



Protected Contact and Elephant Welfare

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Captive elephant management in the 21st century: by all appearances it is as emotionally charged and contentious as it was in the previous century. It is somewhat difficult to determine if elephants are much better off than they were 5, 10, or 20 years ago. Elephants have been the recipients of unprecedented attention, scrutiny, and debate. Despite the production of innumerable guidelines, standards, position papers, and recommendations, scientific evaluation remains a much needed component in assessing elephant welfare. Part of the difficulty stems from differences in perspective. One perspective is that elephants have needs that are distinct and unique from any other species, and therefore require specialized responses. Another view is that elephants are no more unique than other species we manage, and therefore much can, and should, be learned and applied across species.

We are proponents of the second perspective, members of the school of “don’t reinvent the wheel”. We advocate maximizing the welfare of captive elephants by recognizing their uniqueness, as well as their similarities with other species. Within this framework, this paper will focus on the choices we make regarding elephant care and management and their relative impact on animal welfare.

In order to maximize animal welfare, we suggest 3 basic rules. First, strive for utmost clarity in defining and implementing the system being used. The suggestion that there are no distinct differences between training systems, only a continuum of options, inhibits rather than assists elephant managers in evaluating the relative costs and benefits of the choices they make and the impact of those choices on animal welfare.

Second, when making choices in methods, tools, and techniques, always choose the most positive option. It’s hard to imagine going wrong when following this simple rule.

Third, in the decision-making process, use science when it is available and fairness and reason when it’s not. Move past differences in opinion and into the realm of fact and objective assessment, as much as possible. To do so completes the loop, as objective assessment leads to, and requires, clarity.

Rule 1 - Clarity in defining PC

Clear and concise thinking is fundamental to any problem-solving process – we must strive for clarity to assess and choose our options. What is the benefit of ignoring 14 years of PC experience, activity, discussions, and publications by stating that there are not two distinct systems, but rather a continuum of management types between PC and FC? That position allows for rhetoric, semantics, and generalities to blur the lines and inhibit reason and clarity. Although there are certainly similarities, it is the differences that may be most relevant, and we have to be willing to look at these openly and honestly in order to assess options and make an informed choice.

For example, in our travels around the country we encounter elephant management practices that are called PC or “modified” PC, in which trainers simply move to the other side of the physical barrier and give commands to the elephant. In these situations, the trainer often still carries the ankus, may use an authoritative voice to give commands, and doesn’t actively attempt to abolish the pre-existing dominance-based relationship. Although some may consider this PC, we

respectfully and adamantly, disagree. PC is not free contact conducted from the other side of a barrier. It is a separate and distinct form of elephant management that is comprised of more than keeper position and the presence of a barrier. This simplistic view allows, and even invites, misinterpretation.

PC is a system that has 2 equally important fundamental objectives, keeper safety and animal welfare. We define PC in the following way: Protected contact is a system for managing elephants that uses positive reinforcement training as the primary method to modify behavior. Physical punishment is prohibited. Directing the positioning and movement of the elephant and shaping behavior is achieved through the use of targets. Keeper safety is achieved by elephant and keeper positioning relative to each other and to a barrier, which typically separates human and animal spaces. Trainers function outside the elephant social hierarchy and do not attempt to establish a position of social dominance.

Tools of PC

The tools of PC are simple: a conditioned reinforcer like a whistle or clicker, targets of varying lengths, and food reinforcers. The primary technique and foundation of PC training is positive reinforcement. Operationally, we are gaining the elephant's voluntary cooperation in the training. According to the AZA PEM course notebook, the official tool list for PC includes the ankus or guide. The implication being, that the systems are similar and the tools interchangeable. We see this position as violating the fundamental principles of PC and diminishing its welfare benefits to elephants.

In PC, it is not necessary, nor is it appropriate, for the trainer to be socially dominant. In fact, attempts should be made to diminish this type of relationship, which is a component of traditional training, but inappropriate in this context.

