
Enriching the Lives of Primates in Captivity

By Peggy O'Neill

HUMAN-ANIMAL COMMUNICATIONS AND INTERACTIONS

All animals held in confinement are psychologically and physically at the mercy of their keepers. Keepers include animal care and scientific staff. All keepers must abide by a code of ethics which promotes a sense of healthy respect for all the animals which are on loan to them. This includes respect for the species involved as well as respect for each and every individual.

Primates receive a sense of security and well being when:

- a. Caretakers are familiar. Getting to know new staff and their habits is essential.
- b. Voice tone and body languages of the people involved is distinctly non-threatening. Harsh words and body movements in proximity to caged primates are exceedingly distressing to the animals. Humans are usually perceived as intruders by the animals instinctively. To keep this fear from becoming a reality is essential.
- c. Keepers should never lower themselves to psychological game-playing with animals even if they are threatened and provoked or intimidated by the animals they oversee. Responding to a caged animal's aggressive behavior with taunting or teasing aggressive gestures from keepers is not acceptable in any case.

PRIMATE INTERACTIONS

1. Monkeys and Apes have evolved along with very specific and very complex social hierarchies. Primates develop a sense of well-being by understanding where they fit socially. They must be given adequate time to learn what their social identity is whether they are housed within a group cage with others or if they simply have other monkeys taking up space in their visual field from across the room 24 hours a day. Twenty-four hours easily becomes an eternity if the other looking at you and vocalizing toward you is an intimidating threatening bully or a virtual vegetable.
2. If a nurturing parental figure cannot be housed directly with infants and youngsters it certainly is helpful to allow them proximity where at least visual union or perhaps contact through the cage link is possible.
3. Keep animals in the same proximal arrangement when groupings are interacting in a healthy manner. When caged primates are inflicting injury which is self-directed or directed toward others, start altering cage mates or neighbors so that conflicts can be worked out. Mother Nature provides space for escaping life threatening confrontations. This survival mechanism is simply not available to confined animals, or confined humans for that matter.

NUTRITION

1. A psychologically balanced primate requires appropriate nutritional intake. Diets should be prepared with a technical knowledge of species requirements in mind. Different age groups may have differing needs. Altering the living conditions of the animals may change the intake requirements significantly.
2. Feeding amounts and intake amounts of food can vary drastically. Never assume that because you allotted a specific amount of food to an animal, he will have access to it. The social strategies that primates use were never meant to be fair. Lower ranking animals and young primates eat leftover and higher ranking animals may overeat, that is life. In the wild, there is always a chance to locate more food. In captivity when it's gone, it is GONE! This can be extraordinarily distressing as we can all imagine.
3. The above statement is aimed at group housing situations for captive primates. Sometimes it also relates to animals who reside in individual housing units as well. A primate that is bullied continuously by another or a number of others who reside within visual proximity gets the same message that it would receive from higher ranking animals in the field. If this timid lower-ranking animal is unable to ignore the message it will go without eating food that has been placed in its own cage regardless of whether those threatening outsiders are physically able to attack. He must learn that he can eat without the reprisals that he fears. Simply sitting down to a meal can be a very risky business for non-human primates.

CONTACT COMFORT

We have learned that many primates have evolved a social nature. Those species that are placed in this category, including man, have similar basic needs that must be fulfilled in order to achieve a state of psychological well-being. The first of these needs is CONTACT COMFORT. This presumably means mother.



Primates and man have similar basic needs that must be fulfilled in order to achieve a state of psychological well-being. The first of these needs is CONTACT COMFORT.

As responsible keepers of social primates we must fulfill this need. We have some practical alternatives:

- a. Leave infants with their mothers until their physical and associated psychological separation can occur without severe stress.

b. Provide satisfactory alternatives to the mother if she is not available.

