

To Lift Up Our Companions

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In 1968, Baer, Wolf and Risley laid out the “dimensions” of Applied Behavior Analysis (ABA) in the first issue of the Journal of Applied Behavior Analysis (Baer et al., 1968). The study of socially significant behavior, functional analysis, and all the components of these dimensional guidelines had been born of the experimental work in the animal laboratories of the likes of Pavlov, Thorndike and Skinner, and they have since had a dramatic impact on human behavior change.

On a parallel track of scientific study were those who received the Nobel Prize in 1973 for their systematization of animal behavior, in the science of “Ethology.” Cobbling it from Biology and Ecology, Niko Tinbergen, Konrad Lorenz and Karl von Frisch systematized the new animal science (Burke, 2005). Interestingly, as early as 1902 (Wheeler 1902), this was already the name of the study of behavior of animals in their natural settings. The modern behavior analyst may gasp with recognition when they read Wasman’s proposed 1902 definition of ethology: “The science of the external conditions of existence which pertain to organisms as individuals and at the same time regulate their relations to other organisms and to the organic environment” (Wheeler, 1902, p. 975). Compare this to Skinner (1953), who said, “The environment is so constructed that certain things tend to happen together. The organism is so constructed that its behavior changes when it comes into contact with the environment.” Thus, the discriminating applied animal behavior analyst always has a foot each in the path of ethology and psychology. We gratefully follow in the footsteps of scientific giants.

The more recently-born discipline, that of Anthrozoology (see the journal *Anthrozoös* for a thorough investigation into this field) embraces the juncture of human and non-human animals and all its relationships, and those who publish in *Zoo Biology* address all empirical aspects of animals in wildlife zoos, parks and aquariums. Yet none of these sciences (biology, ethology or anthrozoology) has specifically or systematically embraced the analysis of the socially significant behavior of those animals that live with, and/or are cared for by humans, particularly those in need of behavior change. This animal population, as represented by pets, shelter animals, zoo and aquarium animals, livestock, and laboratory animals, has historically been served by those who have one foot in the stream of ethology or zoology, and one in the stream of psychology. To date, these animals’ behaviors have been only rarely changed by those who analyze behavior as to cause, and who create efficacious treatments based upon a functional

relation between environmental components and behaviors targeted for change. A need exists to support this change via peer-reviewed research.

The term “applied” has become a common term for the study of those animals that live with humans. For this Journal’s purposes, applied will be defined as socially significant behavior, such as when an animal’s care and feeding is controlled by a human. This could be a pet of any species, livestock, or any animal that lives in captivity, whether in a zoo, aquarium, or laboratory. (This would be contrasted with any animal that forages for food, and reproduces freely, regardless of its species.) Animals who have been under the care of a human but who are stray or have become feral could exhibit socially significant behavior in the presence of humans. Though the function of the behavior of any species of animal could be the subject of study, the focus of this journal will primarily be the behavior of those animals under the direct care of humans.

The importance of pets in human societies around the world is known; their loss is mourned in a fashion similar to that of a spouse or child (Davis et al., 2003). Local and worldwide organizations that would protect many species of animals from cruelty (Linzey, A., editor, 2013) arose during the 19th century.

According to the American Veterinary Medical Association, in 2016, 38% of Americans owned a dog, 25% owned a cat, and 13% owned a specialty or exotic pet (<https://www.avma.org/news/press-release/where-not-so-wild-things-are-avma-releases-data-top-bottom-states-dog-cat-and>). But all is not the imagined world of the likes of television and comic stars Lassie and Garfield. Humans are bitten by dogs at a rate of 4.5 million per year in the United States; bites to children are underreported, and 50% of children will be bitten by a dog (Essig et al., 2019). Cats are especially dangerous to humans when they “redirect” aggression (Amal et al., 2008). Dogs and cats are surrendered by the thousands to shelters in the U.S. (approximately 3.3 million dogs, 3.2 million cats), and approximately 1.5 million are euthanized (<https://www.aspc.org/animal-homelessness/shelter-intake-and-surrender>).

Behavioral help is available for zoo/aquarium animals and pets with problem behaviors, and may come from vets, veterinary behaviorists (<https://www.dacvb.org/page/Certification>), applied animal behaviorists (<https://www.animalbehaviorsociety.org/web/downloads/CAAB-ACAAB-Program-Requirements-%20June2018.pdf>) or from trainers certified by non-academic bodies, to those who have learned their craft through an online course or a history of mentorship; it is beyond the scope of this article to try and list and compare them all, if all can even be found.

For trainers and/or behaviorists seeking peer-reviewed research about applied animal behavior, the choices include diverse journals such as The Journal of Applied Animal Welfare Science, The Journal of Applied Animal Behavior, the Journal of Veterinary Behavior or the Journal of the Veterinary Medical Association, Animal Behaviour, Journal of Experimental Analysis of Behavior, and others. As well, many applied *animal* behavior analysts publish in

“human” ABA journals such as those published by the Association for Applied Behavior Analysis International (<https://www.abainternational.org/journals.aspx>). They do this partly because ABA animal research has been published there, and because they recognize that barriers do not exist between the psychological realms of animals and humans where it comes to ABA; the principles of behavioral science travel with ease between species.

When BF Skinner wrote “The Behavior of Organisms,” he was interested “...in setting up a system of behavior in terms of which the facts of a science may be stated and, second, in testing the system experimentally at some of its more important points.” (Skinner p.5)

Skinner was good to his word and did not differentiate between species when, after writing in *Scientific American* about how easy it would be to shape the behavior of a dog, a reporter from *Look* magazine invited him to do just that. The result can be seen in the May 20, 1952 issue, when pictures were published of Skinner teaching a Dalmatian named Agnes to jump progressively higher on a wall and to open the lip of a garbage can by stepping on it (Peterson, 2001).

In 1989, BF Skinner commented that “human behavior will eventually be explained (as it can only be explained) by the cooperative action of ethology, brain science, and behavior analysis.”

These words resonate now for animal behavior change; aside from safety concerns alone, the environmental pressures on animals in applied settings are tremendous. From having to learn to wear a collar, halter, coat (and perhaps a designer one at that), to live and perform in ethologically unfamiliar landscapes, or among a dwindling number of representatives of your species being kept healthy in a zoo or aquarium, it is a world of human-controlled environments in which many animals behave. Moving the behavior analytic needle back and forth amongst species has never been more timely or important.

Thanks to a dedicated cadre of researchers, this data-supported reverse translation from the lab to the human back to animals is gaining traction (Lattal and Fernandez, 2022; Allgood, Edwards & Mahoney, 2022). Behavior analysts who work with humans demonstrate their interest in training animals by their growing numbers at behavior analytic conferences where ABA research on animals is presented. Many belong to and frequently collaborate with other members of the ABAI Applied Animal Behavior Special Interest Group.

It is therefore the intention of this Journal to support this movement of scientific, ethical, behavior analytic, reverse-translational trend toward helping the animals in our care by making what was old...new again. Every animal living in social proximity to humans may be viewed through our analytical lens. May their behaviors, as analyzed by our writers, lift up all our companions.

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