

Shrine Circus

Animal Welfare Report: James Cristy Cole Circus

Jay Pratte, B.S., M.A.
February 2018

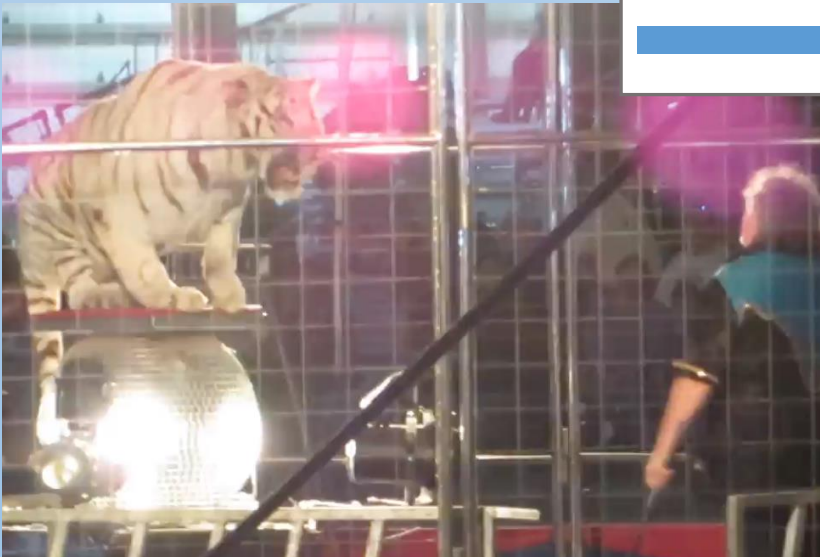


Table of Contents

Background	1
Tigers	2
Housing	3
Physiological/Medical	6
Psychological	8
Behavioral	10
Bears	14
Housing	14
Physiological/Medical	18
Psychological	23
Behavioral	26
Elephants	30
Housing	30
Physiological/Medical	34
Psychological	43
Behavioral	47
Attitudes	54
Summary	58
References	59
Appendix I	61
Peer-reviewed Publications	61
Papers at Professional Conferences	62
Conference and Symposia Workshops	62
Appendix II	63
Appendix III	67
Appendix IV	68

Shrine Circus Animal Welfare Report: James Cristy Cole Circus by Jay Pratte, B.S., M.A.

Background

I willingly submit the following statement and supporting information in regard to the physiological and psychological welfare of big cats, bears and elephants in a circus environment—in particular, the tigers and elephants exhibited by Brian Franzen and the bears exhibited by Castle's bears at the Shrine Circus produced by James Cristy Cole Circus. My report is based on over 25 years of experience with animal behavior and welfare, of which much personal focus has been given to the felid and ursid families.

I am an animal training, behavior, and welfare consultant for the Association of Zoos and Aquariums (AZA), Bear Care Group (BCG), the U.S. Department of Agriculture (USDA), the Global Federation of Animal Sanctuaries (GFAS), the Humane Society of the United States (HSUS), and People for the Ethical Treatment of Animals (PETA). I received a Bachelor of Science degree in zoology and behavioral psychology from the University of Alberta and a Masters of Interdisciplinary Studies in zoo and aquarium leadership from George Mason University. I have 25 years of experience training both domestic and exotic species, and my personal experience has included every member of the big cat and bear families, as well as experience with pachyderms. This training includes (but is not limited to) daily husbandry and management, public demonstrations, and advanced medical training.

For more than two decades, I have worked with organizations across North America on improving animal welfare, including private sanctuaries, rehabilitation agencies, traveling circuses, government institutions, and both accredited and non-accredited zoos. I teach comprehensive behavior and welfare assessment techniques and strive to develop a better understanding of behavior-based care for animals with keepers and caregivers. This entails analyzing the environment that the animals live in, assessing their current (and past) physical, psychological, and medical condition(s) and then observing behavioral patterns. This information is then combined into a comprehensive plan to improve the responsiveness to the animals' needs and provide improved care for each individual. I have spent time in China, Kenya, Romania, and Vietnam working directly with animal caregivers from these (and surrounding) regions to assess very specific needs for animals in captive situations in those areas. I work regularly with international rescue and welfare agencies Animals Asia and Wildlife SOS on consulting with regard to improving behavior-based husbandry practices, particularly in reference to animals they have rescued from illegal trafficking or other human activities.

Training, behavior, and animal welfare are all inextricably linked to an animal's overall well-being. Much of my experience with behavioral management is rooted in understanding natural behaviors for animals and how captive facilities can better manage the housing and exhibition of animals to meet their genetic behavioral predispositions. Failing to meet animals' needs in captive environments results in physiological, medical, and behavioral issues. Assessing behavior and welfare and subsequently advising on alternate, progressive approaches to animal care is an intrinsic part of this skill set.

I have published numerous papers on exotic animal care, welfare, behavior, and training, and a reference list is attached as **Appendix I**. I am also an adjunct professor at the University of Nebraska at Omaha, where I teach courses and labs in Animal Behavior, as well as the Special Topics course of my own design, “Human-Animal Interactions.” I regularly attend and host workshops, symposia, and conferences dedicated to improving animal care and welfare. The papers, presentations, and workshops presented are attached, also in **Appendix I**.

The statements presented here are the result of six years of research into the welfare of animals in circuses around the world (for Human-Animal Interactions), including attending various circus performances throughout my life and, specifically, direct personal observations at multiple performances, and review of media recorded at other performances. I attended two performances and reviewed footage from the Sesotris Shrine Circus in Lincoln, Nebraska, on March 18, 2017. I attended and reviewed media footage from the Tangier Shrine Circus performances during the February 16-19, 2017 run, and again on Sunday February 18, 2018 in Council Bluffs, Iowa. The information presented is based on observation of the environment, the animals’ behaviors, physical appearance, and movement; during each show, before and after shows where the animals were housed, during intermissions and rides, as well as direct conversation with two staff members (one of which was Brian Franzen of Franzen Brothers Circus himself) and several Shriners. I also reviewed news and media stories, public relations materials, and USDA inspection reports for the Halls. Throughout this report, I have included references to AZA standards, which set a baseline for zoological animal care, as well as Animal Welfare Act standards, which are the minimum standards that animal exhibitors must meet. The Dangerous Wild Animals Act is a law in the United Kingdom that is referenced to illustrate the international scope in recognition of acceptable minimum standards. The references are included to illustrate that the exhibitors are not meeting federal and industry benchmarks for acceptable animal care. Photos are included where appropriate, and full-sized versions of the photos referenced in this report are available at [this website](#).

Visitors to the circus are excited to view the animals up close and to see them “perform.” The announcers, trainers, and staff state that the animals are managed with rewards and through trust. However, what actually occurs is environmental and physiological neglect, psychological abuse, and coercing the animals to behave through dominance and fear-based techniques. What may appear benign to the public or to inexperienced inspectors is readily apparent to individuals with significant animal experience as diminished welfare. Each animal species will be discussed separately, though there is clearly an overlap of issues between them.

Tigers

The observations and information below refer to the six tigers exhibited by Brian Franzen.

- **Housing:** The tigers’ enclosures in the truck parked outside of the event hall were very small, had no access to any exercise area, and the truck was stationed in the parking lot with no source of shade. Cats were forced to share space with other animals and had no means of avoiding other cats’ presence or conflict. No enrichment was visible, and in general both living and care conditions appeared poor. These conditions do not meet AZA or USDA standards and guidelines.

- **Physiological/medical:** While to the untrained public guest, the tigers appear “healthy,” I observed some areas of concern, including obesity and impeded movement. These issues are easily managed through proper husbandry, but the appropriate level of care is not apparent. Cats are also exposed to excessive levels of noise, light and exhaust, likely resulting in acute and chronic distress and respiratory complications.
- **Psychological:** The big cats exhibit several signs of severe and chronic distress, including (but not limited to) fear and displacement behaviors (otherwise normal behaviors occurring at inappropriate times, or unrelated to current situation) resulting from inability to avoid other animals, stereotypic behaviors (pacing) and aggression to other animals and to trainers.
- **Behavioral:** The tigers I observed are coerced and forced into exhibiting desired behaviors and performing for the public using dominance and fear-based techniques. The cats routinely exhibited fear, aggression, and stress-related behaviors during performances and while waiting in the transport vehicle. This method of controlling the animals and the subsequent physiological and hormonal changes will permanently impair learning as well as appropriate behavior expression for the species and result in irreversible neurological changes.

While the conditions that the animals endure could be improved to meet industry standards, there was no evidence of this in the observable husbandry and environment.

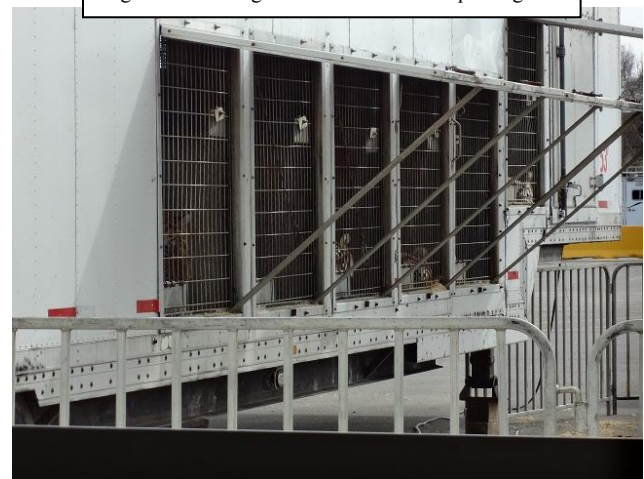
Housing

Tigers are generally solitary animals and have expansive territories in the wild; home range size is based on prey abundance, but has been recorded up to 400 square kilometers [IUCNredlist.org]. Their natural habitat is exceptionally complex, with trees, undergrowth, water sources, and a dynamic, changing environment. The cats would constantly have behavioral choices available to them, whether those would be to sleep, forage, hunt, search for mates, mark their territory, swim or immerse themselves in water, etc.

The tigers exhibited by Brian Franzen for the Lincoln Sesostri Shrine Circus shows were housed in the parking lot/staging area behind the Lancaster Event Center. A modified livestock trailer was parked on the concrete directly outside of the center’s loading doors. A couple of low metal stanchions were placed between the two trucks as an ineffective protective barrier. Any members of the public, Event Center or non-animal Circus staff, or volunteers that walked around the building could easily access this truck and the tigers. (Figures 1 & 2) In fact, while the elephants were performing, the truck was left unattended and I could have walked out the back door and been beside the big cats. In Council Bluffs, when I drove behind the event center to park, the tiger truck was parked behind the building and stanchions, entirely unattended.



Figures 1 & 2: Tigers housed in trailer in parking lot



Cats were housed in groups; I observed usually 2-3 animals enclosed in the small cages, transport truck, and then out in the performance area together. They were unable to avoid one another when space or social conflicts occurred. As naturally solitary animals, tigers do not inherently possess the genetic programming allowing for constant social interactions. For *any* animal, the inability to avoid potential conflict or injury with another animal runs absolutely counter to all instinctive responses to the sympathetic nervous system's "fight or flight" reaction. The inability to remove oneself from a conflict (or to display and cause the intruder to leave) will result in significant increases in stress, potential injury, and long-term psychological issues (see Psychological section).

When the cats were enclosed in any of the locations, there was only one visible shift door in each area, so they were forced to pass one another. Animals may potentially be trapped by another individual with no safe escape route, leading to potential conflicts, injury, and even risk of death.

AZA, Care Manual (2012), 2.1: *All enclosures should allow each animal the ability to retreat from conspecifics through the use of visual barriers ... without limiting an animal's access to food, water, heat, or shade. Sufficient numbers of holding spaces should be available to separate cats individually when the need arises, and these should be interconnected to allow maximum flexibility.*

Both exhibit and holding spaces should be designed with a means of egress to avoid being trapped [by other animals] in corners. Holding cages and exhibits with at least two doors will help prevent trapping and/or one animal excluding another from access.

The animals were kept in a very sterile environment. The housing enclosures were side by side and ran the length of the semi-trailer, and I would estimate each one's maximum size at no more than 8' x 3-4'. Bengal tigers average 6-8' in length, and 3-4' in height, so the space available for the animals was minimal. The tigers were unable to do more than sit, lie down, walk a few steps, or turn in place. When shift doors were opened, and in the transport truck, more than one animal regularly occupied the same small area. Tigers possess a wide repertoire of natural behaviors, including (but not limited to) running, jumping, marking, climbing, hunting, sunbathing, grooming. They are clearly unable to engage in *any* of these behaviors that would be considered "normal postural and social adjustments" for a tiger.

Per USDA, 9 C.F.R. § 3.128: *Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make **normal** postural and **social adjustments** with adequate freedom of movement.*

On top of being unacceptably small and confining, there was a noticeable lack of environmental or behavioral enrichment. Again, tigers require an immensely complex natural environment. Their physical surroundings would have tremendous variation and provide innumerable behavioral options. Captive tigers have access only to what their human caregivers provide them with. Enrichment should include pools, toys (that are kept novel by changing them regularly), bones or whole prey items, different substrates to investigate and lie on, etc. There are no limits to how the animals' enclosures could be enriched to provide stimulating physical and mental activities. There was simply no evidence of this standard of care by Franzen, or Shrine Circuses

in general. These animals were living nearly constantly in a sterile environment, which could easily be improved with simple planning and little cost or effort. (See Psychological section.)

The big cats were also missing a number of items that are considered minimum standards in big-cat husbandry in captivity. According to AZA management guidelines (see References):

AZA Minimum Husbandry Guidelines (1997), 1 (B): *A cage for a single animal should measure at least 20 ft (6.1 m) wide x 15 ft (4.6 m) deep (300sq.ft/27.9 sq.m); cages should be 50% larger per additional animal. Outdoor cages should have vertical jumpwalls at least 16 ft (4.88 m) high or be provided with tops at least 10 ft (3.1 m) high. Shift cages should measure at least 8 ft by 8 ft (2.44 m x 2.44 m).*

There was no visible outdoor exercise or holding area for the tigers. On the opposite side of the holding trailer, there was a door that opened for the tigers to transfer into the small, specially designed transport truck that moves the cats from the trailer to the performance area. (Figure 3) The space in this truck for the cats was exceptionally small, particularly for the number of cats inside at any given time. The animals were forced into a complex social situation with no avenue of avoiding conflict. Worse, as the truck moved, it was constantly surrounded by people and noise, and the overwhelming external stimuli are likely to be triggers for conflict. Preceding each show, I witnessed multiple altercations between cats within the transport truck. While none appeared injurious, the cats' behavior and body postures indicated discomfort, stress, and the potential for further aggression.

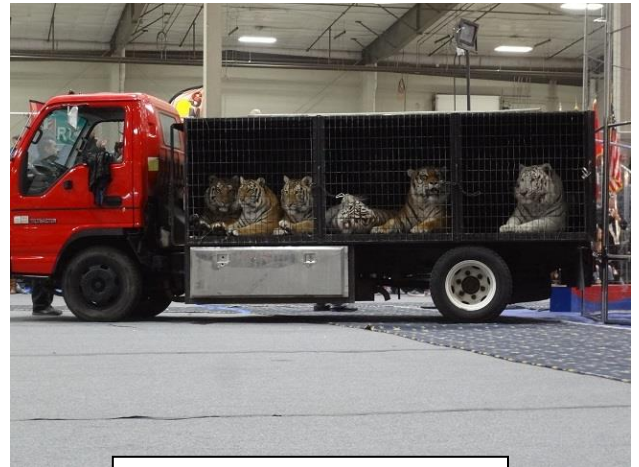


Figure 3: Small, cramped transport trailer

The living spaces were also all flat, hard surfaces, with minimal amounts of bedding for the animals. Constant exposure to unyielding surfaces such as wood, metal and concrete can lead to a number of medical issues (see Physiological/Medical section). The tigers were also not provided with any visible or obvious resting platforms, which is an industry standard for big cats.

AZA Care Manuals (1995, 2012); Minimum Husbandry Guidelines (1995): *Although both lions and tigers are terrestrial in nature, they benefit from raised shelves or ledges for sleeping and resting. Multiple resting spaces at various elevations should be included with at least one resting location per individual.*

Natural behavior for a big cat is to lie down or rest in an area that is raised off the ground. This is a genetic response for animals who survey their territories for intruders or prey. Raised shelves also provide options beyond concrete or other types of hard, inflexible flooring and give cats the opportunity to avoid lying on wet or soiled surfaces.

These guidelines are generalized for multiple cat species by the AZA and should be considered at the very least minimum guidelines or standards for any captive felid. Based on my personal

observations, the housing environments for the big cats provided by Brian Franzen on behalf of the Shrine Circus fall well below acceptable standards and negatively impact the tigers' welfare.

Physiological/Medical

The cats appeared, at first glance, to be generally healthy. The first and most immediate observation regarding the tigers in the Shrine Circus was that most of the animals were significantly overweight. With one exception (the younger white tiger) the cats would be rated as a "4" on the AZA's Felid Taxon Advisory Group's body condition chart, or a "7" on the Purina chart (**Appendix II**, Figures 1 and 2). Obesity in mammals results in short- and long-term medical complications, including (but not limited to):

- Liver, kidney, and other internal organ failures
- Arthritis and other painful joint and spine conditions
- Respiratory distress
- Heart disease and reduced circulatory efficiency
- Hygromas at joints, the result of repeated joint trauma on hard surfaces that regularly swell with fluid
- Possible hyperkeratosis—thickening of the skin at joints increasing the risk of infection
- Reduced ability to thermoregulate effectively

Historically, as a result of constantly living on inflexible floors like these, which are hosed clean and remain wet for long periods of time, big cats develop cracked foot pads. Severe cracks can become infected, causing further skin and tissue damage. Big cats will often groom and lick cracked pads, which over time can develop into a stereotypic behavior, particularly in such a sterile, non-enriched environment. (See Housing and Psychological sections.)

I observed several minor aggressive interactions between the cats (see Psychological and Behavioral sections) while they were forced to wait in the transport truck before performances and in the housing trailer. One cat would display a warning to another (ears back, growl, hiss), but in close confines when the animals could not avoid one another, one tiger would strike at another with a paw, or lunge and tackle the other. These incidents were usually broken up by the handlers by striking the cats with prods, or by yelling and banging on the sides of the enclosures. These aggressive interactions result from improperly housing these cats in groups (see Psychological section) and in restricted holding environments, where they cannot make their own behavioral choices and social adjustments to evade conflicts with other animals.

Per USDA, 9 C.F.R. § 3.128: Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make *normal* postural and *social adjustments* with adequate freedom of movement.

A normal *social adjustment* would be the ability to remove oneself from an aversive situation. The animals should be housed appropriately to minimize inappropriate social interactions and risk of injury. Many of the issues and risks resulting from poor housing could be addressed with improved space, separation, and attention to industry guidelines.

The aversive stimuli were not all entirely social, as there were pervasive environmental stressors that the cats could not avoid that would impact behavior. The animals were exhibited near

machinery and vehicles that were loud and startling, and affect the animals' sensory systems on levels that humans would not even be cognizant of. Most non-human species have different auditory capabilities that register sounds at ultra- or even infra-sonic. This means that stimuli that humans perceive as "normal" can actually be overpowering to animals, and adversely impact their welfare and experience.

AZA Care Manual (2012), 1.4 Sound and Vibration: *Consideration should be given to controlling sounds and vibrations that can be heard by animals. [Cats] have excellent hearing, and staff should pay special attention when there is unusual or excessive noise around the enclosure, as this may cause stress or aggression.*

These animals were also exposed to a unique and particularly troubling medical complication. Being housed in a parking lot behind event buildings, the cats were already exposed to the exhaust and pollution from regular vehicular traffic. Each Shrine Circus, however, opens with a parade of vehicles that drive by all of the animals that are housed in the area. The exhaust fumes and pollution from the vehicles caused me direct personal discomfort when I was 15-20 feet away, even when I covered my mouth and nose with my shirt. The animals had no such luxury and were even closer to the vehicles than I was, easily within 10-12 feet. Not only were they assaulted with the sensory stimuli of moving vehicles, lights, revving engines, and shouting people, but all of the animals were also forced to endure the exhaust of all of the vehicles that pass/park/idle right next to them during the parade and throughout the show. The animals were also regularly exposed to exhaust and pollution during loading onto vehicles and transport between venue locations. This is a regular occurrence in these animals' lives.



Figure 4: Vehicles passing right by animals; tiger on left clearly agitated

We as human beings know the deleterious and hazardous effects of airborne pollutants. They include, but are not limited to:

- Irritation and infection of eyes, nasal passages, sinuses and mucous membranes.
- Asthma and other respiratory disorders.
- Premature birth.
- Emphysema.
- Lung disease: Photo on right compares a healthy mammalian lung to one chronically exposed to air pollution (Source: <https://www.quora.com/How-much-does-air-pollution-affect-health>)
- Cardiac disease, including an increased risk of heart attack.
- Death.



It is an unnecessary cruelty to inflict this on animals that are trapped in poorly ventilated, confined spaces.

Psychological

The transport cages, temporary housing, and temporary enclosures do not adequately meet any of the AZA guidelines for big-cat husbandry and clearly do not meet several USDA guidelines. For this section, I will specifically address the issues resulting in psychological distress.

The inadequate and inappropriate social housing prevents individuals from being able to evade one another, resulting in repeated conflicts and adverse interactions. This inability to avoid conflict, or even the presence of other animals (including humans), will result in psychological distress for the animal. (Figure 5) The blood cortisol levels that result from stress can trigger aggression toward other animals or trainers, displacement behavior, apathy, learned helplessness, and even severe capture myopathy (see below).

