THE POLITICS OF PROTECTED CONTACT

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Protected contact is:

"...a concept of elephant confinement that consists, principally, of eliminating tactile human contact..."

"...the relegation of elephants to a kind of penal confinement."

"...a return to the unhappy era of enforced isolation."

With protected contact:

"...those relationships (human/animal) will become a robotic, remote relationship."

"...we could wind up with a generation of unmanageable "wild" zoo elephants.

Protected contact will:

"...reduce the quality of life for these magnificent animals."

We are now only 2 years into the implementation of protected contact as a primary elephant management system. Yet, in reading the preceding comments from a variety of newspaper, magazine, and newsletter articles, it is difficult to imagine that protected contact was developed as a positive alternative for traditional elephant handling. In addition, looking at the various forms of protected contact that have cropped up around the country, many significantly diverge from the fundamental principles of protected contact. And there really are some basic tenets upon which PC was built. They have just gotten a bit distorted along the way.

The rather rocky road protected contact has traveled thus far is to be expected. Although not a completely new idea, it is one that, once organized into a cohesive methodology constituting the beginnings of a real system, fundamentally challenged the status quo. It is irrelevant that that was not the intention. The emotional resistance to protected contact arises from a community under siege. Ironically, the rush to protected contact by crisis-driven zoo management also threatens to undermine its structure and intent. So, in order to sort out the confusion and to address the concerns, a review of the basic tenets of protected contact from the perspective of those who developed it is in order.

1. KEEPER SAFETY.

The cornerstone of a protected contact program is keeper safety. Protection comes from three elements - physical barriers, elephant positioning, and trainer positioning. When the trainer works in close proximity to the elephant, a physical barrier allowing safe access to the animal is required. Next, the elephant must be in a physical position where it cannot strike the trainer without repositioning itself. Finally, trainers must take positions which they can easily vacate if the elephant repositions. In situations where a barrier is not used, such as in yards or pens, trainers must work beyond the

maximum reach of the elephant's trunk. This strategy is backed up by a buddy system in which one trainer focuses on the behavior being conducted as the backup watches the elephant.

Although the level of risk is far less than in free contact, protected contact is not a foolproof system. Safety ultimately relies on human judgement and is vulnerable to human error. It is absolutely critical that both staff and management understand the basic rules of keeper safety and adhere to them, or people can and will be hurt.

Human/Animal Interaction

The rules of protected contact that apply to keeper safety are there to allow and support human/animal interaction, not prohibit it. Given the right facility modifications, it is possible to have tactile contact with virtually every inch of an elephant's body. The same positioning that allows contact for husbandry behaviors and veterinary procedures can and should be used for physical contact simply for the sake of human/animal interaction. This is not a unique concept. Keepers that work with the vast majority of zoo animals create and maintain lasting relationships with the animals, always interacting through barriers of steel, mesh, bars, fences, or moats.

Those that lament the loss of a special human/animal relationship when free contact is suspended, must acknowledge that a free contact system necessitates the handler maintaining a socially dominant position over the elephant. It is reasonable to assume that that factor impacts, and to some extent limits, the human/animal relationship. Protected contact, on the other hand, places some constraints on physical contact, but at the same time removes the barrier of sustained domination. Each system has its costs and benefits, and ultimately the extent and quality of the human/animal relationship is up to the individual humans and animals to develop and assure.

2.HANDLING METHODS THAT RELY PRIMARILY ON POSITIVE REINFORCEMENT.

In a positive reinforcement system animals are reinforced with rewards they like for the desired behavioral response. Operationally, it means that we exhaust the positive alternatives before any kind of negative reinforcement is utilized. On the rare occasions when an escape-avoidance technique is necessary, such as restraining an elephant in a chute, it is kept to a minimum and balanced by positive reinforcement the vast majority of the time. Punishment is only used in a life threatening situation for person or animal. The only discipline used is a "time out", which is simply a withdrawal of the trainer's attention from the elephant for a short period of time before resuming activity, or in extreme cases, actually ending a session and coming back later to try again. The elephant is always fed its daily allotment of food.

This training does not rely on the handler being socially dominant. Participation by the elephant is voluntary. With good trainer skills the level and consistency of elephant behavioral performance will remain high. Our records show that in 365 protected contact training sessions between four elephants, the animals chose to work 99% of the time (Laule, 1992).

Negative versus Positive Reinforcement

Good free contact trainers regularly utilize positive reinforcement in their training and handling. However, free contact as a system relies primarily on negative reinforcement or escape/avoidance. This

is illustrated in contrasting the use of a hook and the use of a target (a pole with a soft tip which is the basic tool of protected contact) to elicit a physical movement.

Initially, the hook controls the elephant's movement by escape-avoidance. The elephant is uncomfortable when the hook touches the back of a leg, so the elephant moves the leg forward to escape or avoid the hook. The movement is away from the hook. Once trained, the elephant will respond to the hook as a cue whether or not it is used in an aversive fashion. However, if the animal does not respond appropriately, the hook is used as a negative reinforcer. A target works the opposite. The target touches or is presented in the front of the leg, and the leg moves toward it. The target is not used in an aversive way (i.e. tapping the leg harder) to elicit the response.

