target for follow-up was 76 DOs. Seventy-five DOs began the study. From these, 46 dogs were overweight and recruited for Phase 2 of the study. Forty-one provided baseline data. Eight were lost to follow-up resulting in 33 final participants. Self-reported daily physical activity increased by 157 minutes in the intervention group, compared with two minutes in the control group. The small sample size makes it impossible to determine whether this difference is due to the intervention or to chance ( $F_{1,18} = 1.37, p = 0.257$ ). Although our study suggests that a veterinary-based counseling program to increase DO activity might be effective, obstacles including change in practice location and health of both dogs and owners resulted in inconclusive findings for several key outcomes. Potential solutions include expanding recruiting to multiple veterinary facilities (referral and primary-care) and use of a full-time project employee to supervise data collection.

**63. Title: A follow-up survey of cats after adoption from a shelter in Japan**

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There were few follow-up systems for adoption of cats in Japan, although the follow-up is important to new owners for successful adoption. In this study we conducted a follow-up survey of adopted cats in Japan, and compared the results with those obtained from similar surveys previously conducted in the US and UK. We followed up 11 kittens (9 males and 2 females, 1-5 months old) adopted from a shelter. By interviewing by phone or sending questionnaires by post, we mainly asked the adopters the questions asking; impression of the cat, relation to the cat, behavioral problems of the cat, behaviors that the adopters think as problem in cats, and degree of satisfaction with the cat. The survey was conducted at 1-3 weeks, 3 months, 6 months and one year after adoption, respectively. Using SPSS software for analyses, we found the following. As to the impression of the cats, the level of fearfulness decreased and that of affection-demanding increased as adopting time increased (Friedman test,  $p < 0.05$  for each). The relation to the adopted cat for the majority of adopters was "part of the family" at all times. Half of the adopters had some behavioral problems with their cats, and "scratching", "house-soiling" and "escaping outside" were considered as problems. The majority of adopters, especially at one year after adoption, were satisfied with the adopted cat at over 80 among 100 points. The previous study in the US have reported similar results for the relationship and the degree of satisfaction. As revealed by the present study, most adopters were satisfied with the adopted cats, whereas they found behavioral problems in these cats. Therefore, it is recommendable for staff at shelters to keep contact with adopters after adoption to detect and help with serious problems.

**64. Title: "I don't know if I can go on without her": Suicidal ideation related to pet loss**

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Pet loss is a form of disenfranchised grief, and many mental health professionals may not understand the impact of the loss of a companion animal may have. The purpose of this study is to explore the incidence of suicidal ideation precipitated by the loss of a companion animal in clients of a veterinary teaching hospital who received social work services. Data were collected from an Access database containing case files for clients of social work services within a veterinary teaching hospital from 2002 to 2010. Using case notes, files were cleaned to ensure that all presenting issues and interventions were appropriately marked. The database included approximately 1360 client files which include faculty, staff, and students of the veterinary teaching hospital as well as veterinary hospital clients who have received social work services. In this exploratory study, a file review was conducted using information in the Access database. Frequency distributions and contingency tables were obtained. Twenty five clients—23 women, 2 men-- reported having suicidal ideation, and 42 contacts were recorded addressing this issue. Animal loss was a presenting issue in 61.9% of these contacts. Grief (69.0%), depression (31.0%), and anxiety (35.7%) were also common presenting issues in these contacts with clients. Common themes in the case notes were feelings of hopelessness and not knowing what do to without the animal. One client specified that she did have a plan, and others admitted to past suicide attempts. Because this study is limited to clients who received social work services, it is possible that the prevalence of suicidal ideation due to pet loss is greater than this study reveals. These findings suggest that mental health professionals become aware of the potential severity of the grief reaction due to pet loss, and that suicide risk assessments be utilized when working with pet loss clients.

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**65. Title: From anecdote to evidence: The rewards and challenges of longitudinal research on the effects of service dogs for children with autism**

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In an innovative animal assisted therapy (AAT), service dogs are trained to reduce the impulsivity, self-harm, mood swings, and social isolation of children with autism through actions such as retrieving the child, crawling on the child, responding to the child's verbal commands, and interrupting self-stimulatory behaviors. While parents have provided anecdotal evidence of quick, though enduring, positive changes in their child's behaviors and language after they receive their service dog, our research aims to identify to what degree these service dogs modify behaviors of various children with autism. For participants, we collaborate with Wilderwood Service Dogs which trains service dogs for children with autism nationwide. Immediately prior to the receipt of a service dog (baseline), and every year thereafter, we collect parent-report measures of the child's maladaptive and adaptive behaviors (Pervasive Developmental Disorder Behavior Inventory) and language (Children's Communication Checklist-2). The child is also videotaped prior to receiving the dog and, together with the dog, one week after receipt of their dog. Based on the eight participants (of 20 participants total) for whom we have multi-year follow-up data, we found that participants' scores are showing improvement in maladaptive behaviors (e.g., ritualism, aggression, self-stimulatory behaviors) and overall Autism composite scores, while less improvement in adaptive behaviors (e.g., social communication skills). This research contributes a much needed multi-method longitudinal approach to AAT research, furthers our understanding of how service dogs affect varied spheres of a child's well-being, and demonstrates how autistic tendencies may change over time. We also aim to discuss the challenges of AAT research specifically related to the complexities of qualitatively and quantitatively analyzing child-dog interactions and effects, longitudinal participant attrition, extraneous variables (e.g., maturation, laboratory settings, concurrent autism interventions), and potential participant and/or experimenter biases.

**66. Title: Tracking for life: A new paradigm in the re-training and adoption of ex-racehorses?**

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This study examines the impact of human cultural attitudes and practices on ex- Thoroughbred racehorses undergoing re-training for use beyond the sport of horse racing. In particular, this study will examine the concept of “tracking for life,” where the value, health, and training of a retired racehorse are (ideally) documented under every ownership arrangement until the horse dies. The concept of “tracking for life” is a culturally imposed practice on the care of ex-racehorses that is fairly recent and in direct response to the propensity for lackluster or injured racehorses to lose value through the loss of their legal (racing) identity through the misplacement or improper management of their breed registries, vet records, and other forms of powerful documentation and human testimony. In many cases, the loss of a horse’s legal and medical identity not only results in dramatic deflation of the horse’s monetary worth, but places the horse in great risk of abuse, neglect, or needless death. This study will thus examine how tracking for life works through the case study of five ex-Thoroughbred racehorses taken in by a re-schooling facility in Kentucky. Data collection includes observing the daily care and training of these five horses and interviewing the human retinue of trainers, interns and volunteers involved with these horses. These observations and interviews are then analyzed to account for any changes seen in the horses’ health, appearance, behavior and competence under saddle, as well as how human handlers interpret and understand their involvement in the horses’ transformation and newly documented life. Procuring and re-schooling these horses, however, are just the first tracks in the new life of an ex-racehorse. Thus, this study will also account for any adoption and subsequent new ownership of these horses and how the tracking protocol is implemented in these new circumstances.

