

Book Review: “How Animals Affect Us: Examining the Influence of Human-Animal Interaction on Child Development and Human Health.” (2011)

Edited by Peggy McCardle, Sandra McCune, James A. Griffin, and Valerie Maholmes. American Psychological Association, Washington DC.

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The timing of the publication and review of this edited volume in the inaugural addition of the HAI Bulletin could not have been more fortuitous. Similar to the goals of this publication -- to advance the science and field of human-animal interaction (HAI) -- this volume provides those currently in the field of HAI, and those seeking to enter the field, with a broad, multilevel conceptual map and scientific framework for moving the field forward from the anecdotes and personal experiences of practitioners to empirical discovery.

The text opens with an introduction to the issues and topics in HAI in which the authors acknowledge the many challenges to the systematic study and methodologies currently facing the field. First, they address the bias that exists toward the field from within, as well as biases against it from those scientific circles outside of HAI. Researchers and practitioners *within* HAI are typically animal lovers driven by a deep, intuitive understanding of the importance of non-human animals to our lives. Animal-assisted therapy (AAT), for example, continues to increase in popularity and has moved forward despite a lack of solid supporting scientific evidence. On the other hand, those from research circles outside of the field often have biases that lead to the dismissal of the contributions that non-human animals make to human lives as either obvious or trivial.

Other major challenges to the field identified by the authors are that HAI is multidisciplinary and lacks consistent terminology. The field of HAI includes such disparate fields as psychology, psychiatry, social work, public health, sociology, special education and veterinary medicine. Each of these has field-

specific nomenclatures. The authors propose more consistent terminology for the field that covers the basic developmental, applied therapeutic research for physical as well as psychological health and well-being.

Scope and Organization:

This volume is organized into three major sections: Section 1 (chapters 1-3) is dedicated to an over view of methodology, Section 2 (chapters 4-6) examines the research on HAI and child development and Section 3 (chapters 7-10) focuses on HAI and human health. The *Afterward* provides an agenda for future research in the field and the Appendix organizes resources (by field and journals) for studying HAI through Anthrozoology.org.

Section 1: Methodology

The first two chapters, dedicated to methodology, are essential reading for those proposing research in the field. In Chapter 1, Gail Melson presents guiding principles for HAI that are grounded in the context of the broader theoretical frameworks. These principles are central to the study of child development, which has seen numerous advancements in the last several decades with regard to the quality and quantity of empirical research. The author suggests a framework for HAI research that falls within the contexts of the fundamental studies on perceptual, cognitive, social-emotional, language and moral development of children.

In Chapter 2, Alan Kazdin acknowledges that there is “no conceptual leap” in considering the promising role that animals play in assisting humans with social, emotional and behavioral problems.

He reiterates the challenges discussed in the introduction that the “intuitive appeal and widespread belief that animals can have a therapeutic effect can detract from rigorous scientific scrutiny of AAT” (p. 35). While the call for more systematic research has been a common one in the field, Kazdin proposes clear guidelines for fostering the scientific evaluation of AATs and methodological standards for intervention research. He lists common methodological problems found in the current AAT research including heterogeneous or ambiguous samples; treatment foci that are questionable or based on unsupported assumptions; and the lack of multiple assessment measures. Instead of a unique approach to research, he proposes research guided by existing standards for the evaluation of other therapeutic interventions: RCT’s (random clinical trials), quasi-experimental designs, well-designed single case studies, and qualitative designs.

Chapter 3, (K. Uvnas-Moberg, L. Handlin, & M. Peterson), focuses on the promising directions in research pertaining to the physiological changes and endocrine correlates in HAI research- specifically proposing ways to measure and assess oxytocin and cortisol.

Section 2: *HAI and Child Development*

In Section 2 (chapters 4-6) the focus is on current research and issues in child development. Chapter 4, (J. DeLoache, M. Bloom-Pickard, & V. LoBue), examines how and why infants exhibit greater attention and emotional attraction towards animals as opposed to other stimuli and offers hypotheses for these early preferences. Chapter 5, (C.D.L. Wynne, N. Dorey, & M.A.R. Udell), take a different approach to HAI by stressing the importance of understanding the effects of children’s cues on canine behavior. The authors point out that all of the studies to date have involved adults and canines. They suggest that researching and understanding canine responses to children may reduce the prevalence of dog bites perpetrated on them. This understanding may also advance our understanding of canine human interaction and therapies with children.