Some facilities currently use combinations of free contact techniques in a confined contact setting and call it protected contact. Keepers work from shielded positions but continue to use hooks and free contact voice commands and body language to access behaviors. It is important to understand the repercussions of such a mix. To an unknown extent, the animals are being maintained through a process that utilizes negative reinforcement and harkens back to the animal's memory of the social dominance structure. Although both the hook and the target can elicit movement, the hook has significance to the elephant that is neither necessary nor desirable in protected contact. It can create the perception that the trainer is attempting to dominate the animal when the trainer is no longer in a position to back it up. This can result in challenging and aggressive behavior by the elephant. It also denies the elephant all the benefits positive reinforcement offers. Utilizing protected contact as it was designed, relying on positive reinforcement, meets behavioral objectives while minimizing the chance of aggression.

Greater Choice and Control

In a positive reinforcement environment, animals are free to experiment with a broader range of behavioral responses because there are no negative consequences to experimentation. In fact, skilled trainers consistently reward animals not just for overt correct responses, but for more subtle and subjective actions like "problem solving" a task, offering "creative solutions", and "trying" hard.

Animals are also free to express displeasure, frustration, and aggression without negative repercussions. Because trainers are not functioning in the precarious "alpha" position, which is always vulnerable to being challenged, and because they are working from protected positions, they can ignore aggressive behavior and selectively reinforce any gentle or non-aggressive behavior that occurs. With three different bull elephants, keepers, managers, and veterinarians subjectively report dramatic reductions in aggressive behavior with the use of protected contact techniques (Desmond, Laule, 1991; Maddox, 1992; Flanagan, personal communication, 1993).

Pro-Active Techniques

Positive reinforcement training offers techniques to address behavioral issues in a pro-active manner. Through the process of desensitization animals learn to tolerate scary or uncomfortable stimuli. This is the procedure used in training voluntary cooperation in veterinary procedures that may be physically uncomfortable, such as drawing blood. In basic terms, desensitization is a process designed to "train out", or overcome, fear. While desensitizing animals to specific stimuli, which is an integral part of protected contact training, a general increased tolerance of the unusual seems to occur simultaneously. Some of that is very deliberate on the part of the trainer, some is simply a by-product of reinforcing

toleration of new events. Our observations indicate that overall the elephants react less fearfully to new stimuli and, if they do, are quicker to recover and continue working (Desmond, Laule, 1991). This is consistent with our extensive work with marine mammals (Laule, 1983) and many other animals. This may have significant implications for keeper safety. A study on elephant inflicted injuries indicated that attacks often came as a result of exposure to startling or unexpected stimuli (Bernirschke, Roocroft 1992).

One group of keepers stated that in a free contact system, "...elephants look to the keepers for security..." (E.M.A., 1992) . One could argue that by actively utilizing desensitization, elephants are taught and encouraged to be independently comfortable and secure, rather than dependent on human handlers for security.

3. THE ABILITY TO PROVIDE OPTIMAL CARE FOR ELEPHANTS.

The most serious concern of those contemplating the implementation of protected contact is whether it can provide optimal care for the elephants. Specific issues that are cited are: the ability to train and conduct necessary husbandry behaviors reliably; the ability to access sick or injured animals; the ability to address social issues including introductions and aggression between animals; and the ability to deal with novel situations such as accessing calves.

Training and Conducting Husbandry Behaviors

Protected contact training entails two processes: transferring existing behaviors that an elephant knows to a safer, positive reinforcement context; and training new behavior. As long as the requirements of keeper safety are adhered to, the techniques are versatile enough to be used in a variety of training settings - through a barrier, in an open yard, or in a restraint chute. In our experience, with skilled personnel and adequate facilities, all basic husbandry behaviors can be trained in a reasonable time-frame and accessed on a reliable basis. Reports on positive reinforcement training with a variety of species indicates that the reliability of animals voluntarily cooperating in husbandry and veterinary procedures is very high while the stress level is low (Reinhardt, 1990; Turkkan, 1990; Reichard, Shellabarger 1992). Reliability will not be 100%. However, realistically, no system insures 100% reliability, and the ease of accessing animals for repeated attempts makes success rates in the 80-90% range more than adequate to maintain basic health. The availability of an elephant restraint chute increases the probability of success, as long as the animal's experience in it is positive.

Accessing Sick or Injured Animals

This is an acknowledged concern in any animal management system. As discussed previously, although high reliability can be expected, there will be times when animals will not cooperate. Unfortunately, non-cooperation is more likely to occur when an animal is sick or injured. However, two factors are critical to increasing the likelihood of accessing animals in trouble: the skill level of trainers; and the functionality of the facility in providing adequate access to the animals. In our initial work at the San Diego Wild Animal Park, both bull elephants encountered health problems during the project. The Asian bull cooperated in a protracted process to treat a painful foot problem. The African bull was successfully examined by a veterinarian and treated for an eye problem requiring frequent application of medication. Both these efforts were accomplished solely through protected contact techniques (Desmond, Laule, 1991).