**67. Title: Do dolphins do it: Comparison of three novel to one control condition on motivating multiply-disabled adolescents**

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Dolphin Assisted Therapies continue to be popular worldwide, yet research into their efficacy is contradictory at best. To determine whether changes in human behavior are due to relationships with dolphins, or a function of increased stimulation, attention, and novelty, we designed a study comparing dolphins, horses, and duckpin bowling to see if each worked equally when compared to normal classroom environment. The Participants were four female students (15 to 18 years old) enrolled at the Indiana School for the Deaf with a variety of moderate to severe developmental delays (daily living skills ranging from 2-5 years, socialization skills from 1-4.5 years, communication skills from 6 mo-5 yrs), sensorineural deafness, Autism, Cerebral Palsy, and other disorders. In each interaction condition, students “earned” the opportunity to interact by completing individually designed educational and basic life-skills tasks. They petted, fed, and played with dolphins, participated in therapeutic horseback riding, and bowled in duckpin bowling. Students’ performance showed statistically significant changes due to the different enriched environments ( $F= 2.68, df= 3, 154, p<.05$ ). Overall, the students performed significantly better in Horse and Dolphin than in Bowling conditions (Fisher PLSD= 8.67,  $p<.05$  for Bowling Versus Horse; Fisher PLSD= 7.36,  $p<.05$  for Bowling Versus Dolphin). The Classroom condition was not significantly different from any of the three other conditions. This supports that Percent Correct in the Horse and Dolphin conditions were superior to the Percent Correct in the Bowling condition, but not superior to the Classroom condition. Each student showed individually differential responding to the four conditions. Two students showed improved Percent Correct during the horse condition, one due to the dolphin condition, and one to maturation effects across conditions. Two students showed decreased Motivation across conditions, one showed a ceiling effect, and one showed asymptotic improvement. Additional qualitative results will be presented.

**68. Title: Dog-walking as a physical and social activity: Implications for health and well-being of children with ASD and their families**

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Dog-walking has been under scrutiny due to physical decline in aging populations, decreased physical activity, and increased obesity and overweight across age groups in post-industrial societies. A number of research studies on dog walking as part of health benefits of pet ownership have been conducted in the United States and other countries (Johnson, 2003; Reeves et al., 2011). Dog-walking involves both social and physical engagement of the child with ASD with the companion dog and other people. There is evidence that children with autism spectrum disorders (ASD) respond to animals with a marked increase in sociality and improved participation in everyday activities with family members and peers (Gross, 2006). Children with ASD are more likely to engage in play and to display more attention to other people when a dog is present (Solomon, 2010). Although dog-walking may be challenging for children with ASD because of motor impairments (Baranek, 1999), it may also afford increased physical activity. The paper examines the activity of dog-walking and its potential to promote health and well-being through social engagement and participation of children with ASD in everyday activities with other people. The focus on dog-walking as a site for engagement in social and physical activity is consistent with the interest in healthcare related fields for ways in which children and families participate in the construction of their own experiences and social worlds. There is a need to examine dog-walking activity involving children with ASD and their family members from a human-animal interaction perspective. It will contribute to understanding how health and well-being of children with ASD , their families, and their companion dogs may be enhanced by dog-walking, and whether and how dog-walking may have a positive impact on children and families' physical activity, stress-reduction, and participation across social contexts.

**69. Title: Owners and pets exercising together: Health characteristics of pet owners**

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There is a “parallel problem” of rising overweight and obesity in both pets and pet owners (PO) in American society. Two of every three American adults are either overweight or obese, and studies have estimated between 25% and 40% of adult dogs and cats are overweight or obese. The Owners and Pets Exercising Together (OPET) study is designed to use the human-animal bond to promote weight loss for both owner and animal. We report baseline characteristics of a cohort of pet owners enrolled in a veterinary-based physical activity program. As Phase I of a double blinded, prospective, randomized control design, POs provided self-reported activity data, as well as a self-assessment of their physical health, mental health and social support using previously validated survey instruments. Indicators of perceived physical health were taken from the Physical Composite Score (PCS) section of the SF-12. Measures of perceived mental health were taken from the Mental Health Composite Score (MCS) portion of the SF-12. Perceived social support was reported using the social survey from the Medical Outcomes Study (MOS). Pet attachment was assessed using the Lexington Attachment to Pets Scale (LAPS). Seventy-five (75) participants completed Phase 1 of the trial. Participants with higher BMI reported a greater sense of attachment to their canine companions (Spearman correlation 0.29;  $p < 0.03$ ). Patients with higher BMI also reported less social support (Spearman correlation -0.27;  $p < 0.02$ ) and lower perceived physical health (Spearman correlation 0.-24;  $p < 0.05$ ). Our data suggest overweight pet owners have less of a social support network and are more likely to perceive their physical health as poor. They also appear to be more attached to their pets. This has potentially important implications for medical and veterinary health providers when providing lifestyle counseling for humans and pets alike.



**70. Title: Development of a questionnaire for measuring aspects of human-animal interaction: The HumAnimal-interact**

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Over the last decades, AAT has attracted considerable attention. Hence, the therapeutic use of animals has been formally applied in a variety of interventions. However, most programs lack standardized and concise evaluation tools to document the interaction effects on the participating human or animal part, although an AAT qualification would require both, record and evaluation. To address this issue, we aimed to identify aspects that characterize human-animal-interaction by providing a tool for their assessment. A highly structured instrument, the *HumAnimal-Interact*, based on current psychological and behavioural theories, was designed to cover a wide range of behaviours and emotions that can be rated with regard to their frequency during an interaction. A pretest with a small sample of psychology students (N=10) was conducted to test the feasibility and clarity of the first draft, and adjustments based on their feedback were made. For the main analysis of the instrument, four 10-minute sessions of a dog-assisted intervention were video-recorded. A sample of students and animal trainers as well as AAT professionals (N=200) were asked to rate the video interactions using the invented questionnaire. Additionally, an extended German version of the Pet-Attitude-Scale (Templer et al., 1981) and a German version of the Rosenberg Self-Esteem-Scale (Rosenberg, 1965) are used to gain information about the general attitude towards animals and the self-esteem of the observers. Moreover behavioural parameters of human subjects and the dog assessed by the questionnaire will be compared to the behaviours identified by video-analysis and physiological parameters (Salivary-Cortisol and Heart-Rate-Variability). We conducted a factor analysis using Varimax rotation and statistical analyses to proof psychometric properties of the *HumAnimal-Interact*. The results indicate that the developed questionnaire provides an adequate assessment to evaluate AAT and help to discover the relationship between interaction parameters and positive as well as negative outcomes for humans and animals.