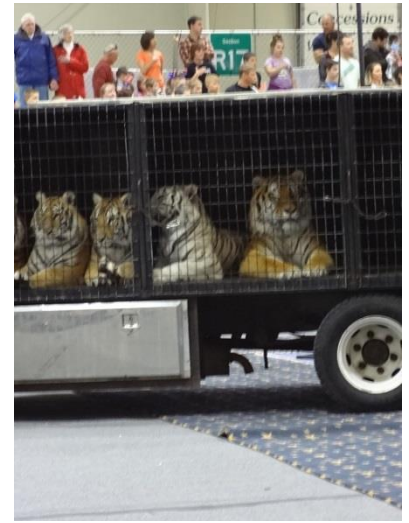


Figure 5: Tigers unable to avoid one another

The sterile environment does not meet any of the cats' genetic expectations. The animals are unable to express normal behaviors (see Housing section) and therefore experience long periods of inactivity or mindless activity, which results in permanent long-term changes to the body, brain, neural, and endocrine systems. Regular, novel behavioral and environmental enrichment need to be provided daily in order to stimulate investigation and solicit normal feline behaviors. The results of housing sterility and lack of environmental change are often stereotypic behaviors, inappropriate social interactions, lethargy or apathy, and learned helplessness at being unable to alter their own environments.

I observed cats exhibiting a stereotypic motor behavior while in the transport truck before two of the performances, pacing back and forth along the bars on the side. This pacing behavior was exacerbated by the plethora of intense environmental stimuli (people, lights, noise, strangers, motor vehicles, exhaust, etc.). Stereotypies are often identifiable by a lack of function for the behavior. From years of experience, I can identify when a cat has "blanked out" and is engaging in stereotypic behaviors to shut out the world, allowing the brain to produce endorphins from a repetitive activity. Over time, these actions become habitual and increase the animal's stress levels and accompanying physical problems. An animal engaged in a stereotypic behavior is being self-rewarded by its internal neural and hormonal mechanisms, and as a result becomes more detached from external stimuli. Anticipatory behaviors (excitement towards feeding interactions, door directed behaviors, etc.) are different from stereotyped behaviors, but not separate. Anticipatory behaviors are the developmental precursors to stereotypic displays, and should be addressed and redirected properly to maintain appropriate individual welfare. The examples I observed of both stereotypic and anticipatory behaviors are well-documented in big cats. That they have developed and continue to occur is indicative of poor welfare and a lack of psychological stimulation.

Per USDA 9 C.F.R. § 3.128: *Space requirements; Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make normal postural and social adjustments with adequate freedom of movement. Inadequate space may be indicated by evidence of malnutrition, poor condition, debility, stress, or abnormal behavior patterns.*

Tiger cubs that are used in circuses and public interaction facilities have been “pulled,” or removed from maternal care, at an exceptionally young age; generally within the first few days or week after birth. This negates proper psychological and behavioral development as the cub grows and matures. Big cats are not domesticated. Their genetic programming is the same as a wild counterpart. To force cubs to interact with another species interferes with normal neural development. This results in cats developing a behavioral repertoire that is in constant conflict with their natural instincts. These conflicts are overridden by the circus trainers using fear and punishment (see Behavioral section), creating further distress and other permanent neural problems (see below).

Under the USDA’s guidelines, public interactions with cubs under four weeks of ages are not permitted, as the cubs cannot thermoregulate on their own and rely on their mother’s milk for disease immunity. These guidelines recommend that cubs stay with their mothers and healthy siblings as long as possible after birth, which would naturally be until between one and two years of age. This is also when the cubs would learn appropriate genetic behavioral patterns and social interaction skills (see below). The AZA does not recommend unprotected contact with big cats, either by staff or the public (any non-trainers or general circus staff would fall into the public category).

Removal of cubs from their mothers to be hand-reared for public entertainment immediately compromises both the short-term and long-term welfare of the infants pulled. Carnivore cubs under one or two years of age are at a critical learning juncture, when they would be learning necessary life skills from their mothers and species-appropriate social skills from mother, siblings, and conspecifics. Human-reared cubs who suffer from improper (or a lack of) maternal rearing and socialization:

- a. Regularly develop extreme aggression to cage-mates and human caretakers, are less likely to reproduce, and demonstrate a significant increase in solitary or socially inappropriate behaviors (Mellen, 2005; Meder, 1989).
- b. Suffer from neglect (i.e., through maternal deprivation), which leads to long-term depressive traits and impaired coping skill resulting from hippocampal atrophy. This specifically impacts long-term potentiation, or LTP, which compromises an animal’s ability to learn new skills over the course of his or her life and adapt appropriately to new situations (Pryce *et al.*, 2005).

Human care of tiger cubs, unless medically necessary and a last resort, cannot appropriately replace species-appropriate maternal care.

These observations are not an exhaustive list of the psychological neglect and trauma that these cats endure daily. They do indicate poor animal welfare and neglect on the part of Brian Franzen, supported by the Shrine circus. These psychological issues are compounded by the behavioral environment and treatment by humans. Changes in management to meet industry minimum standards, psychological well-being, and long-term health would not be impossible but would require a different approach than is currently applied. (Foy et al, 1987; Pryce et al, 2005; Romero, 2004; Wolinsky, 1972)

Behavioral

All the issues listed above with housing, sterile environments, medical issues, and general neglect will cause acute and chronic trauma. One of the primary reasons that I take a firm stance against exotic animals in circuses is because of how they are regularly treated by their trainers and circus staff. Circuses are unable to meet the genetic behavioral expectations that these animals have evolved, and the animals endure compromised welfare as a result. Specifically, during the Shrine circus performances I observed, Brian Franzen used aversive stimuli on the tigers that they were unable to avoid; they are managed through fear, coercion, and punishment.

The primary means that I observed used to coerce the cats to respond in a desired manner was to yell at them, use long goads, prods, or whips to force them to move in a specific direction or to back off when approaching another animal or human too closely, and during one performance a distracted cat was jabbed in the face repeatedly with the butt end of one of the prods (Figure 6; the event is visible in [Video 1](#) at approximately 1:10). These prods are ubiquitous. (Figure 7) They are in the trainers' hands, the assistants and Franzen all carry them. In my discussion with Franzen, he informed me that they also use a mixture of cayenne pepper and water that they spray into the sensitive mucous membranes in the animals' nostrils and eyes when they "act up" or do not perform how the handler wants.



Figure 7: Handlers all carry goads or whips

The application of all these punitive stimuli causes the cats to react in fear, with aggression, and with displaced behavior (redirecting an adverse reaction to another individual). I observed these responses exhibited both in the transport truck and in the ring while Brian Franzen was "performing." As you can see in Figure 8, the cats' postures while in the ring with the trainer(s) are indicative of a fear of consequences if they do not perform as coerced. The hunched shoulders, ears-back position is anticipatory of conflict or tension. Subtle changes then indicate fear or potential aggression, but this body language was consistent throughout both shows, indicating stress, fear, and psychological duress.

When the goads or whips were raised, the cats would flinch and shy back every time. When animals move forward as if to strike or react, they were yelled at and either quickly struck or startled back with whip cracks in the air or on the ground nearby. Most of the cats (the small white tiger being the exception) reacted in a fearful and distressed manner to Franzen throughout the performances. When he approached the animals they would shy away or respond negatively, and Franzen used this to

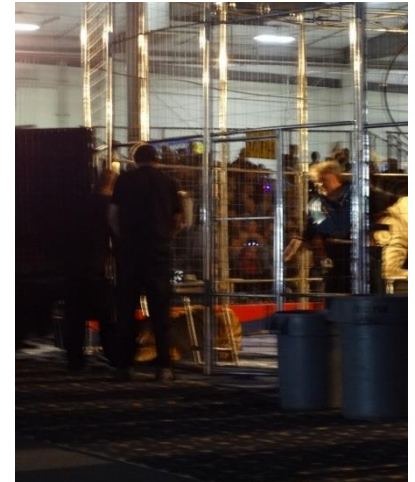


Figure 6: Tiger jabbed in face with prod, sprayed with pepper solution

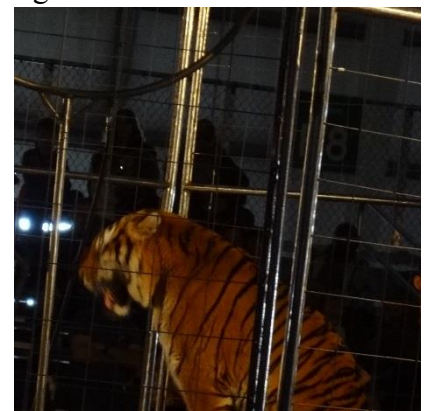


Figure 8: Defensive body posture

maneuver the cats around the ring. Several animals would hiss, bare their teeth, lay ears back, and even swipe at Franzen and the other handlers. The large white tiger male that sits on the spinning disco ball at the end was particularly averse to the trainer's presence. While the tiger looks distressed, the ball rotates as he sits on top, and every time the tiger ends up facing Franzen his body language communicates mistrust and aggression. These animals do not have a trusting relationship with staff and endure this punitive, adverse environment daily.



Figure 9: White tiger reacting to Brian Franzen

In [Video 1](#) starting at 1:00, you can observe one obvious example when a tiger comes out of the small transport truck, and his or her attention is caught by what I later was told by Brian Franzen was a “wrinkle in the floor mat.” The tiger was curious and investigating this, behaving like a tiger would, but as it conflicted with the performance, when the animal would not move the treatment began to escalate. Brian Franzen and the other handlers began yelling at the tiger, followed by whipping the ground nearby. This rapidly turned into whipping the tiger directly, and roughly jabbing it in the jaw, mouth and head to force it to comply. The lights then went out so that the public could not witness the mistreatment any further. Not only was this incident captured on video, I was less than 20 feet away witnessing it at the time. The handlers cursed at the animals (see Attitudes at end of report) and immediately engaged in what are obviously regular practiced techniques and responses to perceived misbehavior. The handlers’ aggressive responses are automatic, as are the tigers’ behavioral responses of distress. It is clear this is an established pattern of using punishing and aversive stimuli to control the cats’ behavior. There is no regard for what the animal is experiencing, since “the show must go on.”

The use of punishment and aversive techniques lead to permanent physiological and psychological changes in learning ability, behavior, and coping mechanisms in animals.

- A. Punishment will eventually inhibit the punished act. The refusal to work or other resultant conflicts (such as avoidance, escape, and displaced aggression) will increase with continued repetitions of the punishment (Gwinn).
- B. Only performance-contingent reward behavior was found to affect subordinate performance significantly (i.e., positive reinforcement). Contingent punishment had no effects on improving performance (Podsakoff *et al.*).
- C. Prior exposure to punishment and aversion methods actually *reduce* extinction of an acquired fear response, increase disruptive effects during an approach-avoidance conflict, and suppress response of both conditioned and unconditioned activity (Boe *et al.*). Essentially, the cats will not learn *not* to be afraid and cannot react to situations appropriately for the species.
- D. Short-term and long-term psychological trauma results in permanent changes to the brain, nervous and endocrine systems. Animals are incapable of learning in circumstances in which they are stressed or traumatized, as the more primitive amygdala in the brain (responsible for fight, flight, etc.), which change permanently as a result of stress, will override learning or conditioning (Dr. Bacon).

The tigers I observed are under constant psychological duress, which results in acute and chronic medical concerns for these animals. The cats are managed using aversive stimuli, fear, and dominance tactics. The cats cannot remove themselves from these situations, nor can they remove the aversive stimuli (fight back), leading to the types of behavioral problems mentioned previously. The cats redirect aggression and fear to the trainers and other animals, which is particularly dangerous in these small, confined spaces where the tigers spend most of their time. These are the same practices I have witnessed time and again in the circus industry, and are also well documented in the Big-Cat Report: Ringling Bros. Circus (Red Unit) I published in 2016. The cumulative effects of distress will likely shorten these animals' lives and, in severe cases, lead to myopathy, injury, or even death.



Figure 10: Handlers forcing tigers into ring with pole

The caging where the tigers were housed, often unattended on several occasions that I checked, was easy for either a person or tiger to reach through. Any guests and staff that choose to approach the housing space are at risk. The tigers are left periodically unattended when handlers are preparing the elephants to perform or are in the ring performing, in an area where building staff, volunteers, and even members of the public, could easily come into contact with the cages.

In my professional opinion, these observations are directly inconsistent with the USDA AWA regulations:

Per USDA 9 C.F.R. § 2.131(c)(1): *During public exhibition, any animal must be handled so there is minimal risk of harm to the animal and to the public, with sufficient distance and/or barriers between the animal and the general viewing public so as to assure the safety of animals and the public.*

Franzen was in the ring alone during performances and practices, and there were multiple instances in each session where he turned his back on agitated animal while cats acted aggressively towards him. He often risks injury or death, and consequently, should an incident occur, the observers would be at similar risk if intervention became necessary.

The tigers demonstrated a complete mistrust of all the people I observed interacting with them and reacted adversely to the equipment. Forcing the cats to perform while attempting to watch for any potential aggressive responses poses a distinct risk of the animals taking advantage of the situation when the trainer's attention falters, most likely injuring or killing that person. In fact, Brian Franzen's father was killed by a tiger during a performance in 1997:

http://articles.orlandosentinel.com/1997-05-09/news/9705090201_1_franzen-lucca-circus.

I have observed such behavior firsthand with numerous species, including lions, bears, elephants, and even domesticated dogs. When the animals suffer chronic levels of stress and mistreatment, at some point, they will react when they believe they finally have an opportunity to change their environment. There is no doubt in my mind what would happen to the big cat that attacked a person in a circus environment, as evidenced by the incident in Florida for which the USDA

issued a warning to Ringling Bros. when a staff member shot a tiger to death, after the animal injured another person who had been in an enclosure with the tiger.

These types of events are also highly traumatic to any observers. Grief and trauma counselors were retained to assist the public, staff and volunteers that witnessed the attack mentioned above. It definitely represents an object lesson and reminder that a tiger is **STILL** a tiger, and capable of such actions, despite what their human handlers want to believe. However, I do not believe that the public, or anyone, should be subject to such a gruesome and traumatic event, nor should the cat be punished or killed for acting on its natural, genetic behavioral patterns.

It is my professional and expert opinion that the tigers I observed before and during the Shrine circus performances were suffering from poor care and management, as well as ongoing physical and psychological trauma. The animals were not provided with the proper care and welfare necessary for any felid species. If conditions cannot be improved within the structure of the circus, regardless of its transitory nature, then the big cats would be better served by living in a certified or accredited institution dedicated to both the immediate and long-term welfare of the animals. (see Summary)

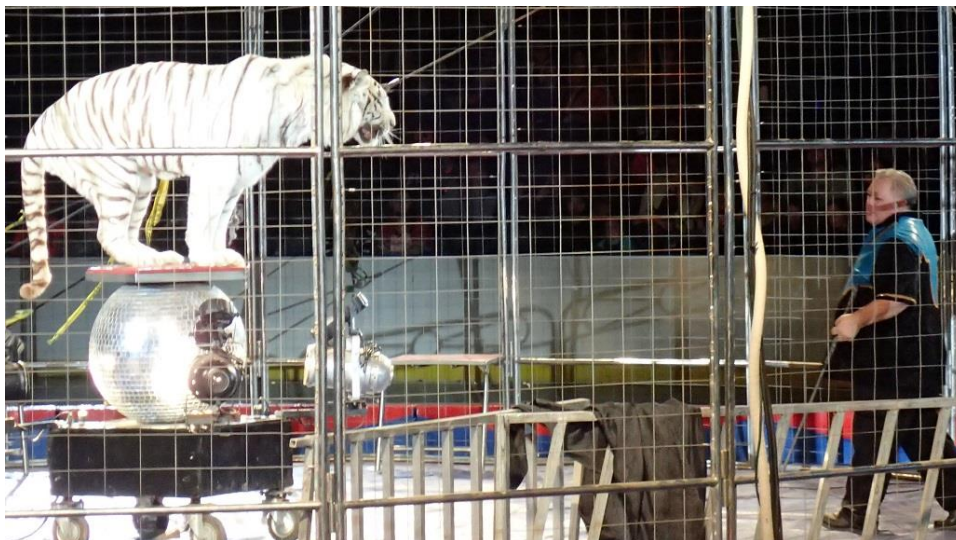


Figure 11: February 2018 performance; white tiger's stress response to Franzen has not improved

Bears

The observations and information below refer to the bears exhibited by James C. and Tapa Hall.

Some of the standards and recommendations presented below are excerpted from one of the AZA Bear Husbandry Manuals that is pending publication. The information is similar to the published lion, tiger and big cat guidelines presented in the Tigers section, tailored more specifically to bear species. The Polar Bear Manual is also referenced, as much of the information applies across species.

- **Housing:** On site for the circus, the bears' holding was kept strictly away from the public areas, and viewing was deliberately hidden from any potential inspection. Previous USDA inspections cited the Halls for poorly housing bears in a small, sterile metal trailer in the heat. Inspection photos from the Halls' home site show barren, sterile environs unsuited for bears.
- **Physiological/medical:** The bears are forced to wear muzzles and leads which place undue stress and injury on facial and neck muscles and the skeletal system. Performances entail the bears being coerced into unnatural positions which cause acute and chronic physiological stress and injury. They are also exposed to excessive levels of noise, light and exhaust, likely resulting in acute and chronic distress and respiratory complications.
- **Psychological:** The bears can clearly be observed exhibiting signs of extreme distress, even going so far as urinating on themselves during performances. The animals' reportedly sterile and transitory living conditions do not meet any of the animals' genetic expectations and lead to chronic frustration, distress and boredom which regularly manifest in self-injurious and stereotypic behaviors in bears.
- **Behavioral:** The bears I observed are coerced and forced into exhibiting desired behaviors and performing for the public using dominance and fear-based techniques. The bears regularly exhibit fear and distress-related behaviors during performances. This method of controlling the animals and the subsequent physiological and hormonal changes will permanently impair learning as well as appropriate behavior expression for the species and result in irreversible neurological changes.

Bears are complex animals, with diverse and highly interactive expectations of their environments. The physical mistreatment and psychological distress observable in these animals is illustrative of poor welfare and lack of understanding of the animals' true nature and needs.

Housing

Bears are generally solitary animals that exhibit complex social interactions under specific circumstances, and have expansive territories in the wild. Their natural habitat is exceptionally complex, with trees, undergrowth, water sources, and a constantly changing environment. Bears are all about climbing, swimming, exploring the reaches of their natural territories, and are particularly interactive with their environments. Bears' genetic expectations are to constantly have behavioral choices available to them, whether those would be to sleep, forage, hunt, search for mates, mark their territory, swim or immerse themselves, etc.

The bears exhibited by James and Tapa Hall for the Sesostri Shrine Circus shows were intentionally hidden from view in the parking lot/staging area behind the Lancaster Event Center. Any handlers, site staff, or Shrine representatives I inquired with informed me that both the

tigers and bears were housed where people could not see them, but in particular the bears were isolated and their holding obscured from view to prevent any “animal rights crazies” from getting pictures. Their security measures tightened further after public outcry regarding a bear urinating on itself in distress during a Shrine circus performance (see Behavioral section). In my experience, this type of paranoia only exists when an exhibitor or facility is aware of specific situations that might be of concern to other individuals or groups, and is attempting to keep conditions or management practices out of the public eye. My opinion is borne out in this case by previous USDA inspection reports indicating that inspectors remarked on the bears being housed in a small metal trailer in over 92-degree heat. When temperatures inside the trailer hit 94 degrees, a fan was turned on and the temperature brought down to 88. Not only is the high temperature itself an issue, particularly in a small holding area with no means for the bears to cool themselves down, but the small, sterile and poorly climate controlled housing described is entirely inappropriate for ANY animal, let alone a complex species like a bear. (See Psychological section.)

The bears appear to be housed together on the Halls’ property, based on photos from inspections and enclosure renderings. At the Sesotris and Tangier Shrine events, there were only two bears, but USDA reports and media coverage describe the Halls traveling with up to six animals at one time. There are also always at least two animals in close proximity to one another during performances. They are unable to avoid one another when space or social conflicts occur. As naturally solitary animals, brown bears do not inherently possess the genetic programming allowing for constant social interactions. Bears may *choose* to engage in social exchanges with one another, but these are generally seasonally and resource dependent (i.e., breeding, cub-rearing, salmon fishing). They also naturally expect to be able to *avoid* social interactions that are not of their choosing, or to engage in species-appropriate behaviors to warn or chase off competitors/threats. For *any* animal, the inability to avoid potential conflict or injury with another animal runs absolutely counter to all instinctive responses to the sympathetic nervous system’s “fight or flight” reaction. The inability to remove oneself from a conflict (or to display and cause the intruder to leave) will result in significant increases in stress, potential injury, and long-term psychological issues (see Psychological section).

When the bears are enclosed in holding areas with no respite from constant social pressure, they may potentially be trapped by another individual with no safe escape route, leading to potential conflicts, injury, and even risk of death. Social frustrations can also build up and lead to unexpected expression of less desirable displacement behaviors of aggression towards other bears, and just as likely towards nearby humans. (See Behavioral section.)

AZA Accreditation Standard 1.5.2: *Animals should be displayed, whenever possible, in exhibits replicating their wild habitat and in numbers sufficient to meet their social and behavioral needs.*

Bear Care Manuals (2009; 2012- pending), Space and Complexity: *It is important to provide bears with secure areas out of sight of visitors and **other bears**. In addition to den areas or indoor enclosures, there should be multiple locations that the bears can utilize if startled or disturbed.*

Guidelines from the AZA Lion Care Manual would also apply here to bears, as another charismatic large carnivore:

All enclosures should allow each animal the ability to retreat from conspecifics through the use of visual barriers ... without limiting an animal's access to food, water, heat, or shade. Sufficient numbers of holding spaces should be available to separate cats individually when the need arises, and these should be interconnected to allow maximum flexibility.