In Chapter 6, Frank Ascione and Mike Maruyama examine progress in the development

of theory and the refinement of empirical research in animal abuse and psychopathology. This chapter is a comprehensive overview of the various measures of assessment of animal abuse and maltreatment and a summary of research findings. Similar to the other chapters in the volume, the authors offer a clear agenda for future research. They assert that advancing our understanding of the etiology, developmental trajectories and predictive value of animal abuse will inform efforts to intervene and prevent the suffering of animals as well as advance understanding of mental health and psychopathology in children and adolescents.

Section 3: *HAI and Human Health*

Section 3 (chapters 7-10) focuses on health outcomes and correlates. Chapter 7, (J. Salmon & A. Timperio) addresses childhood obesity and the influence of dog ownership and dog walking on children’s health and health behaviors. The authors also suggest future research directions including examining a range of interactions with animals and various health outcomes with children.

Chapter 8, (B. Headey & M. Grabka) provides an examination of health correlates of pet ownership from national surveys as well as a little known “natural experiment” that has been evolving in China for the last 15 years. In China, pet ownership was banned until 1992. After this time “there was a sharp break, a specific moment in time when conditions changed and an experiment began” (p. 157). Research has indicated that since 1992, people with no prior history of pet ownership began owning pets and approximately 10% of households in large cities have acquired a dog. This condition has allowed researchers to examine health related questions in relationship to pet ownership. The chapter concludes with a preliminary glimpse at the potential health cost savings due to pets and the implications for future research and public policy concerns.

Chapter 9, (E. Friedmann, S. Barker, & K. Allen) explores the physiological correlates of health benefits from pets using a bio-psycho-social-interpersonal model. The authors suggest a psycho-neuro-immunological model might be particularly useful in the evaluation of AAT in health care settings. The chapter focuses on the

human health benefits (e.g., stress level) of observing animals as opposed to actually interacting with animals. The research reviewed in this chapter supports positive effects of observation but questions the effects of actual interaction. This raises important considerations for research in both quantifying and controlling for many variables in AAT. The authors also raise important differences between researching pets and their owners compared to friendly but unfamiliar animals such as those used in AAT. Similar to the theme found in the previous chapters, authors note that most of the research has focused on adults and the authors conclude with possible research directions with children.

In chapter 10, Rebecca Johnson examines Animal Assisted Intervention (AAI) in health care contexts and the urgent need to research AAI across the lifespan. Given the scant research that exists with children, she focuses on the importance and need for RCTs (random clinical trials), larger samples, standard protocols and relevant outcome variables. She states, "...the AAI field needs to advance the science rapidly to more beneficially guide practice, rather than continuing to allow practice to lead the field. There exists a critical need to further test to identify what populations may be the most likely to benefit (e.g., adults, children, acute care settings, or long-term care) and what may be the optimal dose (length of AAI and number of sessions), and means of administration (group vs. individual AAI)" (p.190). Furthermore she asserts that the research has begun to indicate that this is not a one-size-fits all intervention.

Afterward and Appendix

The Afterward (P. McCardle, S. McCune, L. Esposito, V. Maholmes, & L. Freund) offers an agenda for future research in the field of HAI. Future directions include the nature of human animal interactions, HAI and child development, children and pets from the standpoint of health and physical well-being, therapy and animals and biomarkers and biobehavioral studies. They reiterate the methodological issues and challenges facing the field and call for clinical trials, population-level studies of HAI, diverse samples and utilizing technology to accomplish cross-sectional, longitudinal studies.

Additionally they propose the creative application of new technological advances to the development of behavioral phenotypes and the study of pair-bonding between people and pets.

In the Appendix, Tim Adams conducted a review of the literature on HAI beyond peer-review to include "gray literature" (p.203) and published commentaries published around the topic. He describes three main themes from the literature 1) that HAI is a young field of investigation, 2) the diversity of the field is both a strength and a weakness, and 3) definitions, search terms, and keywords are fluid. He provides a resource for studying HAI through the anthrozoology.org project and website in which abstracts from the many areas of HAI are organized by field and journal. This is an invaluable resource for those searching the HAI literature.

Relevance to the Field

This volume is essential reading for those conducting research in HAI as well as those seeking to enter the field. Researchers and students from a wide-range of disciplines and developmental approaches can benefit from the broad scope of this text.

For graduate students, and possibly more advanced undergraduate students, this volume provides a solid foundation for understanding the current state of the literature and issues facing the future of the field. While many authors have issued the clarion call for empirical research, particularly in the area of AAT, this volume provides an answer to that call by providing a grounded, scientific rationale for accomplishing just that.