**71. Title: Pathways to reality? Probing the psychophysiological responses during interactions with living and virtual canines**

**Authors:** BIRGIT U. STETINA<sup>1</sup>, ELISABETH KASTENBOFER<sup>2</sup>, NATHALIE HAUKE, LISA M. GLENK<sup>3,4</sup>, & OSWALD D. KOTHGASSNER<sup>2,5</sup>

**Affiliations:** <sup>1</sup>Webster University Vienna, Department of Psychology, <sup>2</sup>University of Vienna, Research and Training Lab, <sup>3</sup>Neurochemical Laboratory, Karl Landsteiner Research Institute for Pain Treatment and Neurorehabilitation, LKM Mauer-Amstetten, Austria, <sup>4</sup>Neurophysiology, Institute of Physiology, Department for Biomedical Sciences, Veterinary Medical University Vienna, Austria, <sup>5</sup>University of Vienna, Department of Clinical, Biological and Differential Psychology

**Correspondence:** stetina@webster.ac.at

In the late 1980ies the term “Virtual Reality” (VR) was used for the first time. Users are not only external observers, but are included in the simulation and in this picture as active participants (Riva, 2005). Many studies support the thesis that just the presence of an animal enhances humans’ well-being significantly (e.g. Banks & Banks, 2005). The intended research addresses differences between living and virtual presence of an animal through simple interaction sequences and their impact on human behavior. 160 participants with a mean age of 26.8 years took part in the current research. We created virtual simulations of real-life canines. We used the possibilities of a computer-aided biofeedback for measuring physiological parameters such as the skin resistance level (SCL) and heart rate variability (HRV) as indicator for emotional stress, and human well-being. The first experimental group will consist of participants interacting with the virtual canine using a Head-Mounted-Display (HMD). The participants of the second experimental group will interact with a real canine in an offline situation. The third group is a control group without any interaction sequences and further instructions. Statistical analyses between the groups were tested running a one-factorial ANOVA with post-hoc tests according to Bonferroni. There were no differences between the real-life canines and the virtual canine avatar, but results indicate significant differences between these two groups and the control trial concerning human well-being measured by HRV RMSSD ( $F(2, 78)=3.661$ ;  $p=.022$ ). There were also significance differences between the experimental groups and the control trial concerning emotional stress measured by SCL ( $F(2, 78)=2.420$ ;  $p=.031$ ). The impact of interaction using VR technology on necessary emotional skills and on human well-being compared to real-living canines will be discussed. Furthermore it will be evaluated which situations virtual simulations could make sense to replace real-life interaction.

**72. Title: Meet your match: An Investigation of an adoption program based on animal personality**

**Authors: R. STRASSER, W. FRANK, & N. HARRIS**

**Affiliation:** Department of Psychology, University of Nebraska at Omaha, USA; Nebraska Humane Society, 8929 Fort Street, Omaha, NE 68134, USA

**Correspondence:** rstrasser@unomaha.edu

This study investigated the Meet Your Match (MYM) Program which is based on matching adopters and animals through behavior assessments and the personality profile of potential adopters. A total of 331 voluntary, web-based surveys were returned by adopters who had recently adopted a dog or puppy from a local humane society. We compared responses before and after MYM program implementation. Hypotheses of MYM providing a better adopter-animal match found mixed support. Overall reported satisfaction of adopters was very high both pre- and post implementation of the MYM program with the majority of the responses indicating the adopters were very satisfied with the adoption process. Although there was a trend for adopters to report greater overall satisfaction post-MYM, this trend did not reach statistical significance ( $p < .07$ ) possibly due to ceiling effects or response bias from the voluntary survey. Before and after implementation of MYM there was no significant difference in ratings of helpfulness of animal descriptions, satisfaction with the adoption process, attachment to the pet, or any characteristics of “better fit” between adopter and dog. However, there were fewer problems reported post-MYM ( $\chi^2(1) = 4.71, p = .03$ ). Prior to the use of the MYM program, 16.1% of reported problems were with aggression in dogs compared to 6.4% of reported aggression problems post-MYM. Individuals who adopted outside the suggested personality profile were not less satisfied with the dog they adopted; however, individuals who did adopt a dog that matched their personality profile reported their pet having a higher ability to learn ( $p < .05$ ). Different personality profiles of dogs and adopters predicted whether individuals reported more or fewer problems. Matching adopters with dogs that fit their expectations and lifestyle is important because these owners may then experience less problems, be less likely to relinquish that dog, and form better bonds with their dog.

**73. Title: Relationship between owners' neuroticism and their dogs' behavior problem: in the case of aggression behavior**

**Authors:** KANAOKO TATEISHI, NOBUYO OHTANI, & MITSUAKI OHTA

**Affiliation:** Azabu University Graduate School of Veterinary Science, Japan

**Correspondence:** ktateishi@ercaz.jp

It is generally assumed that dog behaviors are influenced by their experiences and environment. Previous studies have suggested that the owner's gender, personality (especially neuroticism and extroversion) and attitude would affect the dog behavior (O'Farrell, 1995; Kotrschal *et al.*, 2009). Aggression is one of the most common canine behavior problems and considered as serious problems by owners. In Japan many dog-owners prefer small dogs like Toy Poodle, Chihuahua and Miniature Dachshund (Japan Kennel Club, 2010). However, Chihuahuas and Dachshunds were higher scored in stranger-directed, owner-directed and dog-directed aggression than the other breeds (Duffy *et al.*, 2008). The aim of this study was to investigate the effect of owners' neuroticism on the aggression of popular small dogs such as Toy Poodle, Chihuahua and Miniature Dachshund. In this study two questionnaires, NEO-Five Factor Inventory (NEO-FFI) and a part of Canine Behavioral Assessment & Research Questionnaire (C-BARQ), were used. The NEO-FFI measures normal adult personalities in five dimensions: neuroticism, extroversion, openness, agreeableness, and conscientiousness. To avoid a gender bias of personality, 1398 women who aged 30 or over were recruited. Participants were divided into 3 groups according to scores of neuroticism. The questionnaires about dog's aggressive behavior were three categories (aggression to owner, to other dogs, and to unknown people) of C-BARQ.

The number of answers was 652 and its recovery rate was 46.6%. The small dogs kept by owners who scored higher (over 28) in neuroticism were more aggressive only for their owner, compared with the dogs kept by those who scored lower (under 20) ( $p < 0.05$ ).

Our results suggest that owner's neuroticism would especially influence on the small dog's aggression for owner. Using the human personality inventory like the NEO-FFI, an owner may have chances that would prevent the dog's aggressive behavior.

**74. Title: Three decades of research on human-animal interactions: Challenges and rewards and where do we go from here**

**Author: DENNIS C. TURNER**

**Affiliation:** Institute of Evolutionary Biology and Environmental Studies, University of Zurich-Irchel, and I.E.A.P., Switzerland

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Having served for a number of years on the council of ISAZ, for 15 years as president of IAHAIO, having chaired the program committees of many of the IAHAIO conferences on human-animal interactions, served since 2006 as a Trustee and chair of the Scientific Advisory Panel of the WSPA, served since its founding by UFAW as co-editor of the journal *Animal Welfare*, and finally, having conducted and directed research on human-companion animal interactions at a university for three decades, it is time - shortly before retirement - to take stock and review the challenges and rewards of working in this field. Anthrozoology has made significant advances since its early days of anecdotal reports on the benefits of interactions with animals to people's health and well-being, to full recognition by e.g. the US NICHD and NINR, the European Commission and WHO, with publications appearing in class-A, peer-reviewed medical and health journals, as well as the dedicated journal *Anthrozoös*. One of the biggest challenges has been finding mainstream sources of research funding alongside of that from initial sponsors in the pet food industry; but we are making progress in this respect. Further, we must continue to be cautious of pre-empting scientific publications of results by the ever-present (and highly interested) public media. Nevertheless, one of the rewards of working on HAIs is indeed the widespread interest in our findings across the globe. Nor can we deny that a major reward comes from the fact that we can, and enjoy working with both animals (our *biophilia*) and people to benefit both the animals and the people involved. In this poster, I will list *and justify*, what I consider to be the most promising and challenging areas of future research and practice in the field.