Addressing Social Issues and Aggression

Another area of concern is the ability to monitor and referee social problems within an elephant group in a protected contact program. In a traditional free contact system, when animals are on exhibit and free to move about, trainers physically intervene in social disputes between elephants, up to a point. However, because of the high risk to keepers, some free contact programs no longer allow keeper intervention in elephant disputes under any circumstances. Many programs still require elephants to be put on chains or separated at night to control their movement and thus the potential for life-threatening physical interactions.

In converting to a protected contact system, it is no longer possible to physically intervene to end fighting between animals. Properly designed facilities should allow for chaining animals at night, if required, while providing the opportunity to leave animals off chains as well. There is reason to believe that protected contact techniques can directly address and mitigate social problems. Utilizing a training technique we call "cooperative feeding", it is possible to enhance introductions, mitigate dominance-related problems, and reduce aggression. This technique has been used successfully with a variety of marine mammals and several species of primates (Laule, 1991). Data has shown that this method can reduce aggression and increase positive social interaction between group members (Desmond et al, 1987; Cox, 1987; Bloomsmith et al, 1992). To date the same procedure has not been tried, and results have not been demonstrated, in elephants. However, with the significant results achieved thus far, it is likely that the technique is applicable to other large mammals as well. Again, the skill level of trainers and the amount and type of animal access the facility provides are critical factors in successfully dealing with social issues.

Dealing with Novel Situations

Expert and creative utilization of positive reinforcement training constitutes a powerful problem-solving process that is useful in addressing novel situations. By identifying potential problem scenarios, like accessing new-born calves, training can be designed to address those issues. For example, a protected contact system must have the ability to manage animals in a group as well as access animals on an individual basis. This is approached in several ways. First, control behaviors like "come", "go" (to a particular location), "back", and "steady", are worked and maintained in a variety of social contexts and physical locations. Second, animals are fully desensitized to every environment they may be required to work or spend time in, socially or alone. Third, active socialization training, like cooperative feeding, is conducted on a regular basis to facilitate regular movement of animals in and out of the group.

Even without 100% cooperation on the part of the elephants, with this level of control in place, there are many options available to trainers to safely access a particular animal or animals, for whatever reason. There is an established track record and a host of accomplishments resulting from trainers and keepers addressing novel problems with a variety of animals while working through barriers or without the use of restraint (Joines, 1976; Desmond, 1985).

4. **ADDRESSING THE PSYCHOLOGICAL NEEDS OF ELEPHANTS.**

No system for elephant management and care is adequate if it does not address the psychological needs of the animals. One of the strongest arguments for the use of positive reinforcement techniques is the

enrichment value they offer. A study was conducted with four adult male chimpanzees to assess the enrichment value of positive reinforcement training (Bloomsmith, 1992). Results show that three positive changes occurred during training: reduced self-directed behavior, reduced inactivity, and increased social play. Each of these behavioral changes is typically considered to be a positive outcome of an enrichment procedure. Further, in two documented studies involving socialization training, neurotic and self-directed behaviors were also significantly reduced as a result of a positive reinforcement training program (Cox, 1987; Bloomsmith, 1992). As discussed previously, positive reinforcement is the preferred method in protected contact because it offers animals greater choices and control. These elements have been documented as important to the psychological well-being of animals (Hanson et al, 1976; Mineka et al, 1986).

On an operational basis, a protected contact system is built upon a training regimen and activity budget that addresses all the elements of good mental and physical health that a free contact system does. That includes regular training sessions that provide elephants the following benefits: a chance to work for their food; mental stimulation; increased physical activity; expanded behavioral repertoires; and human/animal interaction.

It is important to reiterate that human/animal interaction is an integral part of a protected contact program and a critical factor in addressing psychological well-being (Bayne, 1993). Behavioral and environmental enrichment are as well. In protected contact, the ability to move animals on and off exhibit easily and frequently creates maximum opportunity to: rotate enrichment devices and toys, seed exhibits and holding areas, make minor changes to the environment, add new exhibit furniture, and access animals for daily training sessions.

Conclusions

Given these four fundamental principles, protected contact has the potential to address many of the tough issues facing facilities exhibiting elephants today. However, it must be implemented in a way that meets the concerns of handlers and managers alike. The first step, therefore, is a planning process which allows full discussion of all concerns and which results in formal institutional consensus on goals, methods, and objectives of the elephant program. Next detailed facility and other support requirements must be identified. Finally, a schedule and budget must be created which takes into account all resource requirements. Only then is the program ready to be implemented.

Once underway, it's critically important to carefully monitor and document the implementation of protected contact. It's important to learn and share with the community which techniques work and which don't. Although any system of elephant handling will vary somewhat from institution to institution, it is important to standardize protected contact training protocols from the outset. Understanding and embracing the basic principles upon which protected contact was built is the first step.

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