Positive reinforcement is the primary method of behavioral modification in a true PC system. This means that all positive reinforcement tactics should be pursued and exhausted prior to resorting to any unpleasant or aversive techniques. We recognize that in the real world there will be those times when negative reinforcement or non-physical punishment may be necessary. We acknowledge that all elements of operant conditioning contribute to learning. However, being true to a PC management system requires that the highest priority of implementation is the strict commitment to use positive reinforcement as the primary means by which new behavior is taught, undesirable behavior is addressed, and non-routine procedures are dealt with.

Finally, PC is designed to allow elephants to exercise a high degree of choice and control, to experiment, and to make mistakes without negative consequences. When undesirable behavior needs to be addressed, there are three appropriate and acceptable methods available, including: extinction, training of incompatible behaviors, and punishment in the form of a time out. In many cases we advocate simply ignoring undesirable behavior, like non-compliance, and even aggression. The only form of punishment that has a place in PC is the use of the 'time out', which removes the animal's opportunity to earn positive reinforcement. Physical punishment is prohibited in PC, with the only exception being a life threatening situation for person or animal. Skilled application of any of the techniques is required, as is an ongoing assessment of results to determine efficacy.

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Rule 2 - Choosing the most positive option

We always have choices in what we do and how we do it. This rule is simple - we will always objectively assess our options, and deliberately choose the most positive one. We're animal trainers. We work with a wide array of animals. The concept of finding the most positive training approach applies to all situations and all species. In dog training, we can choose positive reinforcement methods over negative reinforcement and punishment; verbal correction over physical correction, and so on. For progressive dog trainers, the more positive the method, the more preferred it is. In horse training individuals like Ray Hunt and Pat Parelli have made careers, and improved the welfare of countless horses, by advocating the most positive methods of training. In the biomedical community, Institutional Animal Care and Use Committees are tasked to evaluate studies based on this principle. The Animal Behavior Society's guidelines on the use of Aversive Stimulation and Deprivation with animals in behavioral research state: "To minimize possible suffering of the animal, the investigator should ascertain that there is no alternative way of motivating the animal, and that the levels of deprivation or aversive stimulation used are no higher than necessary to achieve the goals of the experiment. Alternatives to deprivation include the use of highly preferred foods and other rewards which may motivate even satiated animals."

In the keynote speech at an Ethics and Animal Welfare conference in 1998, James Battye of the Dept of Philosophy at Massey University in New Zealand made the following comments regarding the treatment of animals in biomedical research. "If people who work with animals are seen to have fair and reasonable views, are seen to be putting them into practice and to be working on lifting their game still further, public confidence and respect will surely follow. If you can show that not only does the good you do outweigh the bad, but also that it does so to the greatest possible extent, and that you are always on the lookout for new ways to increase that margin, you can open the doors of your laboratories with pride. "

Most of us are already applying this philosophy to zoo animals in several ways. Choosing positive reinforcement over negative reinforcement is choosing the most positive technique. The move to husbandry training is a very real way of improving animal care and welfare by choosing the most positive option. Gaining the voluntary cooperation of animals in veterinary procedures is preferable to restraining, coercing, tricking, or forcibly administering medical care. Presenting a leg for an injection is a far more positive option than being chased and darted. With elephants, we can apply the process to the management system we use. Maximizing the use of positive reinforcement and minimizing the use of negative reinforcement is the first step. In PC, assess the possible tools and make the most positive choice. For example:

An ankus:

- is used to cue and shape behavior
- must be established as an aversive stimulus and functions as a negative reinforcer
- is traditionally used to maintain the trainer in a socially dominant position
- is used to mete out physical punishment

A target:

- is used to shape, and sometimes cue, behavior
- is a neutral object the animal learns to move towards
- is associated exclusively with positive reinforcement

On this comparison, if we assume that either tool is sufficient to train new behaviors and maintain existing ones, clearly using a target is the most positive method. So, are there any compelling reasons why an ankus is needed? In our experience, we have never encountered a behavior we cannot cue and shape using a verbal command or hand signal and a target. In PC the trainer is not socially dominant, and physical punishment is prohibited. So, what exactly is the purpose of

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using an ankus in PC? No matter how gently the ankus may be used with an animal, at some point it had to be established as a negative reinforcer in order to be effective. That means causing enough pain and discomfort that the animal remembers, and seeks to avoid that experience by complying. So, why would we want to continue to use a tool that is unnecessary and carries with it a history of pain, discomfort, and human dominance? Doesn't that clearly break the rule of always choosing the most positive option?