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**75. Title: Condition and population size of *Macaca fascicularis* (long-tailed macaque) in Penang Botanical Gardens and suggestion for organization**

**Authors: KARIM ULLAH & SHAHRUL ANUAR**

**Affiliation:** School of Biological Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia

**Correspondence:** karimullah76@yahoo.com

This study discusses the population size of *Macaca fascicularis* in Penang Botanical Gardens, Malaysia. The scan sampling method was used to observe the groups of *Macaca fascicularis* in the Gardens. The study carried out from February 2007 to June 2007. Chi-square test used to find the significant influence of individual appears on the specific area of the garden. The total number of observations that were carried out during this study was 1134. Among these observation the adult females were observed as 22% ( $P = 0.15$ ), adult males 17% ( $P < 0.05$ ), juveniles 56% ( $P < 0.05$ ) and infants 5% ( $P = 0.34$ ). Moreover, these macaques groups contain more members and include higher female, male ratios. This study revealed that the population of long tailed macaques is decreasing in Penang Botanical Gardens. In arranging to get better human contact with macaque and at the same time to keep up a developed macaque inhabitants in Botanical Gardens Penang, there is an imperative requirement for Wildlife Department to enhance their safety, food availability and predator's threats.

**76. Title: The factors affecting a “good relationship” between dogs and humans**

**Authors: MARIKO YAMAMOTO, NOBUYO OHTANI, & MITSUAKI OHTA**

**Affiliation:** Azabu University Graduate School of Veterinary Science, Japan

**Correspondence:** mariko\_yamamoto@hotmail.co.jp

A strong majority of 47 owners with assistance dogs reported problems concerning their dogs’ behaviors, revealing their difficulties with controlling their dogs (Yamamoto et al., 2008). We investigated the factors that would influence a “good relationship” between dogs and humans, defined as: the dog obeys the human handler’s commands well and there are fewer stresses in the relationship physically and mentally for both dogs and humans. Twenty pet dogs were commanded to “sit” and “down”, each by 5 different handlers (17 minutes for each interaction). Forty-one humans served as handlers in the total of 100 interactions; some interacted with more than two different dogs. Three factors of the human handler were investigated: whether the handler had: (1) been a caregiver of the dog; (2) been previously familiar with the dog; and (3) skills in training dogs. For each interaction, the handler was categorized: Handler 1-all 3 factors; Handler 2-only factor (2); Handler 3-only factor (3); Handler 4-no factors; and Handler 5-factors (2) and (3). Urinary catecholamine (adrenaline/noradrenaline) and oxytocin and salivary cortisol and urinary oxytocin were measured from dogs and handlers respectively. Dogs’ responses towards commands were videotaped and handlers answered the Profile of Mood States and Lexington Attachment to Pets Scale.

Dogs obeyed the category of Handler 1 best ( $F=7.60, p<0.01$ ), and Handlers 3 and 5 better than Handlers 2 and 4 ( $F=23.68, p<0.05$ ). No increase of adrenaline alone or cortisol was found. Dogs’ responses to commands were correlated with handlers’ attachment towards the dogs ( $r_s=0.23, p<0.05$ ). Experience in training dogs is beneficial for a “good relationship” between dogs and humans. Most optimal is having the other two factors as well: being a caregiver of the dog and being familiar with the dog.

**77. Title: Brains, horses and kids: A Pilot Study**

**Authors: J. YORKE, W. NUGENT, E. STRAND, R. BOLEN, J. NEW, C. DAVIS, & S. MCCUNE**

**Affiliation:** University of Tennessee, Knoxville, School of Social Work

**Correspondence:** JYorke@laurentian.ca

Does interacting with another species cause stress levels to change in tandem for emotionally and or physically traumatized children and therapy riding horses? Trauma results in the release of a specific neuro-hormone corticosteroid called cortisol, leading to an ongoing over-arousal of the autonomic nervous system. Childhood trauma, abuse or neglect impacts the function and structure of the brain of affected children, compromising resilience and contributing to vulnerability to stress (Glaser, 2000; Lupien, McEwen, Gunnar & Helm, 2010; Perry, 2006; Yehuda, 2006). Connecting with other beings (attunement) as well as an enriched environment can be prophylactic, activating seeking, pleasure and reward systems in the brain, contributing to resilience and normal brain development (Caldji, Diorio & Meaney, 2000; Pragg, Kempermann & Gage, 2000). The enriched environment of a barn and attunement or connection with an animal may contribute to reductions in stress and increased resiliency for traumatized children. A pilot study, using a multiple base line, single case design included four children with post traumatic stress syndrome, (ages 8 to 10) and four therapy riding horses from a exploring the neurobiological intervention between the children and horses. This preliminary study hypothesized that cortisol would correlate between each child horse pair. Using a 12 day intervention that included 6 days of pre post drawing of pictures and writing of stories introduced sequentially around 6 consecutive days of riding and grooming, researchers measured cortisol levels and self report anxiety levels for children and cortisol levels for horses. A meta-analysis was completed using a random effects design (Field, 2001) correlation levels of four child horse pairs The weighted mean cross correlation, controlling for autocorrelation, was .23,  $Z = 3.03$ , approximate 95% confidence interval  $.23 \pm (1.96 \cdot .076)$  or .08 to .38. Although at least one of the pairs appeared to show an association between neurological measures (.449) overall it was not possible to discern a clear pattern of synchronization. There was also some evidence that suggests there was a possible lag time between the children and the horses that was not tested in this study. The data suggest a need for further research.



**78. Title: Optimizing human-animal interaction (hai) costs & benefits in japan**

**Authors: THOMAS R. ZENGAGE & GERALD L. CURTIS**

**Affiliation:** Pacific Communicators (Tokyo think tank); Columbia University (NYC)

**Correspondence:** thomas@pacificcommunicators.com

Compared to Europe or the US, wider adoption of companion animals in Japan is a relatively recent phenomenon, with pet dogs numbering about 12.3 million in a nation of 127 million persons. Surveys show pet dogs are viewed as family members here, which is remarkable in a country that until recently kept dogs outdoors and apart from the family. What are the obstacles and opportunities in optimizing HAI benefits in Japan? The questions we pose are timely in part since Japan’s dog population has inexplicably registered a double digit decline. Our research suggests obstacles are not economic or structural (e.g., pets now allowed in condos), but are “knowledge” centric, with Japan lagging Europe and US in understanding HAI benefits. Our approach is to engage HAI experts in Japan (having completed interviews with 70 Japanese HAI experts so far) and worldwide (targeting 100 global HAI experts in current phase). One goal of this study is to propose and test a quantitative / monetary model of human health benefit outcomes of HAI in Japan (e.g., US\$2.7Bn (preliminary)). Our methodology utilizes Delphi type participatory action research, defined as “. . . a way of structuring communication among a group of people in order to get their opinions, offer feedback, and offer insights about a particular course of action. It is not an opinion poll, because it involves multiple rounds of communication where the results of the first survey are fed back to the participants...”<sup>1</sup> This multi-disciplinary study constitutes a well timed assessment of costs and of benefits of HAI as Japan reviews and revises its “Act on Welfare and Management of Animals” law throughout 2011.