Both exhibit and holding spaces should be designed with a means of egress to avoid being trapped [by other animals] in corners. Holding cages and exhibits with at least two doors will help prevent trapping and/or one animal excluding another from access.

The animals are kept in very sterile environments. Photos of the housing structure and holding trailers show barren, easily cleaned spaces that the animals are forced to reside in. While the home enclosure appears to be a much larger space than the trailer(s), this space does not meet any of the genetic and environmental expectations natural to brown bears (see below).

Per USDA, 9 C.F.R. § 3.128: *Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make **normal** postural and **social adjustments** with adequate freedom of movement.*

AZA Bear Care Manuals (2009; 2012- pending), Space and Complexity: *The size of main outdoor enclosures should allow the animals to perform their complete range of species-appropriate behaviors. Animals should be able to maintain their distances from one another when interacting with exhibit elements.*

Large, natural enclosures are recommended for ex situ housing of all bear species. These exhibits promote the widest range of species-appropriate behaviors, and offer the animals more control over their environment. Behaviors such as climbing, digging, bathing, foraging, resting, sunning, exploring, and manipulating objects are important for bears. Increasing the complexity of the ex situ environment by including a diverse array of vegetation, natural substrates, and exhibit furniture will increase the potential that the physical and behavioral needs of the animals will be met.

Exhibits should promote a wide range of movement and locomotion keeping in mind bears will need to walk, run, and might often chase each other. The exhibit should have flat areas as well as hills for bears to climb on.

Exhibits should be planted whenever possible to provide a variety of ground vegetation. Trees, shrubs, bushes, and grasses are highly recommended exhibit elements that greatly enhance natural feeding and foraging opportunities. Foraging can also be promoted by providing appropriate exhibit furniture. Log piles, tree trunks with cavities, large root balls with openings, piles of branches, and digging pits all provide good places to hide food.

Bears should always have access to nesting material for dens and day beds.

Natural vegetation and soil substrates are recommended for all bear species. Hard substrates (e.g., concrete) should be minimized in outdoor enclosures. Digging pits containing natural substrates offer bears digging opportunities and may limit the amount of damage caused by bears digging in other areas of the exhibit. Additional advantages of digging pits are that substrates can be easily changed or varied and food items can be hidden within the pits.

On top of the trailer being unacceptably small and barren, there is a noticeable lack of environmental or behavioral enrichment. All species of bears require immensely complex natural environments. Their physical surroundings would have tremendous variation and provide innumerable behavioral options. A complete lack of “furniture” such as logs, pools, trees, dens, climbing structures, etc. illustrates that these animals are living in an environment completely bereft of proper welfare and husbandry parameters described by current industry standards and practices. This runs completely counter to any animals’ genetic expectations of their environment, and creates consistent short- and long-term distress.

Captive bears have access only to what their human caregivers provide them with. Enrichment should be offered multiple times a day, and encompass feeding strategies as well as other natural bear behaviors. Detailed examples of bear enrichment programs are easily obtained from the AZA Bear TAG, most zoos, and from nonprofit groups dedicated to improving bear husbandry and welfare, such as the Bear Care Group and Animals Asia. Lack of appropriate environmental stimuli and options to express a wide range of natural behaviors results in long term physiological, psychological, and behavioral issues. Figure 1 illustrates a living environment that most closely resembles one that is physiologically, genetically and behaviorally appropriate for brown bears, and then the Halls’ home enclosure is in Figure 2. The difference is obvious, as is the impact on the animals’ welfare.

AZA Accreditation Standard 10.3.3: *All animal enclosures (exhibits, holding areas, hospital, and quarantine/isolation) must be of a size and complexity sufficient to provide for the animal’s physical, social, and psychological well-being; and exhibit enclosures must include provisions for the behavioral enrichment of the animals.*

Dangerous Wild Animals Act (UK): *Enclosures should provide sufficient space for the animals to carry out their normal locomotive and behavioural repertoire. It must be noted that it is the*



Figure 1: Minnesota Zoo Brown Bear Enclosure; www.mnzoo.org

quality of the space provided, rather than the quantity that is important, but all enclosures must be big and complex enough to accommodate normal behaviour.

The living spaces are all flat, hard surfaces, with minimal amounts of bedding for the animals. Constant exposure to unyielding surfaces such as wood, metal and concrete can lead to a number of medical issues (see Physiological/Medical section). The bears were also not provided with any visible or obvious climbing/resting platforms, which goes against generally accepted practice for bears. The lack of an outside exercise yard while traveling is described as “unnecessary” in media and inspection reports by the Halls since they take the bears on “walks” throughout the day. These “walks” were captured on video (can be viewed at [Video 2](#)), and were merely handlers leading the animals around by the muzzle on hot asphalt/concrete parking lot during the summer months. This is not an acceptable environment for brown bears.



Figure 2: The Halls’ holding exhibit. Kaufman County Sheriff’s Department.

The industry standards and guidelines presented are generalized for most bear species and should be considered at the very least minimum guidelines or standards for any captive ursid. Based on my personal observations, the living environments and management of the brown bears exhibited by James and Tapa Hall, on behalf of the Shrine Circus, fall well below acceptable standards and negatively impact the animals’ welfare.

Physiological/Medical

The Halls’ brown bears appear to be overweight, and would be rated between a “4” and “5” on the Bear Body Score Chart from Polar Bears International and the Cincinnati Zoo. (**Appendix II**, Figure 4). While this chart illustrates polar bear body types, the weight categories can be generalized across most bear species. While brown bears will typically be heavier towards the end of summer and through fall, this weight gain is seasonal and results from a hyperphagic phase (see below) in preparation for annual hibernation. It is not an appropriate physical condition for the animals to consistently endure.

Obesity in mammals results in short- and long-term medical complications, including (but not limited to):

- Liver, kidney, and other internal organ failures
- Arthritis and other painful joint and spine conditions
- Respiratory distress
- Heart disease and reduced circulatory efficiency
- Hygromas at joints, the result of repeated joint trauma on hard surfaces that regularly swell with fluid

- Possible hyperkeratosis—thickening of the skin at joints increasing the risk of infection
- Reduced ability to thermoregulate effectively

Almost all bears are technically “omnivorous” species, and brown bears in particular have a widely varied natural diet. What the animals will forage on shifts depending on season, resource availability, and their metabolic cycles (see below). Food items range from nuts, berries, seeds, leaves, grasses, bark and other plant materials to insects, eggs, carrion, small animals, and fish that tend to be higher in fat composition (especially salmon). Bears in captivity are often fed a small variety of seasonally available fruits and vegetables, eggs and nuts, and usually a manufactured “chow” of some sort, though most non-accredited institutions and private owners feed their bears low-grade dog chow. Poor quality dog food will not meet a bear's nutritional, seasonal and behavioral needs or expectations.

AZA Accreditation Standard 2.6.2: *A formal nutrition program is recommended to meet the behavioral and nutritional needs of all species and specimens within the collection.*

AZA Accreditation Standard 2.6.3: *Animal diets must be of a quality and quantity suitable for each animal's **nutritional and psychological needs**. Animal food, especially seafood products, should be purchased from reliable sources that are sustainable and/or well managed.*

AZA Bear Care Manuals (2009; 2012- pending), 5.1 Nutritional Requirements: *Nutrition involves a series of processes whereby an animal uses items in its external environment to support internal metabolism. The nutrition and resulting nutritional status of an animal are basic to all aspects of health, including growth, reproduction and disease resistance. Appropriate nutrition and feeding are essential to a comprehensive animal management and preventive medicine program.*

Once the diet items are designated the diet should be offered in different methods, and possibly forms, to mimic the bears foraging ability in the wild. Enrichment food items should be part of the total diet, used for movement in the exhibit or even training for different behaviors. This information should be recorded and tracked.

Brown bears, like many other bear and mammalian species, possess a circannual rhythm generator as part of their neural make-up that results in the annual cycle of hibernation (Kondo et al, 2006). There is significant supporting literature about this annual metabolic process and the importance of the process to bear physiology, reproduction, nutrition, and many other facets of individual welfare. The most significant points that are clearly not in evidence with circus bears, and here the Halls' bears specifically, are:

- The bears expect to feed to satiation during the summer and early fall in preparation for building fat stores for winter hibernation. This drive is based on environmental cues (Evans et al, 2016) and does not extinguish itself in captivity.
- Brown bears will find or dig an appropriate den in late fall.
- Hibernating bears experience a metabolic depression; this is a cycle where their energy decreases and their body shifts to feeding off of appropriate fat stores. This depression continues into early spring when the animals would slowly start moving and building up their metabolisms and corresponding activities.

These are merely three simple examples of what these bears physiologically experience. The inability to meet these genetic expectations due to inadequate housing and poor, nonspecific management practices result in physical and psychological distress. Bears that are not able to experience this cycle properly have their metabolisms interrupted, and suffer consequent inappropriate changes in their nutrition and metabolism. These changes then impact everything in their systems from simple digestive processes to production of hormones, and result in issues ranging from poor coat health to impaired brain function. The bears also experience significant frustration with an inability to engage in appropriate seasonal behaviors and suffer acute and chronic distress as a result, which can manifest as in various species inappropriate behaviors. (see Psychological and Behavioral sections.)

Historically, as a result of constantly living on inflexible floors such as concrete or metal, which are hosed clean and remain wet for long periods of time, bears will develop cracked foot pads. Severe cracks can become infected, causing further skin and tissue damage. Bears groom and lick cracked pads, which over time can develop into a stereotypic behavior, particularly in such a sterile, non-enriched environment. (See Housing and Psychological sections.)

There are other pervasive environmental stressors resulting from inadequate housing and management that the bears cannot avoid that will impact their health and behavior. The bears are forced to travel in a trailer towed behind a vehicle, and are subjected to all of the highway pollution and exhaust that entails. They are also exhibited and forced to perform near machinery and vehicles that are loud and startling, and also affect the animal's sensory systems on levels that humans would not even be cognizant of. Most non-human species have different auditory capabilities that register sounds at ultra- or even infra-sonic. This means that stimuli that humans perceive as "normal" can actually be overpowering to animals, and adversely impact their welfare and experience.

AZA Bear Care Manuals (2009; 2012- pending), 1.4 Sound and Vibration: *Consideration should be given to controlling sounds and vibrations that can be heard by animals. [Bears] have excellent hearing, and staff should pay special attention when there is unusual or excessive noise around the enclosure, as this may cause stress or aggression.*

The bears are also exposed to a unique and particularly troubling medical complication. Being housed and walked for exercise in a parking lot behind event buildings, the bears are already exposed to the exhaust and pollution from regular vehicular traffic. The Shrine Circus, however, opens with a parade of vehicles that drive by all of the animals that are housed in the area. The exhaust fumes and pollution from the vehicles caused me direct personal discomfort, even when I covered my mouth and nose with my shirt. The animals have no such luxury, and so not only are they assaulted with the sensory stimuli of moving vehicles, lights, revving engines, and shouting people, but all of the animals are also forced to endure the exhaust of all of the vehicles that pass/park/idle right next to them during the parade and throughout the show. The animals are also regularly exposed



to exhaust and pollution during loading onto vehicles and transport between venue locations. Then the bears are ALSO forced to ride into the circus ring on a motorized cart, enduring further sound, vibration and pollution. This is a regular occurrence in these animals' lives. All species of bear rely **STRONGLY** on their olfactory sense, and the constant overload would be exceptionally stressful.

We as human beings know the deleterious and hazardous effects of airborne pollutants. They include, but are not limited to:

- Irritation and infection of eyes, nasal passages, sinuses and mucous membranes.
- Asthma and other respiratory disorders.
- Premature birth.
- Emphysema.
- Lung disease: Photo on right compares a healthy mammalian lung to one chronically exposed to air pollution (Source: <https://www.quora.com/How-much-does-air-pollution-affect-health>)
- Cardiac disease, including an increased risk of heart attack.
- Death.

It is an unnecessary cruelty to inflict this on animals that are trapped and forced to work and perform in poorly ventilated confined spaces.



The sterile living environs that do not provide for expression of a myriad of behavioral options also contributes to weight and health issues. The animals exercise *less* due to minimal appropriate stimulation and interaction with their surroundings. This leads to atrophy of the muscles, skewed weight/muscle/fat distribution, and development of bone spurs, arthritis and joint problems. Circus handlers often employ the reasoning that “Our animals exercise more during training and performances than animals in zoos.” While the bears may indeed experience bursts of activity during performances, their general sedentary lifestyles and lack of engaging in bear-specific behaviors lead to experiencing overall poor fitness.

Per USDA, 9 C.F.R. § 3.128: *Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make **normal** postural and **social adjustments** with adequate freedom of movement.*



Figure 3: Bears forced to perform species-atypical behaviors

This is further exacerbated by handlers forcing the animals to perform physical tasks that they are not physically designed for. Regardless of what human handlers *want* the animals to do, bears have evolved to naturally possess their own repertoire of appropriate species-specific actions. Their muscles and skeletons move certain ways, their tendons, ligaments, and joints function as their phylogeny dictates, and coercing the animals to assume positions or movements that are unnatural causes undue physical strain and long-term injuries. Bears do not sit upright in metal chairs, do not walk on their front paws, and are not built to ride bicycles like a bipedal human. The fact that they do these things is a result of fear-based, aversive and punitive “training” methods used by their handlers (see Behavioral section). Forcing the animals to assume unnatural and unnecessary physical positions and activities will impact their welfare for the rest of their lives. (see also Psychological section.)

Finally, how circus bears are “trained” and forced to comply with the handlers’ demands (see Behavioral section) leads to acute and chronic physical injury and complications. The bears were trained primarily using aversive techniques, meaning that an uncomfortable or painful stimulus is applied in order to force the animal to move or act how the handler wants it to. (Figures 4 & 5) This is clear in the bears’ behaviors when one can observe them flinching or shying away from the whips and goads, or pulling back and displaying distress behaviors when the lead/muzzle are pulled on. During performances and walks (that, incidentally, appear to be the only time the animals get out of their trailer when not performing) the bears are forced to wear muzzles and are led by attached leads. The handlers also all carry whips and/or goads. Directly using any of these devices can cause immediate injury to the skin, eyes, nose, lips and ears of the animals. These may be small cuts, bruising or swelling that are not obvious through the bears’ fur. The animals are also subject to constant strain on their facial/neck muscles and skeletal structures when either sudden or even constant pressure is exerted to control the animal’s movement. This strain will likely cause chronic pain, damage to connective tissues and musculoskeletal functioning, and lead to joint problems such as arthritis, as well as other joint diseases. This type of trauma to the head/neck also shears off the tiny nerves that thread their way through the cranial and facial bones, similar to when a human being experiences a physical accident. While some of these nerves may regrow, we know that in the interim the damage leads to headaches and impaired physical abilities.



Figures 4 & 5: Bears forced to perform using aversive stimuli



In summary, the circus environment does not provide for the immediate and long-term physiological and behavioral needs of the bears and other animals forced to travel and perform. The animals suffer ongoing physical distress that is secondary to managing for performances of this type, and as a result the animals are experiencing diminished individual welfare.

Psychological

AZA Bear Care Manuals (2009; 2012- pending): *Bears are highly intelligent, manipulative, active, and dynamic animals. They are powerful and have well developed sensory systems, particularly the olfactory system. Due to their high intelligence, stimulation via enrichment, training and complexity in their environment, similar to what primates receive, is highly recommended to keep bears in good mental condition. In many ways bears may need these things all the more than other species with similarly advanced cognition, because unlike many other highly intelligent animals, they lack the heavily social repertoires present in naturally gregarious animals. (Stirling, 1993) In the wild, bears also typically have very large home ranges and spend much of their time traveling and looking for food. It is extremely difficult to replicate these conditions ex situ, which may explain the strong tendency for bears to exhibit stereotypic behaviors in zoological settings. (Anderson et al, 2010) Cognitive challenges such as problem solving during foraging, and an environment with which the individuals can interact, are essential to a bear's physical and psychological well-being.*

Dangerous Wild Animals Act (UK): *Bears are highly intelligent animals that become bored and show abnormal behaviour in restricted enclosures. An enclosure that has a variety of substrates and furniture (rocks, logs, plants, pools) will go some way to allowing a wide range of natural behaviours and limit the stereotypic behaviours bears are prone to showing.*

The transport trailer, home enclosure, and circus environment do not adequately meet any industry standards for bear husbandry and clearly do not meet several USDA guidelines. For this section, I will specifically address the issues resulting in psychological distress.

The inadequate and inappropriate social housing prevents individuals from being able to evade one another, risking conflict and adverse interactions. This inability to avoid conflict, or even the presence of other animals (including humans), will result in psychological distress for the animal. The blood cortisol levels that result from stress can trigger aggression toward other animals or trainers, displacement behavior, apathy, learned helplessness, and even severe capture myopathy (see below).

The sterile environment does not meet any of the bears' genetic expectations. The animals are unable to express normal behaviors (see Housing section) and therefore experience long periods of inactivity or mindless activity, which results in permanent long-term changes to the body, brain, neural, and endocrine systems. Regular, novel behavioral and environmental enrichment need to be provided daily in order to stimulate investigation and solicit a wide range of normal bear behaviors. The results of housing sterility and lack of environmental change are often stereotypic behaviors, inappropriate social interactions, lethargy or apathy, and learned helplessness at being unable to alter their own environments.

Dangerous Wild Animals Act (UK): *Bears are highly intelligent animals that become bored and show abnormal behaviour in restricted enclosures.*

Enclosures should provide sufficient space for the animals to carry out their normal locomotive and behavioural repertoire. It must be noted that it is the quality of the space provided, rather

than the quantity that is important, but all enclosures must be big and complex enough to accommodate normal behaviour.

The provision of enrichment items to provide the animals with a stimulating environment and opportunity to exercise is encouraged. The activity levels of bears in the wild directly correlate with the quantity, distribution and quality of food in their home range. In captivity where all an animal's nutritional need can be provided in one small meal, it is important to spread the total nutritional need both temporally (throughout the day) and spatially (throughout the enclosure).

I have been caring for brown bears for over 25 years, and I am one of the few people in the world that has worked with every extant species of bear. This includes traveling around the world assisting with improving husbandry and management of bears, and assessing/improving individual animal welfare. Knowledge of how the Halls' bears are transported, observing their controlled and restricted handling, accompanied by photos of sterile home enclosures, all demonstrate compromised psychological well-being of bears. I suspect a significant part of the paranoia exhibited by the Halls and the Shrine circus in visibility of housing is that the bears live in poor conditions and display obvious anticipatory or stereotypic behaviors. ANY bear or species would do so in these restricted environments. Video was acquired by Animal Defenders International in 2015 showing at least one of the Halls' bears pacing and circling in its small trailer (<http://www.sheboyganpress.com/story/news/2015/09/04/sheboygan-county-fair-bear-draws-criticism/71700364/>). It is my professional opinion that the bears housed and exhibited by the Halls suffer compromised psychological welfare, and have been developing coping mechanisms and accompanying physiological changes during the course of their lives.

Per USDA 9 C.F.R. § 3.128: *Space requirements; Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make normal postural and social adjustments with adequate freedom of movement. Inadequate space may be indicated by evidence of malnutrition, poor condition, debility, stress, or abnormal behavior patterns.*

This opinion is further supported by the inhumane practice of premature separation of cubs from their mothers. This is standard practice in exhibition settings where the animals will be managed "free contact," or without barriers between the animals and humans. The generally espoused reasoning is that the cubs need to "imprint" on a human and learn to trust and be around people at an early age to better prepare them for their lives as performance animals. *"We had to get the bears when they were cubs. That's how we fostered a relationship with them. Again, it's all about trust."* - Tapa Hall, <http://www.evansvilleliving.com/articles/acting-up>

Current scientific research does not support the concept of imprinting, but further explores the critical learning stages that young animals develop through. Cubs pulled early will habituate to abnormal stimuli over time and acclimate to a degree, altering their behavior accordingly. This is particularly true when being punished for demonstrating behaviors that conflict with a human handler's desires. However, hand-rearing does NOT equate to domestication (see Attitudes section at the end of the full report), and the cubs will not grow up with the proper brain development and behavioral expectations of a full-grown bear. The animal will be in constant

psychological conflict between its “natural instincts” and the behavioral repertoire forced onto it by human handlers who are constantly compromising the animals’ individual welfare.

Bear cubs, like big cats, that are used in circuses and public interaction facilities have been “pulled” or removed from maternal care, at an exceptionally young age; generally within the first few days or week after birth. This negates proper psychological and behavioral development as the cub grows and matures. Bears are not domesticated. Their genetic expectations and brains are the same as a wild counterpart. To force cubs to interact with another species interferes with normal neural development. This results in animals developing a behavioral repertoire that is in constant conflict with their natural instincts. These conflicts are overridden by the circus trainers using fear and punishment (see Behavioral section), creating further distress and other permanent neural problems (see below).

USDA has developed guidelines for big cats, which are based partly on research done with bears and directly applicable to other large carnivores. Under the USDA’s guidelines, public interactions with cubs under four weeks of ages are not permitted, as the cubs cannot thermoregulate on their own and rely on their mother’s milk for disease immunity. These guidelines recommend that cubs stay with their mothers and healthy siblings as long as possible after birth, which would naturally be until between one and two years of age. This is also when the cubs would learn appropriate genetic behavioral patterns and social interaction skills (see below). The AZA does not recommend direct contact with dangerous animals such as bears, either by staff or the public (any non-trainers or general circus staff would fall into the public category).