Rule 3 - Science-based decision-making, followed by fairness and reason

"Science-based" is a term being thrown around a lot these days, and unfortunately, often it is used more as a wish than a reality. However, we must make the effort to gather credible information, from all areas of elephant experience as well as related experience with other species, in order to make sound decisions that maximize animal welfare. This is important, despite the fact that there are huge gaps in our knowledge of what elephants need and what works best to meet those needs.

What does science say about our choices in training strategies? Even a cursory search of the literature will reveal overwhelming evidence that the use of aversive techniques, particularly physical punishment, has many associated risks and negative consequences. Whether studying its use with children (referred to as power assertion) or in training dogs, or in insuring compliance in behavioral studies with primates, aversive techniques have been repeatedly found to be related to aggression, an increase in undesirable behaviors, and the potential for suffering and diminished welfare. Fairness and reason would lead us to a similar conclusion.

Studies with farm animals have shown a high degree of fear response associated with negative handling methods that is surprising since these are domesticated species. In one study on handling of heifers using negative methods including hits, slaps, and kicks, remote blood sampling through indwelling jugular catheters showed both acute and chronic stress response in fearful animals. (Breuer et al, 1998)

A study on dog training methods found that dogs trained exclusively using reward-based methods were reported to be significantly more obedient than those trained using either punishment or a combination of reward and punishment. Dogs trained using punishment also exhibited more problematic behaviors including chewing household objects, stealing food, and over-excitement. (Hiby et al, 2004)

Some studies also warn that just because animals comply and appear to be comfortable, does not mean that is so. Markowitz and his colleagues (Line, Clarke, and Markowitz, 1987; Line, Morgan, Markowitz, and Strong, 1989), as reported by Forthman and Ogden (1992), have cautioned animal managers never to presume, without supporting data, that animals have become habituated to routine procedures and handling, because their studies have demonstrated prolonged alterations in heart rate and cortisol levels after such routine procedures as cage cleaning.

Field researchers whose experience with vast numbers of animals over extended time frames have developed information that is important to consider. Joyce Poole reports that, from her experience, African elephants do not "discipline their young," nor is discipline "...natural in elephant society [and] therefore something that an elephant can understand". Poole states that she has seen calves "...protected, comforted, cooed over, reassured, and rescued, yes, but punished, no."

These are just a few examples of the science that's out there and worthy of review in making decisions about how we manage elephants to maximize their welfare. However, as stated previously, there are huge gaps in our knowledge of what elephants need and what works best to meet those needs. So, in the absence of science to guide our decision-making, we must have

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another mechanism to make decisions and assessments. As Albert Einstein said, “All things that matter cannot be counted and many things that can be counted, don't matter.”

In the absence of science, Battye (1998) suggests that fairness and reason are concepts upon which important decisions regarding animal welfare, and our ethics about it, can be grounded. As way of illustration, he rewrites the golden rule to read: “Treat others as you would want to be treated if you had their needs and interests, not as if you were in their place with your own needs and interests.” His closing words to the biomedical community are relevant to us here as well: “If you are determined to be fair and reasonable, there is nothing to fear.”

Conclusions

There is a great deal of discussion these days about the importance of giving back choice and control to captive animals, and the huge benefits gained in the process. It is important to recognize that we humans do have tremendous choice in how and what we do. And, ultimately, we are the ones with the greatest control. So, the purpose of this paper is to suggest ways we can use our choices and control to better the lives of the elephants we care for. It is our belief that we can maximize the welfare of captive elephants by recognizing their uniqueness, as well as their similarities with other species. So the three rules we suggest are simple and reasonable, and can be applied to all captive animals. First, be clear and concise in what you do, and why you're doing it.; second, when making choices about how to manage and care for elephants, always select the most positive option. And finally, in making your choices use science when it is available and fairness and reason when it's not.

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