<sup>1</sup> Jones, Kip (2004). Mission Drift in Qualitative Research, or Moving Toward a Systematic Review of Qualitative Studies, Moving Back to a More Systematic Narrative Review. The Qualitative Report Volume 9 Number 1 March 2004 95-112 <http://www.nova.edu/ssss/QR/QR9-1/jones.pdf>



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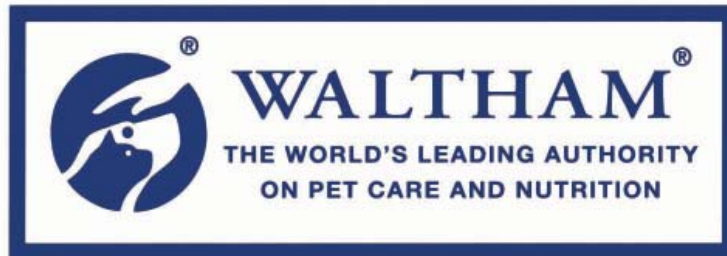




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# ISAZ - 20 YEARS GOING STRONG!!



## ISAZ Founders 1990





**ISAZ /SCAS Joint Meeting  
Practitioners & Researchers  
September 14-16, 1992  
York College**



**ISAZ Symposium at 6<sup>th</sup> International  
Conference on Human - Animal Interactions  
"Animals & Us"  
Montreal, Canada  
July 21-25 1992**

**ISAZ**  
International Society for Anthrozoology  
**NEWSLETTER No. 5** June 1993

**1993 ISAZ Symposium and ABS Meeting  
University of California, Davis,  
California.**

This summer ISAZ are holding a satellite meeting to the Animal Behaviour Society Meeting in California. The ISAZ meeting will be held on the 24th of July, before the main ABS meeting from the 24th to the 30th of July. Details of the ABS meeting are given on page 7.

Papers to be given at the ISAZ symposium include the following:

Asian Elephants from their Drivers' Perspectives	Lynette Hart
The Media, Mad Dogs and Mayhem	Anthony L. Podberseck
Friendliness in Cats: Implications for Cat Owners and Cat Welfare	Sandra McCune
Owner-directed Behaviour of House Cats; evidence for Incomplete Neotensitisation	John Bradshaw
Rolling Behaviour in Domestic Cats	Hilary Feldman
The Ethology of the Human-Cat Relationship	Dennis Turner

- 2 -  
**ISAZ Symposium, Utrecht, Holland,  
September 2nd, 1993.**  
"Medical, Social and Psychological Aspects of Human-Animal Interactions"

Papers to be given include:

Autonomy and ageing: older people and pets  
Social interactions between people and animals - a new biological framework  
Children and pets: a special relationship?

Prof. Dr. C.P.M. Knipscheer  
(Vrije Universiteit Amsterdam)  
Dr. John Bradshaw  
(University of Southampton)  
Dr. Elizabeth Paul  
(University of Edinburgh)

**ISAZ**

INTERNATIONAL SOCIETY  
FOR ANTHROZOOLOGY

*SCIENTIFIC SESSIONS  
AND  
ANNUAL GENERAL MEETING*

Sheraton Hotel and Towers, 811 7<sup>th</sup> Avenue, New York City

Thursday, October 13<sup>th</sup>, 1994







*International  
Society for  
Anthro-  
Zoology*

*Symposium on*

“Cultural & Historical Perspectives on  
Human-Animal Interactions”

7th-8th September, 1995

International Conference Centre,  
Geneva, Switzerland







**ISAZ '96**

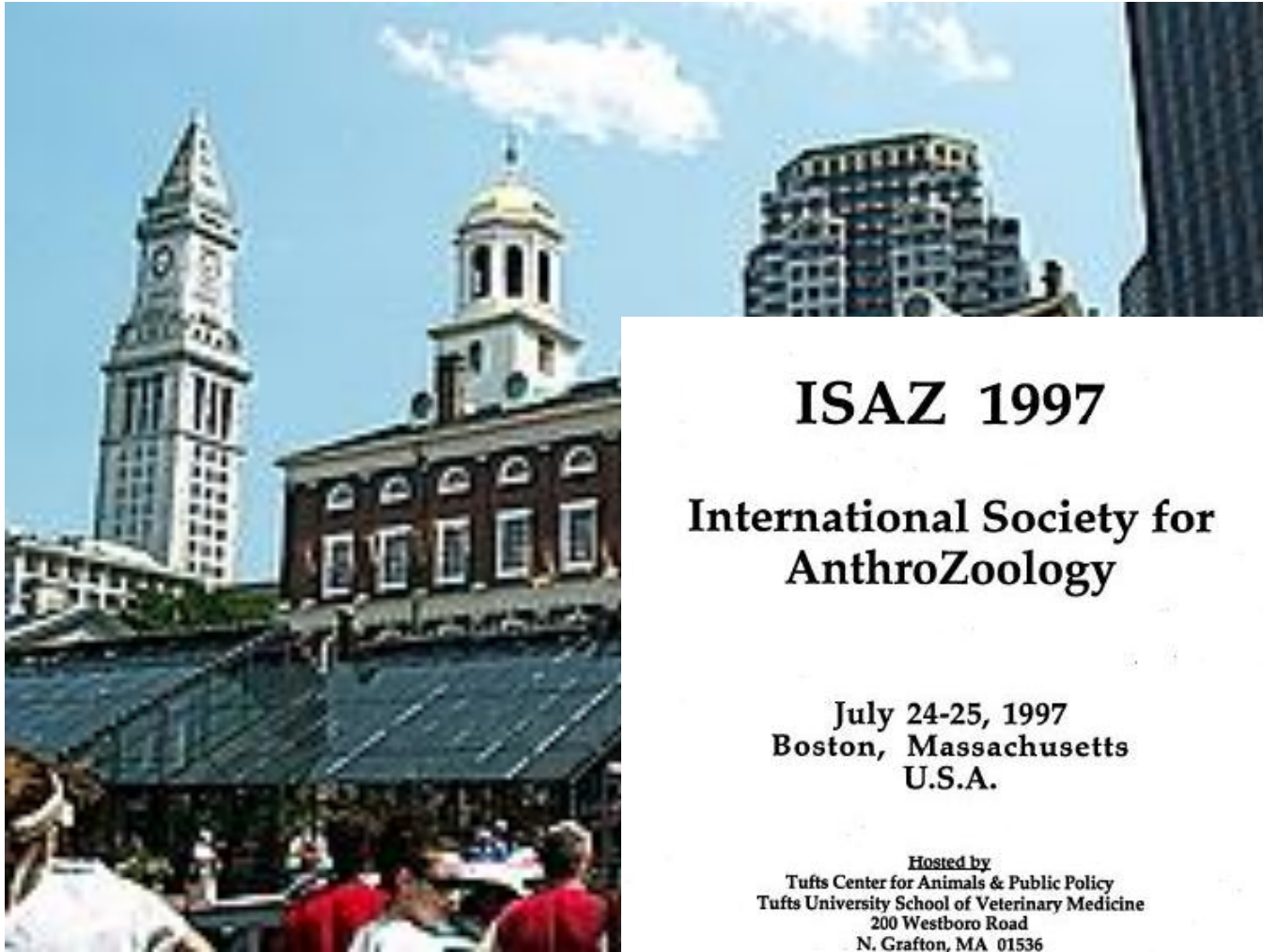
## **The Animal Contract**

*Exploring the relationships between  
humans & other animals*

**ABSTRACT BOOK**

**Downing College, Cambridge,  
United Kingdom  
July 24th - 26th, 1996**





## **ISAZ 1997**

### **International Society for AnthroZoology**

**July 24-25, 1997  
Boston, Massachusetts  
U.S.A.**

**Hosted by**  
Tufts Center for Animals & Public Policy  
Tufts University School of Veterinary Medicine  
200 Westboro Road  
N. Grafton, MA 01536  
tel 508/839-7991  
fax 508/839-3337



# *ISAZ'98*

9th September 1998  
Prague Hilton Atrium Conference  
Centre, Prague, Czech Republic

## ABSTRACTS

Satellite meeting to:

The Changing Roles  
of Animals in Society



Prague 10-12 September 98

Fifth Interdisciplinary Conference on Human Relations  
with Animals and the Natural World, and  
ISAZ '99.