Removal of cubs from their mothers to be hand-reared for public entertainment immediately compromises both the short-term and long-term welfare of the infants pulled. Carnivore cubs under one or two years of age are at a critical learning juncture, when they would be learning necessary life skills from their mothers and species-appropriate social skills from mother, siblings, and conspecifics. Human-reared cubs who suffer from improper (or a lack of) maternal rearing and socialization:

- a. Regularly develop extreme aggression to cage-mates and human caretakers, are less likely to reproduce, and demonstrate a significant increase in solitary or socially inappropriate behaviors (Mellen, 2005; Meder, 1989).
- b. Suffer from neglect (i.e., through maternal deprivation), which leads to long-term depressive traits and impaired coping skill resulting from hippocampal atrophy. This specifically impacts long-term potentiation, or LTP, which compromises an animal’s ability to learn new skills over the course of his or her life and adapt appropriately to new situations (Pryce *et al.*, 2005).

Human care of bear cubs, unless medically necessary and a last resort, cannot appropriately replace species-appropriate maternal care.

These observations are not an exhaustive list of the psychological neglect and trauma that these bears endure daily. They are indicative of poor animal care and neglect on the part of James and Tepa Hall, supported by the Shrine circus. These psychological issues are compounded by the

behavioral environment and treatment by humans. Changes in management to meet industry minimum standards, psychological well-being, and long-term health would not be impossible but would require a different approach than is currently applied. (Foy et al, 1987; Pryce et al, 2005; Romero, 2004; Wolinsky, 1972)

Behavioral

All of the issues listed above with housing, sterile environments, medical issues, and neglect in general, lead to acute and chronic trauma. Yet one of the primary reasons that I take a firm stance against exotic animals in circuses is because of how they are regularly treated by their trainers and circus staff. Circuses are unable to meet the genetic behavioral expectations that these animals have evolved, and the animals endure compromised welfare as a result. Specifically, during Shrine circus performances, James and Tepa Hall use aversive stimuli on the bears that the animals cannot avoid; they are managed through fear, coercion, and punishment.

AZA Bear Care Manuals (2009; 2012- pending), 8.1 Animal Training: *Institutions are expected to utilize reinforcing conditioning techniques to facilitate husbandry procedures. Animals should be managed using positive reinforcement and patience in all training.*

The primary means that the bears are coerced to respond in a desired manner is to yell at them, use long goads or prods to



Figure 7: Constant presence and use of whip or goad

force them to move in a specific direction or to back off when approaching another animal or human too closely, and use a lead/muzzle on each animal to control them. These prods are ubiquitous. (Figures 6 & 7) They

are in both James' and Tepa's hands at all times. There is little evidence of a reward-based (reinforcement) system of learning applied. Punitive methods are standard for the circus industry and its handling of animals, specifically carnivores. It is similar to "breaking" a horse and teaching it to move away from painful pressure on the mouth, and the use of bullhooks and similar tools with elephants.



Figure 6: Use of leash and whip to elicit performance

The application of all these punitive stimuli causes the bears to react mostly in fear, and it is severe enough that one bear in particular can be observed urinating on herself TWICE in one short performance ([Video 3](#)). If you watch the video carefully, the bear urinates on herself each time in response to the handler applying an aversive stimulus. This is absolutely not a normal expression of behavior, and directly a behavioral response to what is happening around her. In one instance, the bear is coerced into standing unnaturally on her front paws by the handlers applying the prod as a "guide" to her feet. This illustrates that the animal learned to lift its feet to avoid being poked or struck on them, and the animal is clearly distressed. In the second instance

she urinates when the lead and muzzle are pulled, clearly in response to a possibly painful but definitely unwanted and aversive stimulus.

This specific incident was recorded and then posted on social media. Public response was overwhelmingly negative to how the bear was treated. When I spoke with some of the Shriners in person, they indicated that they received over 11,000 letters from people within a week of the video's release protesting the treatment of the bears. In response, the Halls and Shrine circus management moved the animals' housing to an isolated location where they were not visible to the public. One Shriner commented to me that it was "all bulls**t", and that the bears peeing during the show was no different than their dog peeing in the park while on a leash. This indicates to me a willful blindness and negligence on the part of the handlers AND the Shrine circus as to the poor welfare of the bears (see Attitudes section).

As you can see in Figure 8, the bear's posture when the prod is lifted in front of it is indicative of a fear of the consequences if they do not perform as coerced. The flinching away from the handler, ears-back position is anticipatory of tension and distress. This body language was consistent throughout performances, and it is easily seen in many photos in the media and even the Halls' social media pages. The body language is indicative of distress, fear, and psychological duress. The handlers do not respond when the animals exhibit any signs of discomfort and distress, instead forcing them to comply with the performance routines.



Figure 8: Bears forced to perform species-atypical behaviors

The bears experience constant stress, which will affect them physically and psychologically for their entire lives (see Physiological/Medical and Psychological sections). These animals do not have a trusting relationship with staff and endure this punitive, adverse environment daily. There is no regard for what the animal is experiencing, but "the show must go on."

Aside from the obvious direct risks inherent in working in close proximity to such large carnivores (see below), the use of punishment and aversive techniques lead to permanent physiological and psychological changes in learning ability, behavior, and coping mechanisms in animals.

- A. Punishment will eventually inhibit the punished act. The refusal to work or other resultant conflicts (such as avoidance, escape, and displaced aggression) will increase with continued repetitions of the punishment (Gwinn).
- B. Only performance-contingent reward behavior was found to affect subordinate performance significantly (i.e., positive reinforcement). Contingent punishment had no effects on improving performance (Podsakoff *et al.*).
- C. Prior exposure to punishment and aversion methods actually *reduce* extinction of an acquired fear response, increase disruptive effects during an approach-avoidance conflict, and suppress response of both conditioned and unconditioned activity (Boe *et al.*). Essentially, the bears will not learn *not* to be afraid and cannot react to situations appropriately for the species.

- D. Short-term and long-term psychological trauma results in permanent changes to the brain, nervous and endocrine systems. Animals are incapable of learning in circumstances in which they are stressed or traumatized, as the more primitive amygdala in the brain (responsible for fight, flight, etc.), which change permanently as a result of stress, will override learning or conditioning (Dr. Bacon).

The bears regularly exhibit signs of chronic distress in photos and videos in their home enclosure and during performances and travel. This constant psychological duress results in acute and chronic medical concerns for these animals. The animals are managed using aversive stimuli, fear, and dominance tactics. The bears cannot remove themselves from these situations, nor can they remove the aversive stimuli (fight back), leading to the aforementioned behavioral problems. The bears' only recourse to cope are neurologically self-rewarding stereotyped behaviors, or redirecting fear towards the trainers and other animals, which is particularly dangerous in free contact settings. The cumulative effects of distress will likely shorten these animals' lives and, in severe cases, lead to myopathy, injury, or even death.

The Halls claim to build trust, but the bears' body postures and behaviors demonstrate mistrust of the people interacting with them, and the animals react adversely to the performance environment. Forcing the animals to perform while attempting to watch for any potential aggressive responses poses a distinct risk of the animals taking advantage of the situation when the trainer's attention falters, most likely injuring or killing that person.

The Halls also fall into complacent routines, likely comfortable as a result of the leads, muzzles and goads. Expert trainers that know to respond to an animal's behavior while employing reward-based learning techniques watch the animal's behavior carefully, and then alter their interactions accordingly. Bears in particular are highly intelligent and readily communicate their intentions through behavior. Unfortunately, that requires paying attention to the animal's needs and responding accordingly. As exhibited in Figure 9, along with many, many others on various websites and in social media, the Halls do not pay any attention to the animals' behavior and what the bears are trying to communicate. In this particular case, it is by sheer luck (likely liberally peppered with the bear's fear of reprisal) that the bear does not use its claws to grab the handler and severely injure or maul them. Even hand-reared, these bears are not domesticated, nor like "large dogs" as the Halls claim (see Attitudes section), and are still inherently wild animals. The bears should be respected and managed as such.

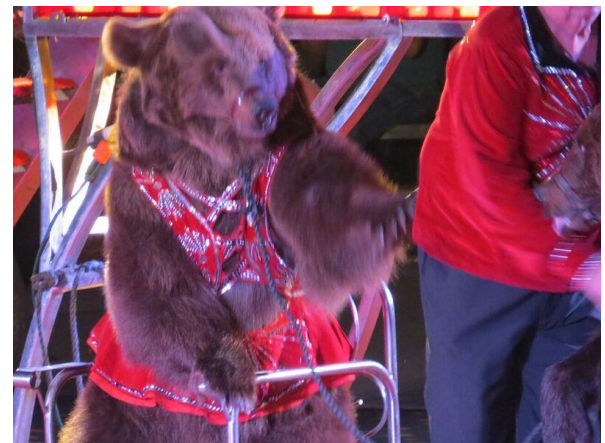


Figure 9: Trainer not paying attention to the adult bear/behavior

Bear Care Manuals (2009; 2012- pending), 8.3 Staff and Animal Interactions: *The AZA Bear TAG recommends that all sun and sloth bear training be done in a **protected contact** setting.*

It is also not uncommon for injuries or fatalities to occur when attempting to manage bears in free contact or entertainment settings:

<http://www.mirror.co.uk/news/uk-news/horrifying-moment-circus-bear-jumps-10526857>

<http://www.cnn.com/2009/WORLD/europe/10/23/russia.skating.bear.death/>

<https://www.pri.org/stories/2012-11-06/animal-trainer-benjamin-cloutier-mauled-death-grizzly-bears-montana>

I have observed such behavior firsthand with numerous species, including lions, bears, elephants, and even domesticated dogs. When the animals suffer chronic levels of stress and mistreatment, at some point, they will react when they believe they finally have an opportunity to change their environment. There is no doubt in my mind what would happen to the bear that attacked a person in a circus or free contact environment, as evidenced by the incidents referenced above.

These types of events are also highly traumatic to any observers. Grief and trauma counselors are retained to assist the public, staff and volunteers that witness these types of incidents. It definitely represents an object lesson and reminder that a bear is STILL a bear, and capable of such actions despite what their human handlers tend to believe. However, I do not believe that the public, or anyone, should be subject to such a gruesome and traumatic event, nor should the animal be punished or killed for acting on its natural, genetic behavioral patterns.

AZA Bear Care Manuals (2009; 2012- pending), 9.1 Program Animal Policy: *The AZA Bear TAG does not recommend the use of bears as program animals because like all large wild animals, **bears present significant risk of injury to people.***

It is my professional and expert opinion that the bears I observed in the photos, videos and media from before and during the Shrine circus performances and the inspection reports, are suffering from poor care and management, as well as ongoing physical and psychological trauma. The animals are not provided with the proper care and welfare necessary for any bear species. If conditions cannot be improved within the structure of both circus and home location then the animals would be better served by living in a certified or accredited institution dedicated to both the immediate and long-term welfare of the animals. (see Summary)

Elephants

The observations and information below refer to the two African elephants (Kosti, the larger, and Megu, the smaller) and one Asian elephant (Okha) exhibited by Brian Franzen.

The standards and recommendations presented below are excerpted from the AZA Elephant Care Manual and the AZA Accreditation manual. The USDA/APHIS Animal Welfare Act is also cited.

- **Housing:** On site for the circus, the elephants' holding area was in the back corner of the exhibition hall. A string barrier was set up from the semi-trailer parked inside, containing hay, tools and supplies. Kosti was periodically chained to this trailer. String and low metal stanchions were the only barriers between the elephants and guests. The elephants were forced to stand on concrete floors in their own waste, subject to excessive noise, light, presence of strangers, and vehicle exhaust/poor air quality.
- **Physiological/medical:** The elephants are overweight, forced to stand and feed amidst their own urine and excrement, and fed hay and produce of variable quality. They are also exposed to excessive levels of noise (particularly infrasonic noise, a particular problem for elephants), light and exhaust, likely resulting in acute and chronic distress and respiratory complications. Staff are poorly trained and grossly underqualified to care for these animals.
- **Psychological:** The elephants are forced to subsist in suboptimal living conditions, managed through coercive methods, and routinely chained to a trailer. There is no visible, appropriate social structure for this matriarchal herd species. All three elephants exhibit various *severe* behavioral stereotypies, exhibiting easily discernable signs of distress.
- **Behavioral:** The elephants I observed are coerced and forced into exhibiting desired behaviors and performing for the public using dominance and fear-based techniques. The handlers are aware of public perception regarding force and the use of an ankhus or bullhook, and consequently resort to small, sharpened fiberglass rods they hide in their pockets to subtly achieve the same effect. The elephants are punished for perceived infractions and to force desired responses by being jabbed where the skin is not as thick on their body. This method of controlling the animals, and the subsequent physiological and hormonal changes, will permanently impair learning and appropriate behavior expression for the species, resulting in irreversible neurological changes.

Elephants are exceptionally intelligent and highly social animals. It is well documented that elephants are sentient beings, capable of experiencing a wide range of emotions. Elephants are incredibly complex animals, with diverse and highly interactive expectations of their environments. The physical mistreatment and psychological distress observable in these animals is illustrative of poor welfare and lack of understanding of the animals' true nature and needs.

Housing

Elephants, particularly females, are highly social animals that normally live in large herds (8-100 animals for African elephants, 8-20 for Asian). The herds are led by an older and experienced female matriarch, and are generally comprised of related animals. Their natural habitat is exceptionally complex, with trees, undergrowth, water sources, and a constantly changing environment. Elephants spend a significant portion of their day foraging, much of which is on trees and shrubs (leaves, branches, bark). Elephants will migrate long distances in their herds,

exercising choice in their location and surroundings. The elephants' genetic expectations are to constantly have behavioral choices available to them, to exist and function as a social unit, and to support and protect one another and their young. They will also regularly interact with other herds when resources are plentiful and allow.

The elephants exhibited by Brian Franzen for the Sesostris Shrine Circus shows were housed inside of the Lancaster Event Center, located outside of Lincoln, Nebraska. For the Tangier event in Council Bluffs, IA the elephants were housed inside the Mid-America Center. The elephants were contained in a small area near the back of the exhibit hall beside a parked semi-trailer that held hay, tools and supplies. The elephants were kept on cement floors where their food constantly became mixed up with their urine and fecal material. The only "containment" features protecting the guests, staff and handlers were lengths of twine strung from the trailer to various poles and the ride structures, and low metal stanchions. There was absolutely NO protection for people from the elephants, nothing preventing easy access to the elephants by people, nor anything protecting the elephants from one another if conflicts arose. The handlers regularly walk in with and work around the elephants. There were also several times throughout the day when I observed the elephants in this holding space, and there were no handlers, staff or volunteers present at all. It would have been unbelievably simple to bypass the "barriers" and enter the containment area to contact the elephants.

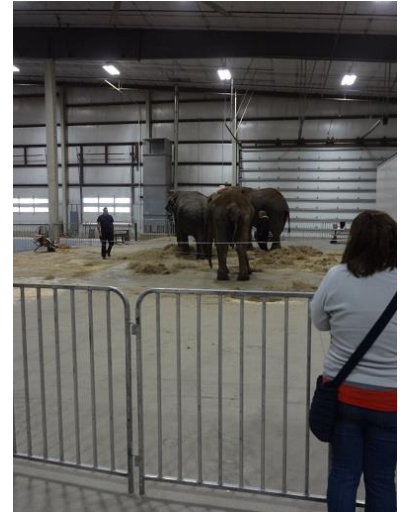


Figure 1: Ineffective stanchion and twine barriers

AZA Elephant Care Manual (2011; rev 2012):

1.4.9.2 Barriers

Standard: All institutions must have in place and be implementing adequate infrastructure to manage and care for elephants with barriers and/or restraints in place to increase employee safety.

Measurement: Adequate infrastructure exists and is used by elephant care providers to care for their elephants without sharing the same unrestricted space with the elephants, except in certain, well-defined circumstances.

Explanation: AZA is committed to maximizing the safety of elephant care staff.

5.3 Visitor safety and acceptable forms of human/animal interaction

Standard: Elephant enclosures must be designed to ensure that no physical contact is possible between the visitors and the elephants that is not directly supervised and under the control of trained elephant staff.

Measurement: No incidents of visitor injury or inappropriate contact with elephants.

Explanation: All elephant/human interaction must be supervised by institutionally qualified elephant staff. Where elephant rides are done, or elephants are walked in public areas or outside their normal exhibit containment, protocols, assessments and reviews must be documented to ensure staff and public safety.

Kosti was chained to the trailer throughout the day when she was not performing or forced to allow circus guests to ride her. She would stretch to reach desired resources; the chain would then be putting extra strain on her leg and foot. This type of ongoing physical distress could cause injury to the skin, joints, tendons and ligaments and cause both acute and chronic pain. This type of distress on joints can also lead to arthritis progressing more rapidly, as well as other joint specific issues. For an elephant that is required to perform multiple times a day and put undue pressure and weight on the leg, this is an unnecessary harm. It also impairs her normal movements and postures, which would cause not only physiological discomfort, but also concurrent psychological distress due to frustration of her behavioral intent. Chains were located at multiple points around the perimeter, so this is clearly a routine occurrence.

AZA Elephant Care Manual (2011; rev 2012):

1.4.1.1. Indoor space

Standard: *Indoor facilities must provide adequate room for elephants to move about and lie down without restriction.*

Measurement: *If there are elephant behavioral, social, or medical issues shown to be caused by insufficient space, there must be a program in place (from a programmatic and/or facility perspective) to address the issue.*

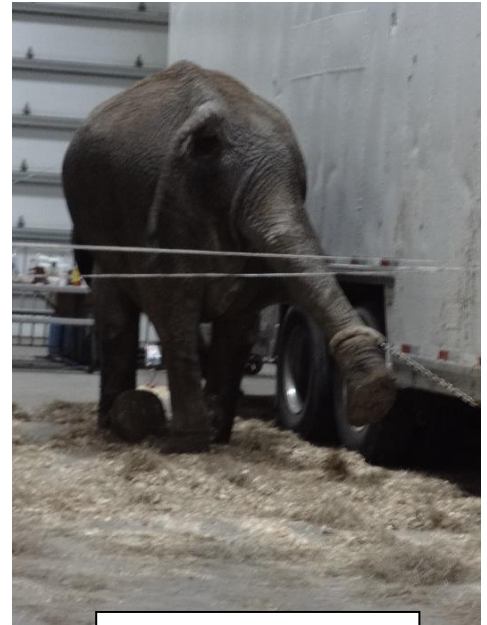


Figure 2: Kosti chained to trailer

Per USDA, 9 C.F.R. § 3.128: *Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make **normal** postural and **social adjustments** with adequate freedom of movement.*

The area the elephants were forced to live in is sterile and had no environmental options for these animals to interact with. There were no logs or branches for the elephants to browse on or interact with (scratching, etc.), no water/wallows, and no interactive devices (see Psychological section). There were no physical barriers to block line of sight from either the people in the building, nor from each other. The elephants, highly social species known to make social choices, had NO choice whatsoever in their proximity to either humans or the other animals.



Figure 3: One of several chains attached nearby

When elephants are held in close proximity to one another with no respite from constant social pressure, they may potentially end up in a conflict, or even trapped by another individual, with no safe escape route. This can result in distress, injury, and even risk of death. Social frustrations and lack of appropriate environmental options can increase chronic stress levels and lead to unexpected expression of less desirable aggressive displacement behaviors. These may be directed towards other animals, but just as likely to nearby humans. (See Behavioral section.)

AZA Accreditation Standard 1.5.2: *Animals should be displayed, whenever possible, in exhibits replicating their wild habitat and in numbers sufficient to meet their social and behavioral needs.*

AZA Elephant Care Manual (2011; rev 2012):

1.4.4. Visual, acoustic, and olfactory barriers within the space

Standard: *The design of indoor and outdoor enclosures must contain areas where elephants can exercise and socialize together, and avoid socializing if/when desired.*

Measurement: *Determine the level of choice the elephants have to join or separate themselves from other elephants.*

2.2.1.9 Daily and life stage variation in patterns of social affiliation

Standard: *A behavioral profile must be maintained for each individual elephant and updated annually.*

Measurement: *Protocols and profiles in place and up-to-date.*

Explanation: *Staff must be aware of each elephant's social compatibility and the dominance hierarchies of the herd. Institutions must have the ability to manage social compatibility as well as dominance and aggression among an elephant group. Institutions must have the ability to manage introductions and separations of elephants, including; a new female to an existing herd, females to males for breeding, calves to their mothers, and calves and mothers to the herd. Elephant enclosures must be designed to allow for separate and group housing during periods of social incompatibilities, without interfering with the normal movement of elephants in and out of enclosures.*

Along with living in a barren and inappropriate social situation, there was a noticeable lack of environmental or behavioral enrichment. Elephants, all species, live in immensely complex natural environments. Their physical surroundings would have tremendous variation and provide innumerable behavioral options. A complete lack of “furniture” such as logs, pools, mud wallows, trees, shrubs, grasses, soil, etc., illustrates that these animals are living in an environment completely bereft of proper welfare and husbandry parameters described by current industry standards and practices. This runs completely counter to any animals’ genetic expectations of their environment, and creates consistent short- and long-term distress.

Captive elephants have access only to what their human caregivers provide them with. Enrichment should be offered multiple times a day, and encompass feeding strategies as well as other natural behaviors. Detailed examples of elephant enrichment programs are easily obtained from the AZA, Elephant Managers Association (EMA), most zoos, and from sanctuaries dedicated to providing elephants with the best husbandry conditions possible while under human care. Lack of



Figure 4: Sterile, inappropriate environment for elephants



Figure 5: African elephant habitat and genetic expectations
Photo: author, Samburu National Park, Kenya

appropriate environmental stimuli and options to express a wide range of natural behaviors results in long term physiological, psychological, and behavioral issues. The photos on the right illustrate living environments that the elephants are evolved to interact with, and genetically expect to encounter in levels of complexity (Figures 5 & 6). While natural habitats can be challenging to replicate, providing the elephants with options that allow expression of a wider range of behaviors is not.