- 1. An adopted mother (male/female) willing to bond with the infant and nurture it.*
- 2. Put several, but not large numbers of infants together in a cage or pen after surrogate bonding has taken place so that social and surrogate security is available. Other infants should not serve as the sole source of clinging.*
- 3. Introduce the surrogate to the infant. This is a wooden cylinder attached to a round metal base at an angle that is comfortable for the youngster to cling to for long periods of time. The cylinder is covered with a terry cloth fitted cover that can be removed readily for washing. The device is inexpensive, simple and hygienic and has demonstrated for decades that it successfully provides infants and young animals with prolonged periods of contact comfort. Over the years since the introduction of the standard surrogate, modifications have been made by researchers and animal care staff to further the positive effects of the surrogate apparatus.*

Examples of these modified surrogates include:

- o A sturdy leg is attached to a weighted base and this leg is placed at an angle so that a sling can be suspended from it. This sling or cradle is made of a soft durable fabric that can withstand numerous washings like the terry cloth cover on the standard surrogate. This surrogate provides a cradling effect and allows the young primate responsiveness via motion such as bouncing, rocking, and swinging that is not available on the standard surrogate. These features are more important to some species than others.*
- o A standard style surrogate can be easily modified to provide motion and thus responsiveness to the young primate's activity by removing the steel pipe stem that attaches the cylinder to the weighted base and replacing it with a spring. The spring that is currently being used by researchers is an auto engine valve spring. This modification allows the animal to acquire a greater sense of control and thus well-being. Even artificial mothers can be responsive.*
- o Another example of a contact comfort source for motherless infants who are in such desperate need of security and psychological protection is the waterbed. Just as premature human babies are provided with waterbeds for their sense of well-being, monkeys too are being offered this source of artificial motherhood at various institutions around the country including the University of Wisconsin. At Wisconsin the waterbed is nothing more than a wheel chair cushion. This surrogate mothering method has been particularly effective by reducing the typical symptoms of distressed infants such as self-mouthing, rocking and huddling, and hyperactivity.*



Nurturing parental figures housed with or adjacent to newborns with some access for grooming.

SOCIAL EXPERIENCE

The essence of the social primate is lost under the stresses of the nonsocial condition. The animal that develops under these conditions of social deprivation must be considered to be an artificial animal that is no longer useful as a research model. Research findings coupled with the common sense of animal care professionals have led to an understanding of the value of social interaction for primates who live in controlled environments. The behavioral abnormalities resulting from prolonged inactivity and lack of social stimulation coupled with lack of control are readily apparent. Institutionalized animals become regimented by stereotypic (repetitive) patterns of behavior, of which pacing is the most common, in addition to ritualistic behaviors which may become self-directed and self-destructive. They suffer physically and psychologically from lack of control in their daily lives and the means of fulfilling basic behavioral needs. When confronted with monkeys in a more naturalistic social setting they act inappropriately and suffer from rejection or possibly attack resulting in death. At this time more than ever before this dilemma is being acknowledged as a serious problem with solutions available. Primates in some research institutions are being offered periods of social interaction time with other primates even though they are housed in solitary caging. For the psychological welfare of the primates and for the sake of the scientific endeavor it is a must that selected periods of time be set aside on a regular basis for social interaction. Social interaction can serve a very therapeutic function for confined primates. Certain methods can be set forth to ensure that interactions have positive results. (Refer to Primate Interactions Section.) There are so many different situations that may arise here requiring specific analysis that I am hard pressed to confront the possible problems with regard to cage size, species, age groups and their specific needs, breaking bad habits, compatibility problems, etc. These topics will require more time than I have right now. The point that must be made here, regardless of specific individual and institution situations, is that all social primates must receive some form of social interaction to develop a sense of psychological well-being. This simply should not be overlooked.

PHYSICAL AND MENTAL NEEDS

In the wild, primates are typically active animals. If they aren't searching for food, they may be fighting off intruders, playing with peers, investigating the world around them, breeding or sleeping. They have evolved physically to be ready for action and they are capable of engaging in acrobatic maneuvers with great finesse. These abilities are a part of their survival package. Their great investigatory and manipulative skills allow them to locate the very foods that sustain them. When held captive they maintain the potential and abilities that they were born with, but, without sufficient enrichment devices available inside their cages, they reside in a continuous state of unchallenged readiness. Like lack of social stimulation, lack of physical and mental stimulation leads to despair. They remain primed and ready with nowhere to go and nothing to do. Muscles suffer from atrophy and depression may set in. Any kind of stimulus is better than nothing at all and they

sometimes start to harass the staff, behave threateningly, urinate on passersby and throw fecal matter at bystanders. They sometimes succeed at getting a degree of control in their lives but it rarely results in positive feedback. When despair sets in the animal may actually attack or injure itself. The result may be lacerations, puncture wounds, loss of hair, weight loss, and a lowering of the immune system resulting in infections. When an animal can't have a social setting to develop a sense of psychological well-being, and for those animals in social settings that take place in an environment void of play and investigatory stimulation, a variety of inexpensive durable, safe and easy to clean apparatus are available:

1. Perches are essential for monkey in cages, social or solitary cages. In solitary cages it provides a place to move to and from. A perch can enable the animal to make use of locomotor skills and it offers access to another visual field. This adds complexity to the environment. In a social cage it provides animals a play stimulus as well as an escape route from one visual plane to another. Animals get on each others' nerves sometimes. If they can't walk out the door and slam it behind them to avoid a fight, they can get into a less conspicuous place out of the way. Avenues of escape are very healthy.

2. Monkeys love to swing and climb. They are designed to make use of trees and they feel most comfortable and secure by nature in high places. Chains, ropes (cotton), and garden hoses are inexpensive apparatus that are easy to install and couldn't go any further in payoff when one sees the pleasure that these items bring to the animals who will utilize them. Socially and physically impoverished animals may not utilize these apparatus to their functional potential at first, but with time their investigation will turn into play. There are stages in the development of psychological well-being. Anxious, fearful, depressed animals will begin to exhibit flashes of exuberant playfulness when they are on the road to recovery.



Heavy duty pails are loads of fun to play around, on top of, and in.

3. One of my favorite enrichment devices for monkeys in captivity is the simple, charming, inexpensive, durable, heavenly milk crate. Threatened animals can hide in it, older animals can just sit and relax with a calming swinging motion, stressed animals find the swinging motion to provide a calming effect, babies fall asleep in them, and all age groups like to hang from them and play and play and play. Animal care staff find them easy to clean.



The "magical milk-crate" is the most durable, inexpensive and safe monkey toy that I can recommend. Hang it inside of the animal's quarters and you will see joyful investigation and playfulness bloom. It offers a sense of safe security to those animals who find the swinging motion soothing, and the surrounding walls of the box to be protective.

They can escape the woes of the world or play to their hearts content Easy to clean. My animals are still using the Bowman Dairy Crates I gave them ten years ago. Thanks Bowman Dairy!

4. Primates like to search for their own food and are delighted by a challenge to get at it. A simple white plastic tub with a fitted lid hanging by a cotton rope from the ceiling and attached in such a way that they can't be tipped over but that the animals can have access to a hole in the lid and reach inside to select one handful of food at a time is fun and rewarding. This style of feeding has been designed by animal care staff and requires no extra effort on the part of the personnel. (Sunflower seeds are a highly nutritional food for primates and they will get great pleasure out of sitting and shucking shells for an hour.)

5. Some toys manufactured by major toy companies make marvelous items to stimulate and entertain primates in captivity. Fisher-Price Child Development Toys for very young children are well made, durable, safe, and some are very inexpensive. Other brands also make similar items available at comparable prices. They may not be quite as durable - I have a list of specific toys that I recommend for various situations. Some toys that I purchased many years ago as used toys are still in reasonable condition and popular with the animals. Activity Centers with multiple gadgets and controls are particularly popular. Toys with durable metal mirrors are always special and of course ever-changing according to the disposition of the animal peering into the mirror and the always-changing background image.



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6. Non-human primates like to socialize with other critters and have remarkably friendly relationships with other animals. From my own experience, they will form long term bonds with a whole list of other social animals including dogs, kittens, horses, and sheep. Younger animals are more flexible with their choice of associates but some older animals form long-term relationships as well.

There is no limit to what we can do to make primates in captivity more well adjusted and psychologically suited to confinement. Their well-being in a psychological sense has a number of components that must be identified and dealt with. These are the basics and I have listed each of them with comments that come from my training and experience. I hope that you will find this outline and my comments to be useful.

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