**"MEN, WOMEN, AND ANIMALS:  
THE INFLUENCE OF GENDER ON OUR  
RELATIONS WITH ANIMALS AND NATURE"**



Friday & Saturday, June 4<sup>th</sup> & 5<sup>th</sup>, 1999  
Room B101, Veterinary Hospital of the University  
3900 Delancey Street, Philadelphia, PA

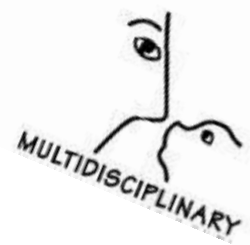


**ISAZ 2000**

AMSTERDAM,  
THE  
NETHERLANDS

ISSUES IN COMPANION ANIMAL  
WELFARE

25th April 2000







# ISAZ NEWSLETTER

Number 28 December 2004

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Kent State University Stark Campus, Canton, OH  
Penny L. Bernstein

**IAHAHO 2004:** People and Animals: A Timeless Relationship  
Penny L. Bernstein

**ISAZ 2004:** Advances in the Science and Application of Animal Training  
SECC, Glasgow, Scotland  
Penny L. Bernstein

### Special Announcements

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**David Anderson's Bibliographic Column**

Web address: [www.vetmed.ucdavis.edu/CCAB/ISAZ.htm](http://www.vetmed.ucdavis.edu/CCAB/ISAZ.htm)



Editor: Jo Swabe (NL)  
Associate Editor: Penny Bernstein

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<http://www.soton.ac.uk/~azi/isaz.htm>

# ISAZ Newsletter

Number

THE INTERNATIONAL SOCIETY



FOR ANTHROZOOLOGY

Editors: Patricia K. Anderson (USA)  
Marie-José Enders-Bieggers (NL)

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**Human-Animal Conflict: Exploring the  
Relationships with Conflict between  
Humans and Other Animals**



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**ISAZ 10<sup>th</sup> Anniversary Conference**

---

Program and Abstracts of the Conference  
University of California at Davis  
August 2<sup>nd</sup> - 4<sup>th</sup>, 2001

Workshop Location: Alumni Center, UC Davis Campus

Hosted by: UC Center for Animal Alternatives  
School of Veterinary Medicine  
University of California, Davis





## ISAZ 2002

*Eleventh Annual Conference*



**ANIMAL ARENAS:  
SPACES, PERFORMANCES AND EXHIBITIONS**





**ISAZ 2003**  
*12th Annual Conference*

**Human/Non-human Cognition, Interactions, Relationships**  
**The Social Lives of Animals:**

INTERNATIONAL SOCIETY FOR ANTHROZOOLOGY  
12th Annual Conference  
Kent State University Stark Campus, Canton, Ohio USA







**International Society  
for Anthrozoology (ISAZ)**

**13<sup>th</sup> Annual Conference**

**Advances in the Science and  
Application of Animal Training**

**6<sup>th</sup> October 2004**

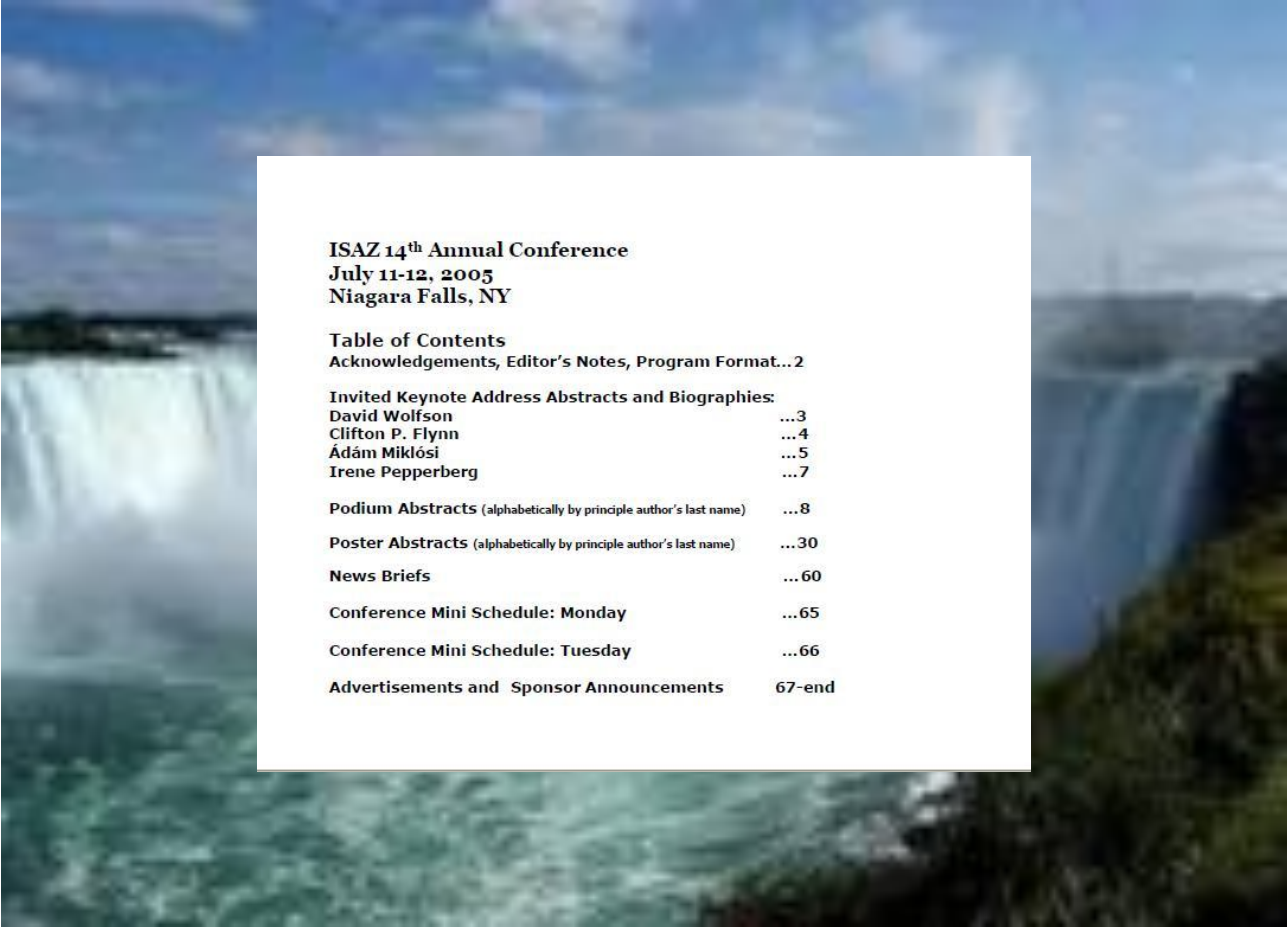
**Scottish Exhibition and Conference Centre, Glasgow, UK**

Satellite meeting to IAHAIO 2004







A scenic view of Niagara Falls, showing the water cascading over the rocks and creating a misty spray at the bottom. The sky is blue with some light clouds.