AZA Accreditation Standard 10.3.3: *All animal enclosures (exhibits, holding areas, hospital, and quarantine/isolation) must be of a size and complexity sufficient to provide for the animal's physical, social, and psychological well-being; and exhibit enclosures must include provisions for the behavioral enrichment of the animals.*



Figure 6: Asian elephant habitat and genetic expectations
Photo: *inhabitat.com*

Living on unyielding cement also takes a toll on the animals' joints, skin and feet (see Physiological/Medical section). The restricted living area and flat surfaces force the elephants to stand in their own waste while feeding (see Physiological/Medical section).

The industry standards and guidelines presented are for zoological institutions that house elephants, but should be considered industry guidelines or standards for elephants living in any situation. Based on my personal observations, the living environment and management of the elephants exhibited by Brian Franzen, on behalf of the Shrine Circus, fall well below acceptable standards and negatively impact the animals' welfare.

Physiological/Medical

Brian Franzen's elephants were all categorically overweight. I provided photos I took of Franzen's elephants from multiple angles to a recognized expert on elephant body condition scoring. In personal communication, based on a standard elephant rating scale where "1" is distinctly underweight and "5" is distinctly overweight, we rated Okha as a "5," Kosti as a "5," and Megu as a "4." Using a different metric, the Wemmer Elephant Body Condition Index (BCI) for Asian Elephants (**Appendix III**), these numbers would be significantly higher and in the upper scores. Brian Franzen's elephants were all categorically overweight, applying existing metrics such as the *Wemmer Elephant Body Condition Index (BCI) for Asian Elephants* (**Appendix III**). These are not appropriate physical conditions for the animals to consistently endure, particularly when forced to exert themselves while suffering from sub-optimal or hazardous environmental conditions (see below). When I inquired about how the elephants' weights and health were monitored, I was informed by the handlers that they do not weigh the elephants or record *any* body measurements, and that "they're just fine."

AZA Elephant Care Manual (2011; rev 2012):

3.1 Diet - Standards for nutrient requirements for all life stages

See 2.1.1.3, 2.1.1.4 and 2.1.1.5. Other resources include Food, the Elephant Husbandry and Resource Guide, Appendix 1, Nutrition Advisory Group Handbook, "Elephants: Nutrition and Dietary Husbandry" (Ullrey et al. 1997).

Standard: *Elephant weights and/or body condition scores should be recorded three times a year. Diet and/or exercise programs must be in place for elephants.*

Measurement: *Weight records and/or body condition scores should be reviewed. Diet and exercise programs modified as needed to maintain elephant physical well-being.*

3.2.7 Activity levels

Standard: *Activity levels should be sufficient to maintain the physical and psychological well-being of the elephant.*

Measurement: *Diet sheets, weight records, body condition scores, exercise protocols and nutritional/intake records should be reviewed.*

Explanation: *In the absence of scientific data to indicate the precise amount of activity needed to maintain good physical and psychological well-being of an elephant, activity levels, weight, BCI and diet composition should be frequently reviewed to maintain appropriate overall health parameters.*

Obesity in mammals results in short- and long-term medical complications, including (but not limited to):

- Liver, kidney, and other internal organ failures
- Arthritis and other painful joint and spine conditions
- Respiratory distress
- Heart disease and reduced circulatory efficiency
- Hygromas at joints, the result of repeated joint trauma on hard surfaces that regularly swell with fluid
- Reduced ability to thermoregulate effectively

Elephants eat a wide variety of plant materials, and a high percentage of their diets is comprised of "browse": branches, leaves, bark. While they will ingest hay and grass, this is filler, and less optimal for their overall health and welfare. What the animals will forage on shifts depending on season and resource availability, but elephants eat a wide range of foods. When I observed and inquired as to what the elephants are fed, over the course of several conversations I was informed that Franzen's elephants generally receive hay of variable quality (depending on availability while at a specific location) and donated expired produce, again of indeterminate and inconsistent quantity and quality. In fact, that very day I was told that the "hay we got is crap and the elephants don't like it." Handlers judge hay quality by how adversely it affects the texture of fecal material ("shi**y hay gives them the runs"). These feeding practices negatively impact the elephants' health and welfare, and can lead to acute and chronic illness and stress. The elephants' inability to engage in natural feeding methods (along with a barren environment and lack of enrichment) will result in further chronic distress, as well as lead to boredom and the development of coping behaviors (see Psychological section).

The elephants are also forced to remain in one small area, and their food, which is thrown on the ground as opposed to suspended or even in a raised feeding device, is constantly contaminated by their own urine and excrement. I observed the handlers throw hay on top of fecal matter, or in puddles of urine. The animals also end up eliminating directly onto the food they are supposed to eat. They cannot move away to forage in a clean area or eliminate bodily wastes elsewhere. They are forced to either eat contaminated food and risk ingestion of various pathogenic organisms, or go hungry and not eat the fouled foodstuffs. While handlers would periodically remove any large fecal bolus and throw wood shavings down, there was no actual cleaning of the floor or removal/replacement of contaminated feed. This negatively impacts the animals' health.

AZA Accreditation Standard 2.6.2: *A formal nutrition program is recommended to meet the behavioral and nutritional needs of all species and specimens within the collection.*

AZA Accreditation Standard 2.6.3: *Animal diets must be of a quality and quantity suitable for each animal's **nutritional and psychological needs**. Animal food, especially seafood products, should be purchased from reliable sources that are sustainable and/or well managed.*

Nutrition Advisory Group Handbook, "Elephants: Nutrition and Dietary Husbandry" (Ullrey et al. 1997):

- "Deficiencies in vitamin E in elephants in human care has led to a range of symptoms, including necrotizing myopathies, anemia, reproductive failure, capture myopathy, and white muscle disease.
- Grass hay with an ADF of > 30% should be provided to elephants, and can be mixed with legume hays. All hay fed should be of **high quality, properly dried and cured, and regularly assessed for nutritional content**. To provide a more nutritionally complete diet, concentrated pellets can be offered in addition to hay. These pellets should be high-fiber and low in starch. **Providing browse for elephants increases foraging time, can add important nutritional benefits, and can promote dental health.** As with other food items offered to elephants, it is important to have browse nutritionally analyzed." (see also Elephant Nutrition Table, Appendix IV)

AZA Elephant Care Manual (2011; rev 2012):

2.1.1.4 Feeding schedules - Variability food presentation (e.g. spatial and temporal dispersal of food resources)

Standard: Varied feeding schedules dispersed both spatially and temporally throughout the day and night are required.

Measurement: Written feeding protocols and schedules must be maintained.

Explanation: Mechanisms to deliver food to elephants during the day and night should be implemented (e.g., changing animal care staff schedules, automated feeders, hanging feeder nets, etc.). Feeders should be located in multiple locations to discourage undue competition or aggression over feed items.

2.1.1.5 Provision of opportunities for elephants to process food in ways similar to their wild counterparts and mechanisms that enable animals to work for food

Standard: Opportunities must be provided for elephants to acquire food using multiple foraging behaviors. **Food must be provided in areas where it is less likely to be soiled.** Excess or waste food must be removed daily.

Measurement: Written feeding and enrichment protocols must be maintained.

Explanation: Opportunities for searching, browsing, grazing, reaching, opening, etc. can be provided by scatter-feeding, hiding foods in crevices and substrates around the exhibit, or by using elevated feeders such as hanging hay nets that encourage an elephant to reach for and manipulate its trunk to gain access to the food. Mechanisms that promote physically active feeding behaviors can be incorporated into a comprehensive enrichment plan for the elephants.

3.2.6 Seasonal changes in nutritional requirements

Standard: Elephants should be fed in accordance to the recommendations of the Elephant TAG/SSP Nutrition Advisor.

Measurement: Diet sheets and nutritional/intake records should be reviewed.

Explanation: If changes are made to diets as a result of seasonal availability of items, then care should be taken to implement changes gradually (over 1-2 weeks) to avoid digestive upsets (Ullrey et al. 1997).

3.2.8 Health status

Standard: Diets should be flexible and should be adaptable to a wide range of individual elephant needs and various health issues, while adhering to the recommendations of the Elephant TAG/SSP Nutrition Advisor.

Measurement: Diet sheets, weight records, health records and nutritional/intake records are reviewed.

Explanation: The elephant team must work closely with the veterinary and nutrition teams to balance medical and nutritional requirements with behavioral components and activity levels for each elephant.

It is a well-recognized industry standard that elephants under human care typically receive regular inspections of areas of their bodies that are prone to experience physiological or medical issues. Elephants that are not provided with appropriate environments to self-maintain require specific care to aid in proper physical health maintenance. These physical areas include, but are not limited to, skin, tusks, teeth, eyes, ears and particularly feet/pads. A comprehensive industry standard list can be found in the AZA Elephant Care Manual.

The elephants are unable to immerse themselves in water or mud as elephants in their natural habitat or under appropriate human care would be able to do. When I inquired as to baths or skin care, I was informed that “they don’t like water much,” which is patently untrue about either species. There are also no opportunities for the animals to engage in dust bathing, another natural behavior that helps them self-regulate their skin condition. These elephants also endure wearing costumes during shows and blankets/saddles during ride encounters. These are outside of what the animals have evolved to experience, and can result in chafing, dry or chapped skin, lesions, and even infections or serious skin complications.

AZA Elephant Care Manual (2011; rev 2012):

3.3.2.3 Skin care

Standard: Elephants must be trained to accept regular skin care and staff must be trained to provide that care.

Measurement: Each elephant facility must have a written protocol for routine skin care and show evidence of its implementation. These records and protocols should be reviewed.

Explanation: An elephant's skin must be thoroughly inspected on a daily basis and cared for as needed through bathing, removal of dead skin, and treatment of dry skin or other skin problems. The elephant's skin should be supple, free of dead skin buildup, not cracked or dry and free of folliculitis.

Kosti and Megu have had their tusks shortened or removed altogether. This is generally only seen under professional care when an animal has experienced a broken tusk or infection that poses a health risk. In free contact settings, where handlers are in with the elephants, tusks are generally blunted or removed to minimize the risk of injury to people. There is no behavioral or physical benefit for the elephant in tusk removal. Quite to the contrary, elephants (particularly Africans) EXPECT to have their tusks and would use them regularly during foraging, marking, defense, and a number of other behaviors. The inability to properly engage in normal behaviors will result in acute distress (the inability to complete behaviors and consequent frustration) and chronic stress (repeated occurrences over the animal's life). Stress has serious physical consequences in elephants, just as it does in humans, and results in impaired immune function, cardiac or respiratory complications, and permanent changes to the endocrine and neurological systems. (see Psychological section.)

Elephants require careful and vigilant monitoring of the condition and health of their feet and the pads/nails. Regular inspections and maintenance prevent cracking, fissure development, abscesses, tearing of skin/nails, infection, and other medical issues. Handlers are generally trained in elephant foot cleaning, trimming, treatment and overall care. While I did not specifically discuss foot care with Brian Franzen, I did ask two handlers what they do for regular foot care. Neither individual had any experience or training in this area.

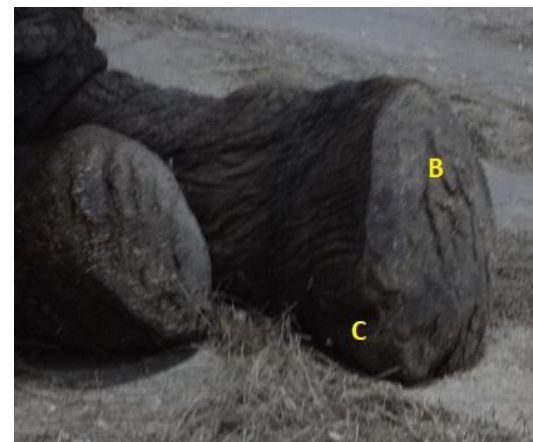
It is also apparent that these elephants do not regularly receive regular foot health maintenance. When the animals kneel to allow riders to climb on, the pad and nails are easily viewed (Figures 8 & 9). There are sections where large areas of skin or nail have torn off ("A"); large cracks and fissures have developed which can trap foreign objects and lead to infected pockets and abscesses ("B"); irregular wearing or cracked nails, which can lead infections and abscesses ("C"). Engaging regularly in species-appropriate behaviors over appropriate, varied substrates (i.e, grass, soil, rock) would help wear the pads and nails properly, as well as wearing down rough or protruding skin patches. When this does not happen, and the elephants do not receive proper foot care, overgrown or rough patches of skin



Figure 7: Megu with cut tusk



Figures 8 & 9: Photos of Kosti's feet



can catch and tear, leading to injury and infection. Upon showing these photos to a professional colleague with over thirty years of experience working with elephants and providing appropriate foot care, the concise summation of his opinion was “suboptimal, at best.”

These elephants also face further foot health complications in that they are forced to stand in their own urine, feces, and leftover food materials. This increases their risk of infection or impaction of pathogenic foreign particles. Any of these foot problems would cause the animal pain. Yet the elephants are overweight, putting more pressure on their feet, and forced to participate in rigorous species-atypical performances that would make any type of medical injury to the feet (or legs, joints, etc.) even more painful. This would result in both acute and chronic distress for the animals above and beyond the physiological/medical component. Figure 9 also shows uneven wear and distribution of pressure/weight along the inside of the foot. This could be a result of the species-atypical behaviors the animals are required to engage in, a result of weight or carriage problems, or due to redistribution of body weight due to pain or injury of the foot or in the joints. Unsurprisingly, this is also the foot that was chained to the trailer in Figure 2. I did not observe even a single incident where an animal’s feet were inspected or cared for, and the lack of knowledge of appropriate husbandry standards exhibited by handlers is disturbing.

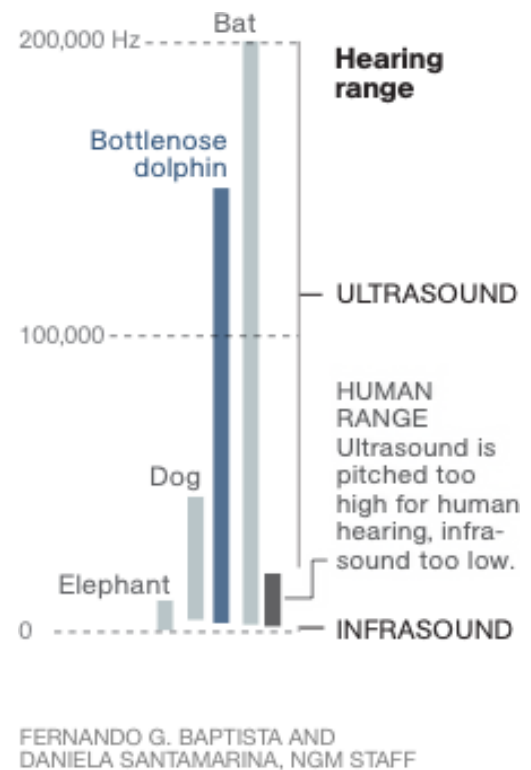
AZA Elephant Care Manual (2011; rev 2012):

3.3.2.2 Foot care

Standard: The elephants should be free of foot injuries or foot disease. Staff must be trained to provide foot care and the elephants must be trained to accept that care. Each elephant facility must have a written protocol for foot care. If foot injuries or foot disease are present, a current treatment regimen must be in place

Measurement: Elephant feet are in good condition and need only periodic pad and nail trimming. Records and protocols on file and foot care and/or treatment protocols in place. Implementation of the protocols/treatment is evident in condition of the elephant’s feet.

Explanation: An institution’s foot care protocol should include daily cleaning and inspection of all elephants’ feet. If foot injury or disease is present, evidence should be documented of the institution’s review of the potential cause or causes of the foot injury or foot disease. Where causes are identified, changes made to address these causes must be documented. Taking baseline foot radiographs or thermographs of all adult elephants and keeping them on file is suggested. In some cases, it may be appropriate to annually monitor selected elephants (i.e., those that have a history of chronic foot problems).



Source: <https://ngm.nationalgeographic.com>

Megu also has a physical or medical issue with her right rear leg. I observed her limping and unable to use her leg smoothly or properly in Lincoln in 2017. The hitch in her gait is also clear in recorded media footage from performances. This year when I observed the performance in Council Bluffs, the affected leg and its impact on her gait and

movement is even more pronounced. Several of the behaviors Megu is forced to perform require a significant effort for her to comply with, and a trained observer can see where she is exerting greater effort with other muscles to avoid using or putting extra weight on that leg. I had an unobstructed view while the three elephants were made to lie down on their sides. While, in itself, this is not an unnatural behavior, elephants will seek opportunities and environments that allow them to lie next to a hill or mound of sand, both for comfort and to provide extra support while rising. Megu lies on her left side, and her right leg juts out at an atypically-straight angle. When she attempts to rise from the flat surface, with nothing to support her, she clearly struggles to do so while avoiding undue pressure on her right rear leg. While the cause of Megu's problem is unclear, it obviously impacts her behavior. It may be a constant source of pain for her, whether the issue is muscular, skeletal, or neurological in origin. Regardless, forced compliance in performances is causing Megu undue and unnecessary physical distress, and Brian Franzen has clearly not addressed the physical problem within the past year.

There are other pervasive environmental stressors resulting from inadequate housing and management that the elephants cannot avoid that will impact their health and behavior. They are exhibited and forced to perform near machinery and vehicles that are loud and startling, causing intense vibrations, but also affect the animal's sensory systems on levels that humans would not even register. Most non-human species have different auditory capabilities that register sounds at ultra- or even infra-sonic levels. This means that stimuli that humans perceive as "normal" can actually be overpowering to animals, and adversely impact their welfare and experience.

Elephants have evolved the mechanisms and ability to hear auditory signals that exist in the infrasonic register, and up to distances of ten miles. Infrasound is defined by the American National Standards Institute as "sound at frequencies less than 20 Hz." Man-made sources of infrasonic sound are varied, but two major sources of infrasonic noise/vibration that the elephants are routinely exposed to are engines and loudspeaker equipment. (National Geographic) The constant music and voices over the sound system, as well as the continual barrage of stimuli from the numerous vehicles that pass directly by the elephants, would be a constant source of harassment and distress on a level that humans would not even be aware of.

Concurrently, the elephants are also exposed to a separate unique and particularly troubling medical complication. The Shrine Circus opens with a parade of vehicles that drive by all of the animals that are housed in the exhibition hall. (The exhaust fumes and pollution from the vehicles caused me direct personal discomfort, even when I covered my mouth and nose with my shirt. The animals have no such luxury, and so not only are they assaulted with the sensory stimuli of moving vehicles, lights, revving engines, and shouting people, but the animals are also forced to inhale the exhaust from all of the vehicles that pass/park/idle right next to them during the parade and throughout the show. The animals are also regularly exposed to exhaust and pollution during loading onto vehicles and transport

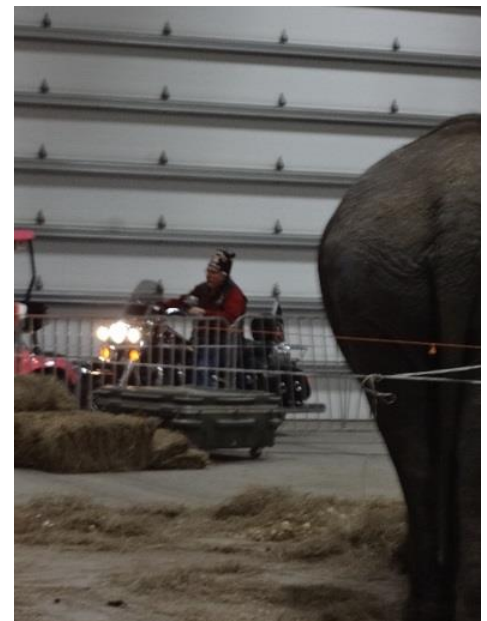


Figure 10: Vehicles regularly driving past the animals

between venue locations. This is a regular occurrence in these animals' lives that puts their health and welfare directly at risk.

We as human beings know the deleterious and hazardous effects of air borne pollutants. They include, but are not limited to:

- Irritation and infection of eyes, nasal passages, sinuses and mucous membranes.
- Asthma and other respiratory disorders.
- Premature birth.
- Emphysema.
- Lung disease: Photo on right compares a healthy mammalian lung to one chronically exposed to air pollution (Source: <https://www.quora.com/How-much-does-air-pollution-affect-health>)
- Cardiac disease, including an increased risk of heart attack.
- Death.



It is an unnecessary cruelty to inflict this on animals that are trapped and forced to work and perform in poorly ventilated confined spaces.

AZA Elephant Care Manual (2011; rev 2012):

1.4.8. Air or water changes/hour required

Explanation: *Indoor ventilation systems for elephants should provide enough fresh air to meet the respiration needs of the elephants, control moisture build-up within the structure, and move enough air to dilute airborne disease.*

The sterile living environs that do not provide for expression of a myriad of behavioral options also contributes to weight and health issues. The animals exercise *less* due to minimal appropriate stimulation and interaction with their surroundings. The elephants may experience short, intense bouts of activity during performances, but they are unable to engage in the very wide range of natural behaviors one would normally see in the species. Brian Franzen told me that his elephants were better off than those in zoos, because his exercise during performances, as opposed to zoo elephants that just “stand around all day with nothing to do.” This viewpoint is incorrect, and contrary to industry standards for housing, enrichment, and encouraging a wide range of natural behaviors. It is also entirely unrepresentative of what is happening with the animals under his care, as the elephants I observed spent most of their “off-time” standing around doing nothing, or worse, engaging in stereotypic coping behaviors. (see Psychological section) While the elephants may indeed experience bursts of activity during performances, their general sedentary lifestyles and lack of engaging in species-appropriate (“normal”) behaviors lend to experiencing overall poor fitness. This leads to atrophy of the muscles, skewed weight/muscle/fat distribution, and development of bone spurs, arthritis and joint problems. Combined with the weight and nutrition problems, these bouts of performance exercise could trigger potentially fatal cardiac or respiratory complications.

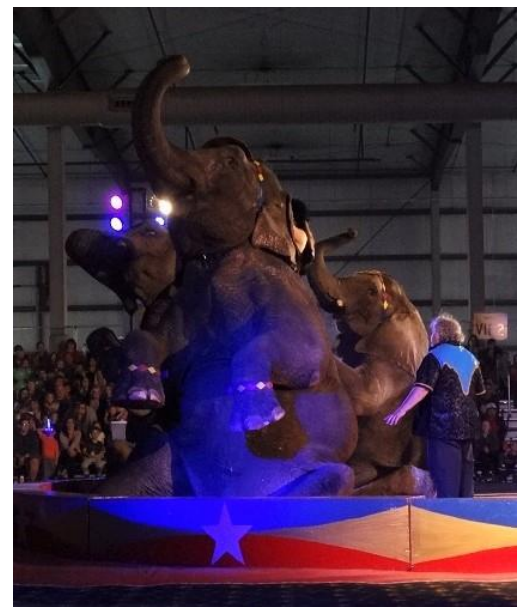
Per USDA, 9 C.F.R. § 3.128: Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make *normal* postural and *social adjustments* with adequate freedom of movement.

This is further exacerbated by handlers forcing the animals to perform physical tasks that they are not physically designed for. Regardless of what human handlers *want* the animals to do, elephants have evolved to naturally possess their own repertoire of appropriate species-specific actions. Their muscles and skeletons move certain ways, their tendons, ligaments, and joints function as their phylogeny dictates, and coercing the animals to assume positions or movements that are unnatural causes undue physical strain and long-term injuries. Elephants do not sit on their hindquarters while lifting a human (or even other weights/objects), do not balance on balls/stands, and do not walk in formation with their front legs on another animal's back. (Figures 11 & 12) The fact that they do these things during performances is a result of fear-based, aversive and punitive "training" methods used by their handlers (see Behavioral section). Forcing the animals to assume unnatural and unnecessary physical positions and activities will impact their welfare for the rest of their lives. (see also Psychological section.)

Finally, how the elephants are "trained" and forced to comply with the handlers' demands (see Behavioral section) leads to acute and chronic physical injury and complications. While I did observe one or two incidents of the handlers giving the elephants jellybeans, the treats were not paired with any specific behavior, so this was not positive reinforcement training, which is the industry standard when working with elephants (or training any species under human care). I am familiar with elephant free contact training methods, and they rely primarily on the use of aversive techniques; an uncomfortable or painful stimulus is applied in order to force the animal to move or act how the handler wants it to. This is clear in the animals' behaviors when one can observe them flinching or shying away from the handlers, or how a body part is "tapped" with a prod or whip to elicit movement. I also witnessed and recorded several incidents where the handlers used a small, sharp tool they concealed in their pockets to force compliance or punish perceived infractions. (see Behavioral section) The handlers also carry whips and/or goads during set up and performances.



Figures 11 & 12: Elephants forced to display species-atypical behaviors and postures



Directly using any of these devices can cause immediate injury to the skin, eyes, trunk, lips and ears of the animals. These may be small cuts, bruising or swelling that are not immediately obvious due to the elephants' thick skin. The animals are also subject to constant strain on their muscles and skeletal structures when forced to engage in species-atypical behaviors. This includes forced participation in the rides as well as the performances. The animals constantly lie down then get up again on the concrete, forced to have a saddle ratcheted on with heavy ties, and then walk in circles on the same cement with several hundred extra pounds of combined saddle/rider weight on their backs. (Figures 13 & 14) These rides occur several times a day, both before and after performances, as well as during any intermissions. This strain will likely cause chronic pain, damage to connective tissues and musculoskeletal functioning, and lead to joint problems like arthritis and other joint diseases. Long-term effects of stress will also permanently alter the animals' neural and physiological systems. (see Psychological section)

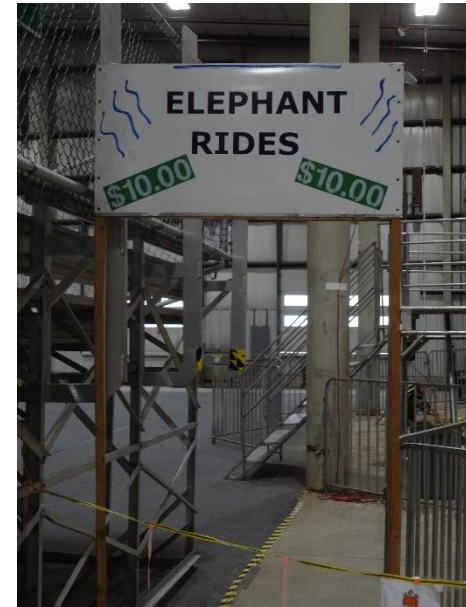
In summary, the circus environment does not provide for the immediate and long-term physiological and behavioral needs of the elephants and other animals forced to travel and perform. The animals suffer ongoing physical distress that is secondary to managing for performances of this type, and as a result the animals are experiencing diminished individual welfare.

Psychological

The inappropriate and barren holding space, noise and pollution, lack of appropriate health management, and circus environment do not adequately meet any industry standards for elephant husbandry and clearly do not meet several USDA guidelines. For this section, I will specifically address the issues resulting in psychological distress.

The elephants in the Shrine circus venue, under Brian Franzen's handling, are experiencing exceptionally poor welfare and neglect, compounded by the fact that the Circus planners and staff, elephant handlers, and Franzen are all stubbornly adhering to the belief that the animals are well cared for. Aside from the inappropriate physical and environmental conditions described in the Housing and Physiological/Medical sections, these animals are also experiencing severe psychological distress.

First and foremost, this is a dismal situation for these animals. The elephants are essentially locked inside of a glorified garage, with no appropriate substrates, environmental structures, enrichment, nor proper social grouping. (see Housing section) While all three elephants exhibit distinct examples of diminished psychological well-being, the single most poignant example of the impact this has on the animals is Megu. During all of my observations before, during and after multiple shows, as well as in other media footage I reviewed several times, Megu is



Figures 13 & 14: Elephant rides before and after performances and at intermissions



suffering severe and constant, chronic distress. To put it bluntly, Megu is a very “sad” little elephant. When she was not forced to perform, she stood in one place and “swayed.” Swaying is a recognized form of stereotypic behavior in elephants that develops as a coping mechanism to deal with distress or the inability to engage in desired, natural behaviors. There are other examples as well (see below), but nearly every time I looked at Megu, in person and on video, when not performing she was standing alone, rocking herself. (Figures 15 & 16; [Video 4](#)) This provides a neural response that releases endorphins into her system, which then engage the brain when no appropriate behavioral expression is available. Periodically, she would absently ingest some hay, contaminated by feces and urine, and continue on with the swaying. She engaged in the behavior when alone, when other females were nearby giving “rides,” and even when all three were left alone in the string pen together, unattended. During my most recent observations, Megu would sway slowly in place, and then stop moving altogether for periods of time. She appears to be experiencing a form of myopathy, where she has essentially “given up.” This is a more severe expression of distress than the swaying, as stereotypic behaviors are a form of neural “coping” with substandard conditions. An animal experiencing complications related to a myopathic response can suffer muscle and tissue damage resulting from stress.



Figures 15 & 16: Megu engaging in constant “swaying” stereotypic behavior

It is even more shocking to see this obvious expression of distress and diminished psychological welfare in light of Brian Franzen’s statement to me regarding elephant exercise, telling me that his elephants were “better off than those in zoos,” because his exercise during performances, as opposed to zoo elephants that just “stand around all day with nothing to do.” This elephant *literally* stands around with nothing to do but eat befouled food, coping with the distress of the situation by engaging in a stereotypic behavior. One grandmother and her granddaughter observed the behavior while I was watching during an intermission, and commented on how “sad” she looked, and that it “didn’t seem right.” I took the opportunity to educate that humans CAN care for elephants appropriately, and not to judge all elephant care by the example they had in front of them. While some of what I observed may only be clear to a trained eye, even guests that are uneducated in animal care and welfare (and those not sold on the dogma presented by the owners/handlers; see Attitudes section) see that these animals exist in poor situations.



Okha also demonstrated swaying behaviors, though not to the severe extent of the small African female. I was unable to observe her to the same extent as she was forced to give rides to guests much of her time, enduring aversive stimuli from her handlers (see Behavioral section). Kosti would regularly put a chain in her mouth and chew on it, another recognizable elephant stereotypic behavior. All three animals are exhibiting distinct signs of chronic psychological distress.

Their distress is amplified by an inability to engage in or express natural, genetically expected behaviors. The lack of appropriate environmental stimuli, absent enrichment, poor social structure, and overall lack of control over their own lives will result in acute and chronic physiological stress responses. Lack of environmental change often results in development of stereotypic behaviors, inappropriate social interactions, lethargy or apathy, and learned helplessness at being unable to alter their own environments.

Per USDA 9 C.F.R. § 3.128: *Space requirements; Enclosures shall be constructed and maintained so as to provide sufficient space to **allow each animal to make normal postural and social adjustments with adequate freedom of movement.** Inadequate space may be indicated by evidence of malnutrition, poor condition, debility, **stress, or abnormal behavior patterns.***

AZA Elephant Care Manual (2011; rev 2012):

1.4.1.3. Behavior

Standard: *The facility and program provides a complex physical and social environment which stimulates natural behaviors, social interactions and activity levels resulting in healthy, well-adapted elephants.*

Measurement: *The elephants are physically healthy and socially well-adapted without aberrant behavior or excessive aggression within the social group.*

Explanation: *There is no current data to indicate what amount of activity, or what daily walking distance is most appropriate for optimal elephant welfare. The basic needs may be different for each elephant. Since the goal is healthy, socially well-adapted elephants, how it is achieved is less important than that it is achieved.*

1.4.6. Provision of change and variation in the environment

Standard: *All holding institutions must have a written environmental enrichment plan for their elephants and show evidence of implementation. An effective enrichment program includes the rotation of exhibit furniture and enrichment initiatives on a regular schedule, and based on the elephants' behavior, maximizes the stimulation offered by these exhibit features.*

Measurement: *Enrichment plan and records of daily enrichment activities should be reviewed.*

4.4 Enrichment programs

Standard: *All institutions must have a written environmental enrichment plan for their elephants and show evidence of implementation (See 1.4.6).*

Measurement: *Enrichment plan and records of daily enrichment activities should be reviewed.*

Explanation: *An effective enrichment program should promote species-appropriate behaviors. Two useful resources on enrichment programs.*

The inadequate and inappropriate social housing prevents the elephants from properly developing their social structure, which is integral to any herd. Elephant social structure is matriarchal, meaning one experienced female helps maintain social stability and leads the herd. A natural part of elephants' lives is to be with other elephants, particularly those that are related along matrilineal lines. The fact that these three elephants are not able to form a proper herd, and Kosti is not in charge, is a constant source of stress for these animals. All three are also forced to coexist in close, barren quarters. The inability to avoid conflict, or even the presence of other animals (including humans), will result in psychological distress for the animals. Prevention of

normal herd social dynamics increases the stress the animals experience daily. It is also a challenge for African elephants to be mixed in with Asian elephants. As a practice, this goes counter to industry standards. From the animals' points of view, they are actually distinct species from different parts of the world. While to most people, an elephant is just an elephant, the animals have evolved to exist in specific environments, and exhibit behaviors patterned from their species' genetic and social needs. This does not automatically mean that all elephants are going to "get along," or even be able to communicate with one another appropriately. To illustrate the point, a lion is a big cat, but has a completely different repertoire of social expectations and behavioral parameters from a tiger. The animals would also never encounter one another without forced interactions by humans. From a human standpoint, we can meet a person from a different country and quickly realize that they have a different language, behaviors, and cultural thought processes that are alien to us. Inability to properly communicate in unabating social situations would be a chronic source of stress. The blood cortisol levels that result from stress can trigger aggression toward other animals or trainers, displacement behavior, apathy, learned helplessness, and even severe capture myopathy. (see Behavioral section)

AZA Elephant Care Manual (2011; rev 2012):

1.4.1.3. Behavior

Standard: *The facility and program provides a complex physical and social environment which stimulates natural behaviors, social interactions and activity levels resulting in healthy, well-adapted elephants.*

Measurement: *The elephants are physically healthy and socially well-adapted without aberrant behavior or excessive aggression within the social group.*

Explanation: *There is no current data to indicate what amount of activity, or what daily walking distance is most appropriate for optimal elephant welfare. The basic needs may be different for each elephant. Since the goal is healthy, socially well-adapted elephants, how it is achieved is less important than that it is achieved.*

In addressing the removal of tusks to minimize human risk in a free contact situation, it is essential to point out that possessing tusks is *expected* for African elephants, and many of the behaviors an elephant would exhibit from its repertoire involve using the tusks in regular activities. These range from use in foraging, moving environmental barriers, social communication and herd dynamics, up to and including defense against predators (which could conceivably include humans). Removal of tusks should only occur in situations of medical necessity, such as an infection in the sulcus or a crack that could compromise the tusk or skull. The *inability* to engage in genetically expected behaviors because of a deliberate mutilation by humans will result in constant bouts of acute stress (not being able to complete a specific desired behavior at a given time), which will

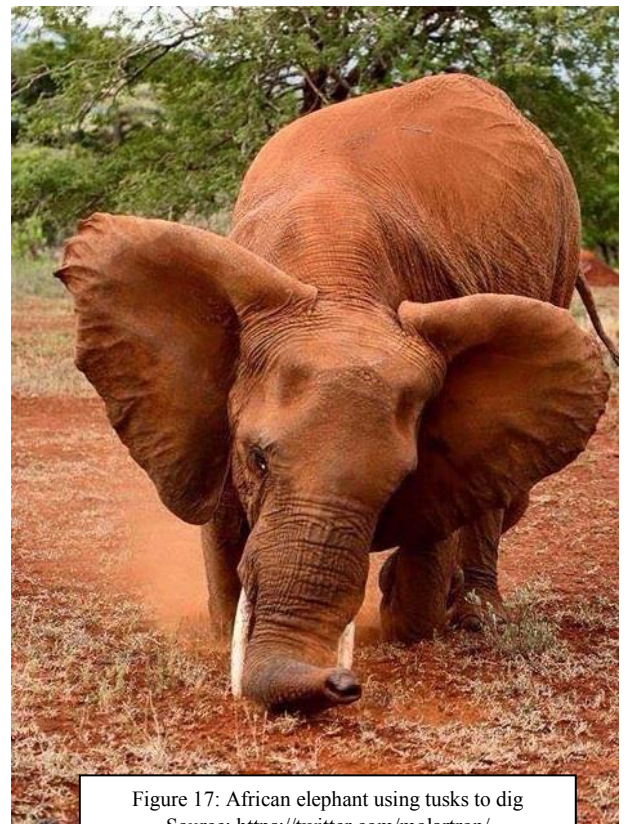


Figure 17: African elephant using tusks to dig
Source: <https://twitter.com/molartron/>

accumulate as chronic stress over the animals' lifetime as long as the tusks are not permitted to regrow. Non-medical tusk removal conveys NO benefit to the animal.

Animals faced with barren environments, altered physiologies, and compromised social expectations develop behavioral repertoires that are in constant conflict with their natural instincts. These conflicts are overridden (yet also exacerbated) by the circus trainers using fear and punishment methods to force compliance (see Behavioral section), creating further distress and other permanent neural problems.

The elephants, along with the tigers and bears, will experience physical changes resulting from chronic stress: increased glucocorticoids in the bloodstream, which will affect the animals' endocrine and neural systems, leading to permanent changes in the brain and body. One specific example that is heavily researched is hippocampal atrophy. This change to the brain, along with other physiological changes, will impair the animals' ability to learn, retain and process memories, and cause long-term memory dysfunction. Chronic stress impacts animals in ways similar to humans. It leads to long-term medical problems such as compromised immune systems, impaired coronary health, altered brain structure and function, impaired reproduction, stunted growth, reduced body weight, shortened lifespan, and increased abnormal behaviors.

These observations are not an exhaustive list of the psychological neglect and trauma that these elephants endure daily. They are indicative of poor animal care and neglect on the part of Brian Franzen and his handlers, supported by the Shrine circus. These psychological issues are compounded by the behavioral environment (see Behavioral section) and treatment by humans. Changes in management to meet industry minimum standards, psychological well-being, and long-term health would not be impossible but would require a different approach than is currently applied. (Foy et al, 1987; Pryce et al, 2005; Romero, 2004; Wolinsky, 1972)

Behavioral

All of the issues listed in the previous sections regarding housing, sterile environments, medical issues, and neglect in general, all lead to acute and chronic trauma. Yet one of the primary reasons that I take a firm stance against exotic animals in circuses is because of how they are regularly treated by their trainers and circus staff. Circuses are unable to meet the genetic behavioral expectations that these animals have evolved, and the animals endure compromised welfare as a result. The elephants are unable to engage in natural behavioral responses to the stimuli and events around them, forced into compliance by handlers that regularly impose their human agendas on the animals. The animals will be in constant psychological conflict between their "natural instincts" and the behavioral repertoire forced onto them by human handlers who are constantly compromising each animal's individual welfare.

Historically, elephants that are used in the entertainment industry have been trained to respond to human-directed cues by application of aversive stimuli. The "ankhus" or "ankusha," known as a bullhook, is the traditional tool, used in numerous cultures, for coercing elephants to comply with human demands. Originally used for war elephants, the method of applying painful or aversive stimuli to an elephant's body parts to make it perform is the common means of training the animals to comply.

The bullhook is used to create pain on the elephant, which is vital to training. It's impossible to make an elephant do extreme un-natural tricks without inflicting pain. The tool is traditionally inserted in their most sensitive areas such as their anus, behind their ears, around their eyes and on their trunk. These areas are all very sensitive to the touch.

The bullhook can also be jabbed with the blunt end which can lead to internal bleeding and severe bruising and abrasions. The hook is used to drive, direct and train the elephant to behave in a certain way.

Used as the main tool for training, the Ankusha is a horrid tool used to force elephants into doing anything. Living a life of fear and not wanting to be inflicted in pain, the elephants will soon learn to do their set tasks knowing that if they do it they won't be injured.

Although many people that visit elephant venues, shows, circuses and experience an elephant ride claim that the mahout did not use the bullhook on the elephant whilst in their company; this does not mean that this elephant has not been inflicted with pain.

(Source: <https://www.thailandelevants.org/bullhooks>)

When observing animals that have been trained using aversive stimuli (negative reinforcement, positive punishment), it is obvious in the body postures exhibited. While they vary across species, fearful or flinching responses are common. As referenced in the article above, the elephants will recall the pain inflicted, and then respond similarly to a smaller aversive stimulus. During all of my observations at the Shrine circus, and of various media sources, the handlers no longer carry the large bullhooks that the public has learned to associate with painful training methods. I commented on this to Franzen and the handlers, and was told, "People don't like us using bullhooks." Instead of recognizing that this means people do not care for the aversive **methods** used to train elephants (and other animals), the handlers willfully continue to use painful management methods. Yet in response to public pressure, they have done something similar to what the author describes in the article above, but instead of using nails, Franzen and the handlers all keep short, sharpened rods (mostly fiberglass) with handles on them tucked into their pockets. (Figures 18 & 19) They *appear* and profess to use treats and praise for training, but after many careful observations, none of the actual responses by the elephants are rewarded using positive reinforcement operant learning methods. While the elephants are periodically given treats, such as jellybeans, the incidents are not paired with behavioral cues. The animals are still managed using aversive techniques. Franzen and the handlers expect the animals to behave as directed; when they do not, the short prods are subtly pulled from their pockets, jabbed roughly into the animal in the side, under the front leg, and even under the chin or behind the ear, in order to "correct" the animal for perceived



Figures 18 & 19: Short, sharp prods tucked into pockets, used to inflict pain on the elephants



misbehaviors or force it to comply with a command. Regardless of what they profess, the animals are still managed through pain, fear and coercion. When I carefully commented to the lead handler on the presence of the prod in Brian Franzen's pocket while he was working Kosti for rides, I was informed that it is there "*In case she gets out of line.*" This is not a grey area that I can misperceive. These elephants were taught, and are continuously managed, using archaic, aversive, and painful handling techniques.

I observed numerous examples of the application of painful stimuli during the performances and rides, and several of these interactions were also recorded:

- [Video 5](#): In this video (one of many), Brian Franzen suddenly grabs the sharpened prod from his pocket and roughly jabs Kosti when she tries to get his attention while riders are loading.
- [Video 6](#): Handler rapidly pulls sharpened prod from his pocket, jabs Okha in the side, then quickly hides it again.

At the most recent performance I attended, the handlers were also carrying goads or prods, shorter but similar in form to what they use around the tigers. While the tools may appear less obtrusive than the metal points of a bullhook, or a sharpened prod, they are still used to inflict pain, fear and punishment. In [Video 7](#), you can clearly see Franzen striking Megu repeatedly in the head and face for a perceived infraction. The direct application of physical punishment is unnecessary, and causes direct physical harm and psychological distress. This mistreatment is not in line with current industry standards, which sees elephants (and innumerable other species) choosing to participate in positive reinforcement training for favored rewards. The animals are patiently taught how to participate in their own management and veterinary care, primarily using a system of praise and rewards.

AZA Elephant Care Manual (2011; rev 2012):

4.2 Successful methodologies for managing elephants

4.2.1 Training methods

Standard: All institutions must have an elephant training program in place which allows elephant care providers and veterinarians the ability to accomplish all necessary elephant care and management procedures. Each institution will adopt and implement an institutional training methodology that promotes the safest environment for elephant care professionals and visitors and ensures high quality care and management of the elephants for routine husbandry, medical management, **physical well-being and overall elephant welfare**. By 1 September 2013, institutions must train their elephant care professionals to manage and care for elephants with barriers and/or restraints in place that provide employee safety.