**ISAZ 14<sup>th</sup> Annual Conference**  
**July 11-12, 2005**  
**Niagara Falls, NY**

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# Barcelona, Spain 2006











ISAZ 2007  
Tokyo

第16回 国際人間動物関係学会  
動物の力 | 社会における動物の新たななる役割を明らかにするためのアプローチ

会期 2007年10月4日(木)〜5日(金)  
会場 東京大学農学部弥生講堂

車両の入構について





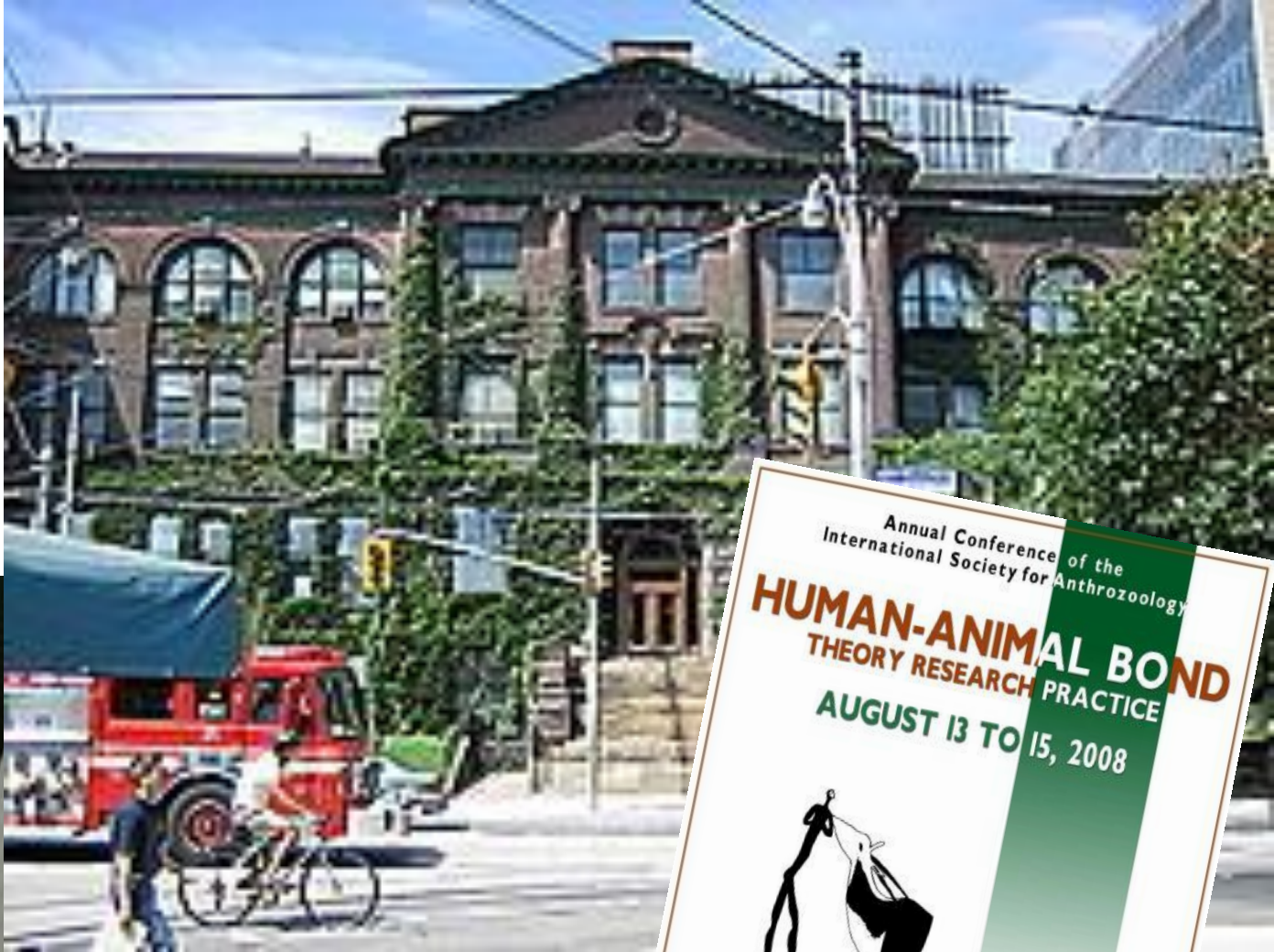


*The power of animals:  
Approaches to Identifying New Roles  
for Animals in Society*

*Friday 5<sup>th</sup> October*








Annual Conference of the  
International Society for Anthrozoology

**HUMAN-ANIMAL BOND**  
THEORY RESEARCH PRACTICE

AUGUST 13 TO 15, 2008



**ABSTRACT BOOK**

UNIVERSITY OF TORONTO  
OISE | ONTARIO INSTITUTE  
FOR STUDIES IN EDUCATION



ISAZ Conference Abstracts

**Human-Animal Interaction:  
Impacting Multiple Species**



October 20-25, 2009

Kansas City, MO USA

International Society for Anthrozoology (ISAZ)

18th Annual Conference

Oct. 20-23, 2009



Research Center for Human-Animal Interaction (ReCHAI)

1st Human Animal Interaction Conference

Oct. 22-25, 2009







## ISAZ 2010

*"Cross-cultural Perspectives on Human-Animal Interactions"*  
June 30<sup>th</sup>, 2010, Stockholm City Conference Center (Folkets Hus),  
Stockholm, Sweden



### CONFERENCE PROGRAM & ABSTRACTS

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# ISAZ/Waltham Collaborative Research Awards



Journal of the International Society for Anthrozoology

# anthrozoös

A multidisciplinary journal of the interactions of people and animals

ISSN: 0892-7936  
E-ISSN: 1753-0377


FIRST PUBLISHED IN 1987  
4 ISSUES A YEAR



# online poster session

## Does Pet Ownership Enable Community Integration in Serious Mental Illness?

Ulrike Zimolog, PhD Candidate & Dr. Terry Krupa, School of Rehabilitation Therapy, Queen's University, Kingston, Ontario



**Introduction:** Community, feelings, and social support are essential for people with serious mental illness (SMI) to achieve optimal health and well-being. However, people with SMI often face significant barriers to community integration, including social isolation and stigma. Pet ownership may provide a means for people with SMI to build social connections and improve their quality of life.

**Objectives:** Community to assist individuals with SMI with:  
 1. Enhancing the perception of self and pet owners.  
 2. Improving social support and social skills.  
 3. Improving self-esteem and self-confidence.  
 4. Improving the ability to manage and manage symptoms of mental illness.