Measurement: Institutions must be able to demonstrate that all AZA Standards for Elephant Management and Care are met. **By 1 September 2013**, institutions must demonstrate that elephant care professionals are trained to manage and care for elephants with barriers and/or restraints in place.

There is little evidence of a reward-based (reinforcement) system of learning applied. Punitive methods are standard for the circus industry and its handling of animals, specifically carnivores and pachyderms. It is similar to "breaking" a horse and teaching it to move away from painful

pressure on the mouth, and dominance-based “training” with dogs. The application of all these punitive stimuli causes the animals to react out of fear of the consequences. The elephants routinely flinch or shy away from the handlers, indicative of a fear of the consequences if they do not perform as coerced. The body language is indicative of distress, fear, and psychological duress. The handlers do not respond when the animals exhibit any signs of discomfort and distress, instead forcing them to comply with the performance routines or elephant rides. The elephants experience constant stress, which will affect them physically and psychologically for their entire lives (see Physiological/Medical and Psychological sections). These animals do not have a trusting relationship with staff and endure this punitive, adverse environment daily. There is no regard for what the animal is experiencing, but “the show must go on.”

The use of punishment and aversive techniques leads to permanent physiological and psychological changes in learning ability, behavior, and coping mechanisms in animals.

- A. Punishment will eventually inhibit the punished act. The refusal to work or other resultant conflicts (such as avoidance, escape, and displaced aggression) will increase with continued repetitions of the punishment (Gwinn).
- B. Only performance-contingent reward behavior was found to affect subordinate performance significantly (i.e., positive reinforcement). Contingent punishment had no effects on improving performance (Podsakoff *et al.*).
- C. Prior exposure to punishment and aversion methods actually *reduce* extinction of an acquired fear response, increase disruptive effects during an approach-avoidance conflict, and suppress response of both conditioned and unconditioned activity (Boe *et al.*). Essentially, the cats will not learn *not* to be afraid and cannot react to situations appropriately for the species.
- D. Short-term and long-term psychological trauma results in permanent changes to the brain, nervous and endocrine systems. Animals are incapable of learning in circumstances in which they are stressed or traumatized, as the more primitive amygdala in the brain (responsible for fight, flight, etc.), which change permanently as a result of stress, will override learning or conditioning (Dr. Bacon).

The elephants regularly exhibit signs of chronic distress during performances, rides and while housed in the barren environment. This constant psychological duress results in acute and chronic medical concerns for these animals. The animals are managed using aversive stimuli, fear, and dominance tactics. The animals cannot remove themselves from these situations, nor can they remove the aversive stimuli (fight back), leading to the aforementioned behavioral problems. The elephants consequently develop coping mechanisms that can manifest as neurologically self-rewarding stereotyped behaviors, or redirecting fear towards the trainers and other animals, which is particularly dangerous in free contact settings. The cumulative effects of distress will likely shorten these animals’ lives and, in severe cases, lead to myopathy, injury, or even death.

Franzen and the handlers are regularly complacent, turning their backs on the elephants and not noticing specific behaviors that could escalate or result in potential injury. This is easily observed in the same video example from above ([Video 5](#)), where Kosti is opening her mouth and attempting to get Franzen’s attention (and/or treats), and he appears unaware, until he

suddenly notices and reacts by applying a punitive jab with the prod in his pocket. Forcing the animals to perform while attempting to watch for any potential aggressive responses poses a distinct risk of the animals taking advantage of the situation when the trainer's attention falters, most likely injuring or killing that person. Expert trainers that know to respond to an animal's behavior while employing reward-based learning techniques watch the animal's behavior carefully, and then alter their interactions accordingly. Elephants are highly intelligent and readily communicate their intentions through behavior. Unfortunately, that requires paying attention to the animal's needs and responding accordingly. In this instance, it is by luck and the elephant's conditioned fear of pain that Franzen is not injured. These elephants are not domesticated and are still inherently wild animals. (see Attitudes section) The elephants should be respected and managed as such.

The handlers' complacency regularly puts them at risk of injury, or worse. Yet the risks to humans are not reserved for the handlers in the circus environment. The inadequate barriers prevent neither members of the public, nor event staff or volunteers, from easily accessing the elephants. (see Housing section) Any guests and staff that choose to approach the housing space are at risk. The elephants were left periodically unattended when handlers were preparing other animals to perform, or were in the ring performing with the tigers, in an area where building staff, volunteers, and even members of the public, could easily approach them or breach the inadequate barriers. There were instances when I was observing during each performance that the elephants had no handlers or "trained" professionals present, and I could have easily approached the animals and attempted to interact with them. This is a tremendous safety issue for the humans AND animals, and goes against industry standards.

Seemingly to prove my point, in Council Bluffs February 18 performance, at the end of the elephant act one of the circus clowns steps forward into the ring. As Okha attempts to balance her considerable weight on the ball, in and of itself unnatural and unnecessary, the clown steps up in front of her and holds up a large stick of cotton candy, which he places into her mouth after she steps off of the ball. Aside from the direct health concerns for the already overweight elephant and her teeth, the clown is at a high, direct risk of injury or death. If the elephant stumbled or fell forward on the ball, or directed an aggressive response towards the clown, he is in easy reach of Okha's trunk. Elephants will also kick, swing their heads and trunk, and even press down and crush something into the ground with their heads and considerable weight. The clown is an untrained handler and essentially a member of the public at direct risk of contact and injury with Okha. Franzen was standing behind Okha, keeping Kosty and Megu in place, and could not have intervened in time if something went awry.



Figure 20: Untrained individual (clown) at direct risk of injury/death

In my professional opinion, these observations are also directly inconsistent with the USDA AWA regulations:

Per USDA, 9 C.F.R. § 2.131(c)(1): *“During public exhibition, any animal must be handled so there is minimal risk of harm to the animal and to the public, with sufficient distance and/or barriers between the animal and the general viewing public so as to assure the safety of animals and the public.”*

Franzen is regularly in the ring alone during performances. He is at direct risk of injury or death if something were to go wrong, or an elephant finally chose to react adversely to punitive treatment. Consequently, should an incident occur, the observers and handlers would be at similar risk if intervention became necessary. This is a significant concern in a free contact situation, where animals are constantly subjected to aversive environmental and applied punitive stimuli. Forcing the elephants to perform while attempting to watch for any potential aggressive responses poses a distinct risk of the animals taking advantage of the situation when the trainer’s attention falters, most likely injuring or killing that person. Brian Franzen’s father was killed by a tiger during a performance in 1997: http://articles.orlandosentinel.com/1997-05-09/news/9705090201_1_franzen-lucca-circus. A very quick internet search turns up a shocking number of incidents where circus staff were injured or killed by elephants. A few examples:

- <http://www.cnn.com/2010/US/04/10/circus.worker.elephant/index.html>
- <https://www.cbsnews.com/news/elephant-tramples-trainer-to-death/>
- <http://www.nytimes.com/1994/08/22/us/african-elephant-kills-circus-trainer.html>

I have observed such responses firsthand with numerous species, including lions, bears, elephants, and even domesticated dogs. When the animals suffer chronic levels of stress and mistreatment, at some point, they will react when they believe they finally have an opportunity to affect their environment. The animals also suffer after reacting according to their genetic predispositions. Many are outright killed, others beaten, and they are always labeled as “dangerous” for the remainder of their lives. This leads to further mistreatment or neglect for these individuals, further (permanently) compromising their welfare.

These types of events are also highly traumatic to any observers. Grief and trauma counselors are retained to counsel witnesses, both staff and public. These types of incidents represent an object lesson and reminder as to why I maintain that an elephant is STILL an elephant, and capable of such actions *despite* what their human handlers tend to believe. However, I do not believe that the public, or anyone, should be subject to such a gruesome and traumatic event, nor should any animal be punished or killed for acting on its natural, genetic behavioral patterns.

The handlers are grossly underqualified to be working around the elephants (or any exotic species), and Brian Franzen employs archaic methods of management that do not reflect current research and methodology of elephant husbandry. (see Attitudes section) This lack of skill and knowledge of care, welfare standards, and animal behavior further increases the risks to the animals, staff and public.

AZA Elephant Care Manual (2011; rev 2012):

5.1 Management structure, technical skills and competencies

Standard: Each institution must demonstrate a management structure which provides (1) staff training; (2) program development and maintenance; and (3) communication with others about the elephant program. The elephant program's manager(s) and keepers must demonstrate knowledge about all emergency protocols and continually improve elephant management techniques as the industry standards evolve. Overall responsibility for the program must be clearly defined.

Measurement: Institutional elephant management responsibility is clearly defined and understood by elephant manager(s) and keepers. By November 2017, all elephant care professionals, managers and directors have attended PEM I [AZA's Principals of Elephant Management course] and are knowledgeable in institutional safety and elephant care protocols. By November 2017, all elephant manager(s) have attended PEM II.

Explanation: Most institutions typically assign one person to be the Elephant Manager, however, some institutions have more than one person sharing the duties described above.

5.1.1 Keeper safety proficiency (Standard applicable beginning June 1, 2013)

Standard: Each institution must implement the standardized methods and protocols to evaluate and maintain records of each elephant care professional's safety-proficiency, in a manner that integrates his/her experience level with the specific behavior profiles of the elephants in his/her care.

Measurement: Written evaluations of each elephant care professional's safety-proficiency exist and are up to date.

Explanation: An elephant keeper training and safety proficiency program should include regular check-ins with the elephant manager(s) and should assess the progress of all employees in safely handling the elephants at his or her facility.

5.2 Animal and keeper safety

Standard: A minimum of two qualified elephant keepers must be present within visual and auditory contact during any contact with elephants (any time a keeper is within trunk's reach of an elephant).

Measurement: Related keeper injuries should be reported annually (See 5.4).

Explanation: A qualified elephant keeper is a person the institution acknowledges as a trained, responsible individual, capable of and specifically experienced in the training and care of elephants.

It is my professional and expert opinion that the elephants I observed during the Shrine circus performances, ride experiences, and during down-time from the shows, are suffering from poor care and management, as well as ongoing physical and psychological trauma. The animals are not provided with proper care and welfare. If conditions cannot be improved within the structure of both the circus and the home location, then the elephants would be better served by living in a certified or accredited institution dedicated to both the immediate and long-term welfare of the animals. (see Summary)

Attitudes

Brian Franzen, his staff, and the Shriners that I spoke to all believe that they care for the big cats and elephants well, and claim that the animals are not enduring trauma and neglect. Yet they try to hide the cats and bears away from public scrutiny, and maintain to onlookers that the elephants are “better off than the ones in zoos.” The Shriners and circus staff have a similar attitude towards the bears, though I was not able to interview James or Tepa Hall with Castle’s Bears directly. This is not uncommon with people who keep animals in captive situations without proper training on how to manage them. It is also not exclusive to exotic animals, as people often fail to see that they are treating their own pets abusively and neglectfully. Caring *about* an animal is not the same as caring and providing proper husbandry and welfare *for* an animal. The closest example that I can provide to demonstrate objectively how someone can *believe* that they have animals’ best interests in mind yet still force them to live in substandard conditions and endure reduced welfare is the research into animal hoarding.

Excerpted from several peer-reviewed psychology journal articles (listed in References):

- Justifications for their behavior included an intense love of animals, the feeling that animals were surrogate children, the belief that no one else would or could take care of them, and the fear that the animals would be euthanized.
- Hoarders also lack awareness of their animals’ distress, or make up their own rules for what constitutes distress.
- It is related to how people define themselves, and one of the important things we have to do when confronting individuals is recognize how important their feeling that they are somehow rescuing or helping animals is.
- Caring for animals is part of their identity. There are physiological mechanisms to prevent the awareness that they are causing pain and suffering.
- Considerable physical and psychological animal suffering occurs without professed intent to harm, in conjunction with a strong human-animal bond, and with lack of insight as to the true nature of the situation.
- Denial frequently colors public discourse on the topic; lack of intent, coupled with professed good intentions, often mitigates the seriousness of these crimes in the eyes of the law.

I have observed these exact circumstances in animal-hoarding cases, in abhorrent backyard captivity scenarios, and in pet neglect and abuse cases. During my conversations with Franzen, the animal handlers and the Shriners, it was clear to me that all the above points apply in this situation. The staff members and observers may believe that they care for the circus animals. In reality, the animals live in an environment of suffering, with little chance of change in the future.

One of the more disturbing trends that emerged when I spoke with Brian Franzen and his lead handler was their constant denigration of, and negativity towards: the people they employed; any person that spoke out in favor of animal welfare; circus visitors; and sadly, the animals themselves. In one of my first conversations with the lead, where I indicated I had asked other two other nearby staff members a question and received no reply, the lead handler responded that the “*useless*” help “*...came from Bulgaria and another one of those countries. Stupid f**kers don’t understand a word of English.*” He and Franzen regularly spoke derisively to and about the employees. This also exemplifies my observations about the lack of training and knowledge in the people managing the animals.

When I inquired initially as to where the tigers and bears were housed, I was told by Shrine event staff and animal handlers that they were “*housed outside and away from where anyone can see anything.*” It was clear that outside pressure from people or groups concerned about animal welfare has led to the animal owners creating an environment of concealment and secrecy, as opposed to one of transparency and communication. Even recognizing that media can be taken out of context, the abject paranoia and refusal to let the “f**king PETA people” anywhere near their animals is likely indicative of an *awareness* that conditions are not optimal, and likely to trigger public complaints. Case in fact, it took me most of the day and two performances, and enduring a gauntlet of suspicious Shriners and security, to even get Brian Franzen to speak to me after indicating that I was a fellow professional and trainer. In my experience, this type of persecution complex only exists with due cause; where there’s smoke, there’s fire. This report details that this also is the case here.

When it comes to the animals themselves, Franzen and the staff regularly labeled them as “f**kers”, “a**holes”, etc. The large male white tiger that snarls every time he sees Franzen was referred to by numerous epithets and insults, in front of staff, Shriners, and myself. This is a huge and well-documented sociological issue known as “labelling.” Having researched Johannes Knutson’s Labelling Theory in detail, it generally illustrates that when a subject is “labeled” with a specific perception, whether the subject is human, animal or other, it is then treated accordingly. Considering a tiger AS a tiger leads to understanding changes in behavior and treating them as wild animals. Labelling a tiger, elephant or any other animal to be an “a**hole” means that is exactly how the animal is treated; poorly and with derision and abuse. These are not the attitudes of skilled, knowledgeable caregivers of husbandry, welfare, and learning methodologies.

The unfortunate consequences of these attitudes are that public perception follows accordingly. This mistreatment of animals becomes “acceptable” because circus staff are recognized as “experts” in the field. I spoke with several Shriners throughout my observation periods, and even while standing watching an elephant sway in a stereotypic behavior for an extended length of time, they still spoke highly of the staff caring for them. The grandmother watching nearby with a child recognized that the environment was sad, but the Shriners have become blinded to the realities of the situation. I was told how, after PETA had initiated a complaint about the treatment of the bears and one had urinated on itself during a performance as a result of sheer distress, one woman joked about how crazy the animal rights people are: “*When I put my dog on a leash and it pees in the park, that’s not cruelty.*” There is a disconnect between caring *about* animals and properly caring *for* them that is lost. Consequently, the Shrine circus performances continue, and so does the poor animal welfare.

These animals are still *wild* animals; their brains and bodies have evolved over thousands of years to accomplish specific goals. While born and raised in captivity, this does NOT mean that the animals are tame or domesticated. They have merely learned how to adapt to life with humans, or suffer the consequences. Since animals are evolved to survive and learn to adapt, humans have taken advantage of this aspect of their behavior and exploited them in performances, and subsequently perception. Domestication takes *thousands* of years, and countless generations. While in some instances animals have been force-bred by humans to achieve a specific trait (meat production, docile temperament, coat color, etc.), (Trut et al, 2009)

this also results in physical and medical deficiencies that arise from traits genetically associated with the ones desired by humans. This further compromises animal welfare when the effects of human impact are not appropriately accounted for. A distinct example of how this misinformation is taught to the public, and acted upon by owners and handlers, is in this quote from Tapa Hall of Castles Bears:

"They are captive born, just like every animal on this fairground," Tapa Hall said this week in Plymouth, where the Sheboygan County Fair is currently being held. "Every animal on this fairgrounds is in a pen."

"They have the mentality of large dogs," she said. "It's like your dog or your cat: they don't care where they are as long as they're with you."

<http://www.sheboyganpress.com/story/news/2015/09/04/sheboygan-county-fair-bear-draws-criticism/71700364/>

While exotic animals under human care WILL learn to habituate and adapt to caregivers, and do display and respond to social cues and attention, it is a complacency (often fatal) to choose to forget that these animals are still genetically wild. They have *not* been domesticated and still possess the range of physiological and psychological effects to fear, pain, trauma, etc. that their cohorts in the wild would possess. *Tractable* is neither tame, nor domestic.

The poor attitude towards animals is pervasive throughout the performers and environment. The elephant and pony rides are clearly exploitative, as the animals are forced to carry people around while jabbed with prods or tied to a giant wheel, but the experience is expected by the patrons and the Shriners. The dog show—presented by Star Plunkett, daughter of the James Cristy Cole Circus owners—is also the first time in my career that I have witnessed a whip used in *any* way on performing dogs. In fact, in 2014 an incident during a Shrine performance was violently broken up in view of circus patrons (<https://www.wibwnewsnow.com/shrine-circus-scrutiny-dog-show-went-wrong/>), despite a myriad of other means of separating dogs that would not involve physically striking them. Even the Ringling Bros. circus, while using punitive methods on their tigers, still used reward-based training during the dog act. The Shrine circus dogs themselves were also grossly obese (all rating between 7 and 9 on the Royal Canin Large Dog Body Condition chart, Appendix II) and poorly trained, indicating similar poor care and welfare attitudes towards animals across the board.

When I inquired at the Council Bluffs event as to why the bears were not performing this time, I was informed that because of the pressure and public outcry last year in the area, after footage of the Halls mistreating the bears went viral, that they would not be performing in Council Bluffs or Lincoln. Instead, a domestic pig act replaced the bears. While the "Pork Chop Revue," owned by Les Kimes, was not as overtly punitive as the dog act, it was yet an odd mix of rewards and punishment. The pigs would be given treats periodically, and like the



Figure 1: Handler using whip, mailbox with piglet inside on right

elephants not necessarily associated with a specific behavior, but the handlers also all carried whips that they would use to move the animals, or hurry them along when they were slow to respond. The most unfortunate and traumatic part of the performance came near the end. One of the props was a small metal mailbox that had been wheeled in between acts. I had been watching it closely, as it had been shaking while the larger pigs performed. Suddenly the handler makes a comment about a “special delivery,” and pulls a small piglet out from the mailbox. It immediately started screaming and squealing, and began urinating on the handler. To avoid the urine and keep up with the act, he swung the piglet away from him at the end of his arm, causing it to cry out in further fear. This was followed up with a blast of some powder to simulate powdering a baby’s bottom, which left a cloud of particles that the screaming piglet was forced to inhale, before being dumped in a mock baby carriage (followed by a mock stream of urine) and pushed away by an adult pig. The piglet was clearly suffering distress from being locked and moved in the small box surrounded by loud and intense noise, and then enduring the handler’s mistreatment. The handler also willfully ignores the piglets distress and fear.



Figure 2: Handler grabbing piglet by leg, cloud of powder dissipating on right

The pony act was also managed by Star Plunkett wielding two whips to keep the animals in line and moving. I watched her try to grasp one of the pony’s bridles at one point to control it, and the animal flinched and shied away from her hand. There is clearly not a trusting relationship here, and the animals are managed historically using aversive and punitive stimuli. Even the domestic species at the Shrine circuses are not treated with rewards, caring and respect.



Figure 3: Ponies managed using two whips

A final word on punishment. These animals are managed through and suffer aversive stimuli regularly, ranging from the barren environment to the directly punitive and physically injurious methods that coerce compliance. If a human is truly interested in building relationships with animals, it is done through trust. You can lead ducks with bread and they will follow, regarding you as a rewarding and trusted stimulus in their world. If you herd the same ducks using loud noises and a stick, they may eventually move where you want, but endure fear, anxiety and distress along the way. Industry practices with animals under human care have evolved to adopting positive reinforcement models, allowing animals to be animals and exert choice and control over their lives. The animals in circuses, including all of the ones I observed footage of or in person with the Shrine circus and under the management of Franzen and the Halls, are managed using outdated punishment models. If you wield the stick, that is how you will be viewed and remembered.

Summary

Historically, animals in circuses have not been treated well, leading many countries, states, and municipalities around the world to ban circuses with animal acts. Some regions have focused specifically on exotic-animal acts, others ban the use of barbaric tools like the bullhook to achieve a similar end. It is a clear sign of progress when authorities recognize that animals deserve better welfare and care. Circuses do not promote conservation, education, or the advancement of animal welfare or management techniques. The Shrine Circus' ringmaster opens the show with the line "*From the time of our grandfathers...*", which illustrates perfectly how the management and welfare of these animals have not evolved with the current animal sciences and industry practices. The circus also places these majestic species in a comic and demeaning light, forcing animals to ride bikes, balance on balls, or rotate under multicolored disco lights. People learn nothing about what makes each species special or unique, their place in the world, nor does it convey any sense of responsibility and stewardship for other organisms.

Sadly, the Shriners and event staff hide behind the "means to an end" argument. Several people that I spoke to, involved in planning and presenting the circus events I attended, dismissed my inquiries into the welfare of the animals. Instead, they argued how the Circus raises money for sick children every year. They focus their ire on animal rights and welfare activists, claiming that they "*obviously don't give a f**k about kids*," while animals are consequently denied any similar level of attention or concern. There are several examples of performances that continue to thrive without relying on animal exploitation (Circus Vargas, Cirque du Soleil, etc.). Circuses are a cruel relic of human history, and for welfare reasons, exotic species of wild animals should be banned from circus exhibition and placed in more appropriate environments with trained, skilled caregivers.