**Method:** This descriptive study, "Pet Ownership and Community Integration in Serious Mental Illness," was conducted in Kingston, Ontario, Canada. The study included 20 pet owners and 20 non-pet owners with SMI. Data were collected through a series of focus groups and interviews. The data were analyzed using thematic analysis.

**Results:** Measures completed by ACT staff

- 1. Perception of self and pet owners:** The study found that pet owners with SMI had a significantly higher perception of self and pet owners compared to non-pet owners with SMI.
- 2. Social and socio-demographic characteristics:** Pet owners with SMI had significantly higher socio-demographic characteristics compared to non-pet owners with SMI.
- 3. Psychosocial and environmental stressors (PONS-2):** Pet owners with SMI had significantly lower psychosocial and environmental stressors compared to non-pet owners with SMI.

**Conclusion:** Pet ownership may provide a means for people with SMI to build social connections and improve their quality of life. Further research is needed to explore the mechanisms of this relationship.

## Pet Support Services as a Healthful Safety Net for People with AIDS

Hart, Lynette A., PhD; Hart, Benjamin L., DVM, PhD; Reed, Shannon K., J.; and Brooks, Andrea; University of California, Davis 'Pets Are Wonderful Support (PAWS), San Francisco




**Background:** An AIDS (acquired immunodeficiency syndrome) diagnosis of a chronic, often fatal disease, is compounded by financial and social hardships that limit successful functioning. How do people cope with these overwhelming, progressive challenges? Pets for Wonderful Support in San Francisco (PAWS) coordinates volunteer support for the most vulnerable people with AIDS or advanced HIV to assist them in obtaining a pet. PAWS associates with pet rescues a confirmed AIDS or disability, no drug use, and a minimum of income (less than \$1,000 per month). Some people with AIDS or disability rely on alternative support from family or friends. Given the increasing challenges faced by PAWS clients, we evaluated the self-reported medical and psychosocial functioning of people with AIDS or disability (HW) including those with and without support from PAWS and/or alternative support from friends or family, and people who have AIDS but no pets.




**Methods:** People with AIDS in residential confinement (disability HW) were interviewed (1) with and without support, (2) 14 participants without pets, (3) 10 participants with PAWS and alternative support, (4) 10 participants with only alternative support. Although comparable groups were not available, PAWS participants had a lower financial level than other groups. Most participants were men living alone. The three intervention units (specifically trained) volunteer interviewers (August 2006-July 2007).

**Results:** Financial stress of PAWS clients. PAWS clients expressed significant financial stress regarding veterinary care (p<0.001). People who had acquired alternative support lacked the financial challenge (p<0.001), but they rated their health as significantly worse than others (p<0.05). AIDS/HIV had negatively affected the ability of participants with only alternative support to care for the pet (p<0.04). Adjusting for health status, PAWS clients also were adversely affected more than other groups in their ability to care for the pet (p<0.04).

**Discussion:** Social satisfaction of PAWS clients. As shown in the figure below, PAWS clients, with or without alternative support, found that their lives were socially satisfying than the other groups, despite their financial status (p<0.01). They also had more comfortable confiding to another person than did people without pets (p<0.04). Clients with only alternative support reported their social lives as significantly less satisfying (p<0.02).

## Nonverbal sensitivity and success in human-dog interaction

Iben Meyer & Björn Forkman

DEPARTMENT OF LARGE ANIMAL SCIENCES  
 FACULTY OF LIFE SCIENCES  
 UNIVERSITY OF SÖDERBYN

**Background:** Some human-dog interactions seem more successful than others. Dogs use nonverbal signals to communicate and human nonverbal sensitivity might therefore affect the success of human-dog interaction.

**Aim:** To do preliminary investigation of the relationship between nonverbal sensitivity and success in dog-interaction.

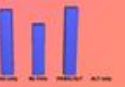
**Method:** Subjects: 25 dog owners/trainers (age 31-71 years) took the PONS<sup>2</sup> test. Questionnaire: self assessed ability to handle dogs. 8 subjects were evaluated by a skilled dog trainer on different aspects of dog-interaction.

**Results:** A significant relation between PONS performance and self assessed success in dog-interaction (Fishers Exact, df=1, X<sup>2</sup>=4.57, p=0.0486).



**Conclusion:** Nonverbal sensitivity might affect how comfortable people feel about handling unknown dogs.

## Do you feel it is satisfying?



**Results:** Analyses adjusting for health status in health pre-diagnosed persons to sleep problems, reach day depression, lack of happiness, a fear of life, and especially awareness of distress the AIDS by members. Pet or support status did not advanced stage of severe disease.

**Discussion:** Social benefits of PAWS support. PAWS clients in this study despite living below the poverty line and with an incurable, life-threatening disease, had satisfying social lives. They continued functioning socially with enjoyment. The PAWS support helped them maintain their essential requirements so that they were no worse than the other groups in medical and psychosocial measures. They were coping and maintained a quality of life despite being generally at higher risk at a group.

**Alternative support lacks social benefits.** Some participants had found it necessary to recruit alternative support due to their health status. These people with only alternative support were not socially functioning as well as those with PAWS support.

**Impact of severe disease.** For the people already severely impacted in their health with AIDS or HIV complications, the effects of disease were not ameliorated by either pets or support.

**PAWS support enhances coping.** For people with AIDS enjoying moderately good health, support from pets and PAWS, more than alternative support from family and friends, provides a rewarding social life and provides meaningful instrumental assistance with the physical and financial deficits they face. PAWS clients manage to continue enjoying their lives despite their daily health and financial challenges.

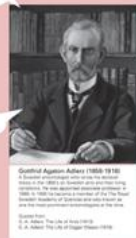

## Anti Intelligence or Instinct? The Gendering of Insects The Mother of Society

Assistant professor Karin Dirke  
 Department of Literature and History of Ideas, Stockholm University

**Intelligence or Instinct?** "It is as if the insect were a human, a being with a mind, a being that thinks, a being that feels, a being that is conscious of its own existence, a being that is aware of its own mortality." - Karl Popper

**The Gendering of Insects** "The social behavior of insects was essentially determined by the organization of the brain. Insects, however, possess a brain that is organized in a way that is fundamentally different from that of vertebrates." - Karl Popper

**The Mother of Society** "The social behavior of insects was essentially determined by the organization of the brain. Insects, however, possess a brain that is organized in a way that is fundamentally different from that of vertebrates." - Karl Popper


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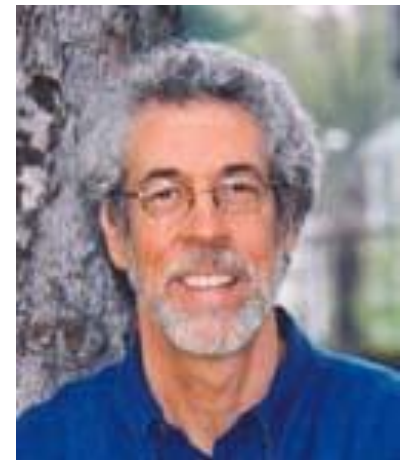




# IAHAIO/ISAZ Distinguished Scholar Award



**Elizabeth A.  
Lawrence**  
**Karen M.  
Allen**







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**Human-Animal  
Interactions:  
Challenges  
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Indianapolis, Indiana USA  
August 4-6, 2011

[www.isaz.net](http://www.isaz.net)



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