It is my professional and expert opinion from my observations before and during the Shrine circus performances, and from media and reports related to the owners and handlers, that the animals are suffering from neglect and ongoing physical and psychological trauma, and are not provided with the proper care and welfare necessary for any species of animal. If conditions cannot be improved within the structure of the circus, regardless of its transitory nature, then all of the animals would be better served by living in certified or accredited institutions dedicated to their immediate and long-term welfare.



Jay Pratte, B.S., M.A.
February 27, 2018

References:

- **United States Department of Agriculture.** Animal Welfare Act and Animal Regulations. November, 2013.
- **Association of Zoos and Aquariums**
 - Shoemaker, A.H., Maruska, E.J. and R. Rockwell. (1997) *Minimum Husbandry Guidelines for Mammals: Large Felids*.
 - AZA Lion Species Survival Plan. (2012) Lion Care Manual. Association of Zoos and Aquariums, Silver Spring, MD.
 - Guidelines for Captive Management of Jaguars. AZA Jaguar Species Survival Plan.
 - *Management and Conservation of Captive Tigers*. R. Tilson, G. Brady, K. Traylor-Holzer, and D. Armstrong (eds.). Minnesota Zoo: Apple Valley, MN, 1995: 1-136. 3rd edition.
 - AZA Bear Taxon Advisory Group. (2012). Sun & Sloth Bear Care Manual. Association of Zoos and Aquariums, Silver Spring, MD. (*Publication pending*)
 - AZA Bear Taxon Advisory Group. (2009). Polar Bear (*Ursus maritimus*) Care Manual. Association of Zoos and Aquariums, Silver Spring, MD.
 - AZA Standards for Elephant Management and Care. Approved March 2011, Revised April 2012
- **Dangerous Wild Animals Act 1976.** *Guidance on the Keeping of Bears*. Wildlife Licensing and Registration Service, Animal Health. United Kingdoms Legislation.
- **Big-Cat Report: Ringling Bros. Circus.** August 25, 2016. Jay Pratte, B.S., M.A.

- Ascione, F. R.. “The International Handbook of Animal Abuse and Cruelty: Theory, Research, and Application1”. Purdue University Press, 2008.
- Boe, E., R M. Church. “Punishment: Issues and Experiments.” Ardent Media, 1968.
- Bacon, Heather. “Veterinary care, behaviour and rehabilitation of traumatised bears.” *Advancing Bear Care*, 2015. Hanoi, Vietnam.
- Becker, PhD. “When a Love of Animals Turns into a Psychiatric Disorder”. February 05, 2015. <http://healthypets.mercola.com/sites/healthypets/archive/2015/02/05/animal-hoarding-psychiatric-disorder.aspx>
- Evans, AL; Singh, NJ; Friebe, JM; Laske, TG; Frobert, O; Swenson, JE; Blanc, S. (2016) “Drivers of Hibernation in the Brown Bear.” *Frontiers in Zoology*, 13:7. February, 2016.
- Foy, Michael R., Stanton, M., Levine, S. & Thompson, R. (1987) “Behavioral stress impairs long-term potentiation in rodent hippocampus.”
- Frost, Randy, PhD. “People Who Hoard Animals”. April 01, 2000. <http://www.psychiatrictimes.com/obsessive-compulsive-disorder/people-who-hoard-animals>
- Gwinn, G.T.. “The effects of punishment on acts motivated by fear”. *Journal of Experimental Psychology*. Vol 39(2), April, 1949. pp260-269.

- Hiby, L., Lovell, N.P., Samba K., Gopalaswamy, A.M., Karanth, U. (2009) “A tiger cannot change its stripes: using a three-dimensional model to match images of living tigers and tiger skins.” *Biol. Lett.* 5: 383-386.
- Johnson, Robert. (2004) “Relative Effects of Air Pollution on Lungs and Heart.” *Circulation.* 109: 5-7.
- Knutson, Johannes. (1977) “Labeling Theory: A Critical Examination.” Scientific Reference Group, Stockholm, Sweden.
- Kondo, Noriaki; Sekijima, Tsuneo; Kondo, Jun; Takamatsu, Nobuhiko; Tohya, Kazuo and Ohtsu, Takashi. “Circannual Control of Hibernation by HP Complex in the Brain”. *Cell*, 125: 161–172. April 7, 2006.
- Meder, Angela (1989) “Effects of hand-rearing on the behavioral development of infant and juvenile gorillas (*Gorilla g. gorilla*).
- Mellen, Jill D., Ph.D. (2005) “Effects of early rearing experience on subsequent adult sexual behavior using domestic cats (*Felis catus*) as a model for exotic small felids.”
- Moriello, Karen A., DVM, DACVD. “Over view of Hygroma”. *The Merck Veterinary Manual*. June, 2013.
- Nemmar, Hoet, Dinsdale, Vermeylen, Hoylaerts and Nemery. (2003) “Diesel Exhaust Particles in Lung Acutely Enhance Experimental Peripheral Thrombosis.” *Circulation.* 107: 1202-1208,
- Podsakoff, P.M., Todor, W.M., Skov, R.. “Effects of Leader Contingent and Noncontingent Reward and Punishment Behaviors on Subordinate Performance and Satisfaction”. *Academy of Management Journal*, Vol 25(4), 1982, 810-821.
- Pryce, C., Rüedi-Bettschen, D., Dettling, A., Weston, A., Russig, H., Ferger, B. & Feldon, J. (2005) “Long-term effects of early-life environmental manipulations in rodents and primates: Potential animal models in depression research.” *Neuroscience & Biobehavioral Reviews*, Volume 29, Issues 4–5, 2005, 649-674.
- Romero, Michael L. (2004) “Physiological stress in ecology: lessons from biomedical research.” *Trends in Ecology & Evolution*, Volume 19, Issue 5, May 2004, 249-255.
- Ryan, S., Thompson, S. D., Roth, A. M. & Gold, K.C. (2002) “Effects of hand-rearing on the reproductive success of western lowland gorillas in North America.”
- Scimeca, Joseph. (1977) “Labeling Theory and Personal Construct Theory: Toward the Measurement of Individual Variation.” *J. Crim. L. & Criminology*, 68: 652.
- Tait, Amelia. “The Complex, Tragic Psychology Behind Animal Hoarding”. May 7, 2015. <https://www.vice.com/read/the-psychology-of-animal-hoarding>
- Trut, L., Oskina, I., & Kharlamova, A. “Animal evolution during domestication: the domesticated fox as a model.” *Bioessays*. 2009 Mar; 31(3): 349–360.
- Wolinsky, Harvey. (1972) “Long-Term Effects of Hypertension on the Rat Aortic Wall and Their Relation to Concurrent Aging Changes: Morphological and Chemical Studies.” *Circulation Research*. 1972; 30:301-309.
- www.lung.org

Appendix I

Peer-reviewed Publications

It's What They Do. The Shape of Enrichment, Vol.12, No.4, November, 2003.

Options for Training Side Presentation in Large Canids and Felids. Animal Keeper's Forum, Vol. 30, No. 9, September, 2003. P 390-391.

The Four Faces of Operant Conditioning. AAZK Animal Keeper's Forum, Vol. 34, No. 11, November, 2004.

Don't Shoot the Keeper: A Practical Guide to Training Your Co-workers. Pratte and Binney, AAZK Animal Keeper's Forum, January, 2005.

Tools of the Trade: Variety is the Spice of Life. AAZK Animal Keeper's Forum, Vol. 32, No. 6, July, 2005.

Teaching Operant Conditioning Methods and Training Program Management in China. AAZK Animal Keeper's Forum, October, 2006. P 420-426.

Formation of a Critical Incident Stress Management Team at the Dallas Zoo. Fitzgerald et al. Special edition on Crisis Management in Zoos. Animal Keepers' Forum, Vol. 34, No. 11/12, Nov/Dec. 2007. P 502-505.

Making a Connection with Keeper Talks. Pratte and Cavarra, AAZK Animal Keeper's Forum, February, 2007. P 80-84.

Proper Use of Cues. AAZK Animal Keeper's Forum, Vol. 36, No. 9. September, 2009. P 376-379.

Spatial Memory Recall in the Giant Panda (*Ailuropoda melanoleuca*). Perdue, et al. Journal of Comparative Psychology, Vol 123, No.3, 2009. P 275-279.

Training Bears for Voluntary Blood Collection. AAZK Animal Keeper's Forum, Vol. 37, No. 6. June, 2010. P 281-288.

When Maintenance Doesn't Require a Work Order. Pratte and Kezer, AAZK Animal Keeper's Forum, Vol 38, No 1, January 2011. P 18-20.

Basic Bear Training Techniques. Updated 2011. Resources: www.BearCareGroup.org.

Ideas to Help New Training Programs. AAZK Animal Keeper's Forum, Vol 39, No 3, March 2012. P 139-141.

Ideas to Help New Training Programs (Part 2). AAZK Animal Keeper's Forum, Vol 39, No 6, June 2012. P 282-286.

Papers at Professional Conferences

- ***Creating Habitats from a Whole Lotta Nothin'***. Proceedings, AAZK National Conference, 1999.
- ***Training Three Juvenile Indochinese Tigers from Scratch***. Proceedings, AAZK National Conference, 2001.
- ***Free Trip to Africa***. Proceedings, AAZK National Conference 2002.
- ***Expanding our Career Horizons: A Panda Department's Journey***. Proceedings, AAZK National Conference, 2004.
- ***Teaching Operant Conditioning Methods and Training Program Management in China***. Proceedings, AAZK National Conference, 2006.
- ***Formation of a Critical Incident Stress Management Team at the Dallas Zoo***. Proceedings, AAZK National Conference, 2006.
- ***Giant Pandas and Research: Spatial Memory Recall and Training Methods***. Proceedings, AAZK National Conference, 2007.
- ***Training Bears for Voluntary Blood Collection***. Advancing Bear Care, San Francisco, CA, 2009.
- ***Basic Bear Training Techniques***. Advancing Bear Care, Banff, Alberta, Canada, 2011.
- ***Xenoglossy: What are they really hearing?*** Advancing Bear Care, New Jersey, 2013.

Conference and Symposia Workshops

- National Behavioral Husbandry Committee member since 2001. Worked with committee to present training and husbandry workshops at the national conferences in 2001, 2002, 2004, 2006, 2007.
- Bear "Training 101" workshops at international Advancing Bear Care conferences in 2007, 2009, 2011.
- Advancing Bear Care conference, Pomona, CA, 2007: Goal and training program planning workshop for bear managers in China.
- Advancing Bear Care conference, San Francisco, CA, 2009: Voluntary bear blood collection training workshop.
- Advancing Bear Care conference, Banff, Alberta, 2011: Management of giant pandas; focus group.
- Advancing Bear Care conference, New Jersey, 2013. Advanced operant conditioning techniques and program management.
- USDA "Lions, Tigers and Bears" Symposium, Kansas City, MO, July, 2014. Using Operant Conditioning Techniques for Long-Term Behavioral Management.
- Advancing Bear Care workshop, Brasov, Romania, October, 2014. Training 101; Comprehending Learning; Practicum at Brasov Zoo.
- Advancing Bear Care workshop, Hanoi, Vietnam, October/November, 2015. Training 101; Comprehending Learning; Practicums at Hanoi Zoo & Animals Asia Sanctuary at Tam Dao.
- Advancing Bear Care conference, Omaha, Nebraska, October, 2016. Hosted conference, lectured on Behavior-based Husbandry, Capstone address.

Appendix II

Big cat [Figure 1], domestic cat [Figure 2], large dog [Figure 3] and bear [Figure 4] physical assessment charts (From AZA Felid TAG, Purina, and Royal Canin).

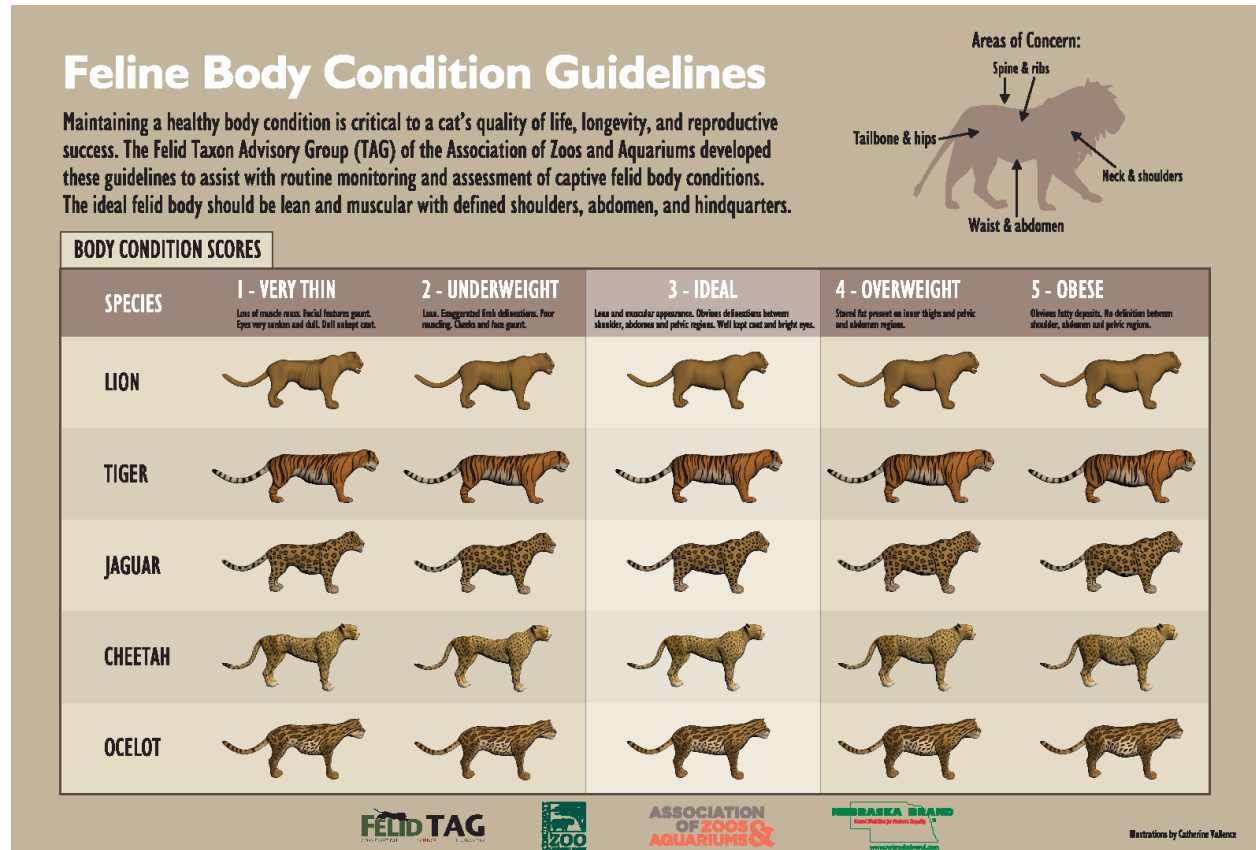


Figure 1

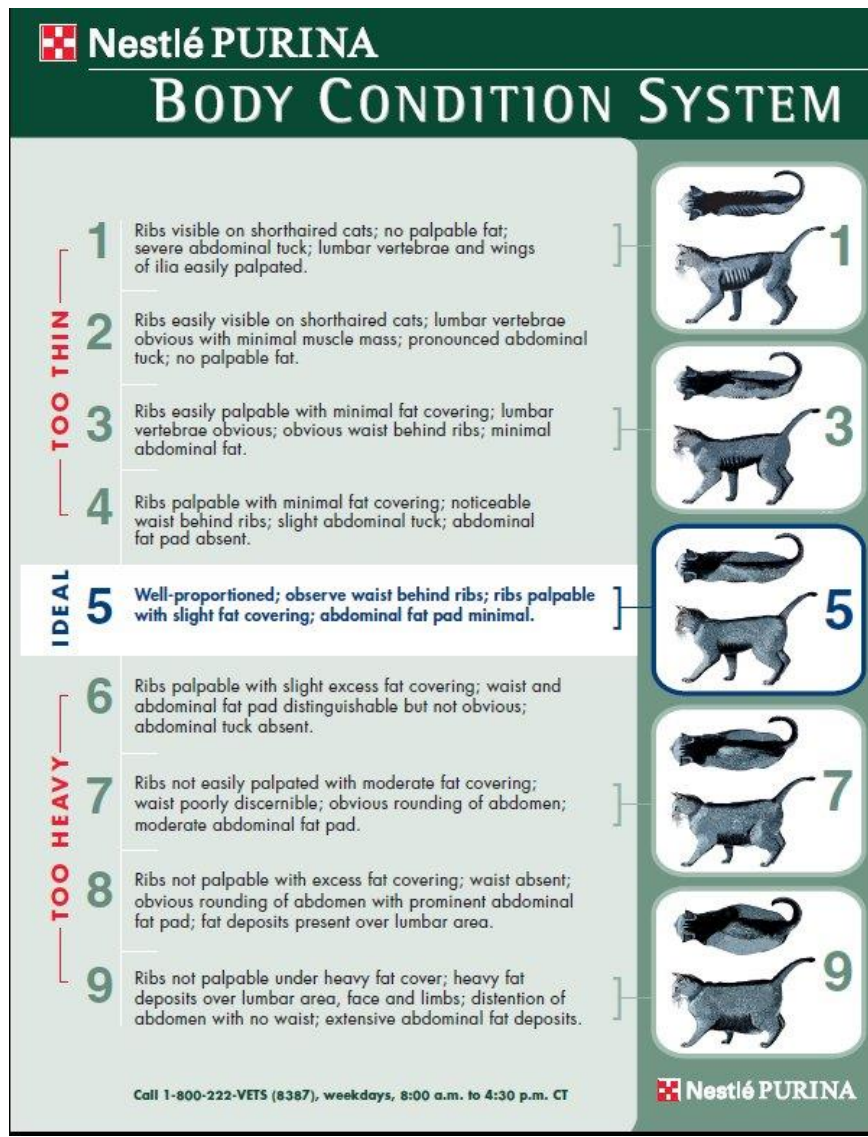


Figure 2

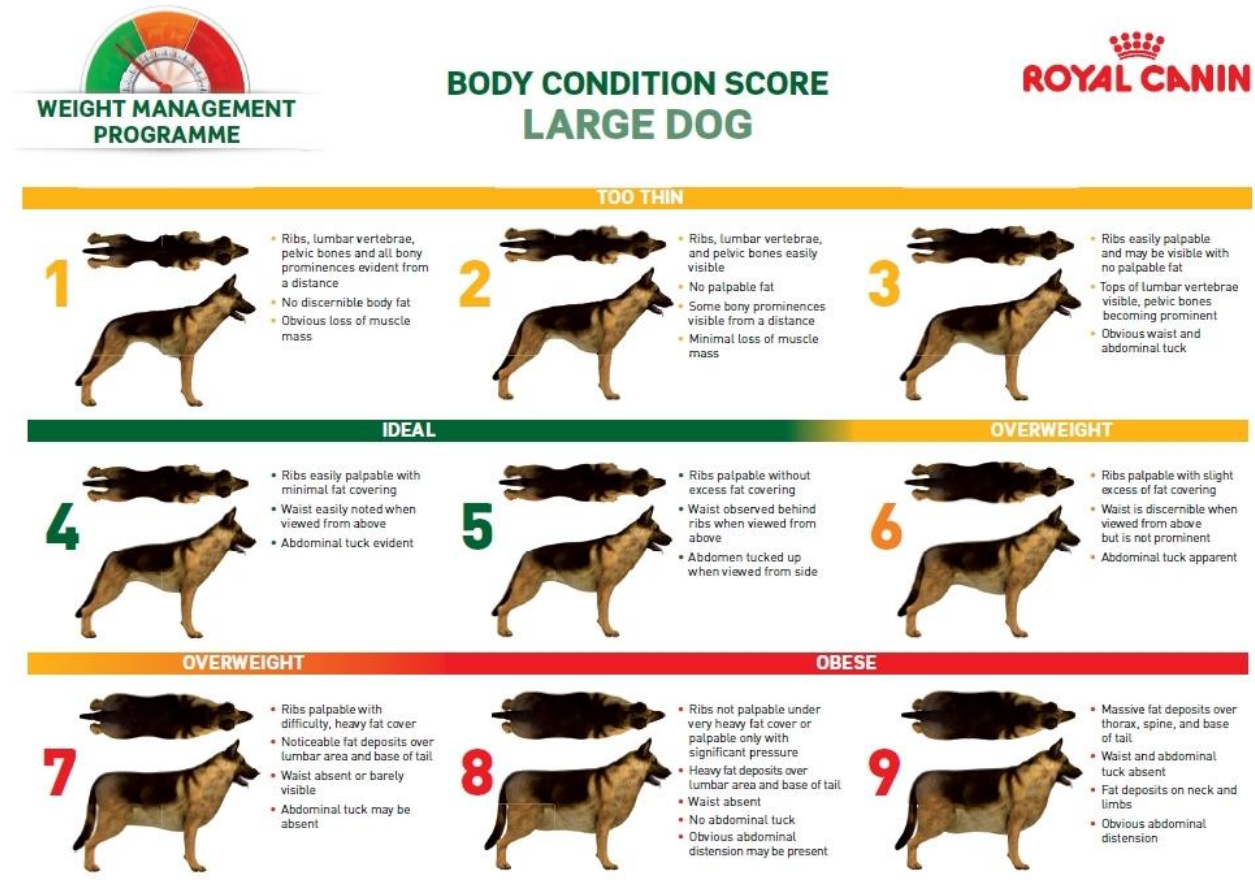


Figure 3

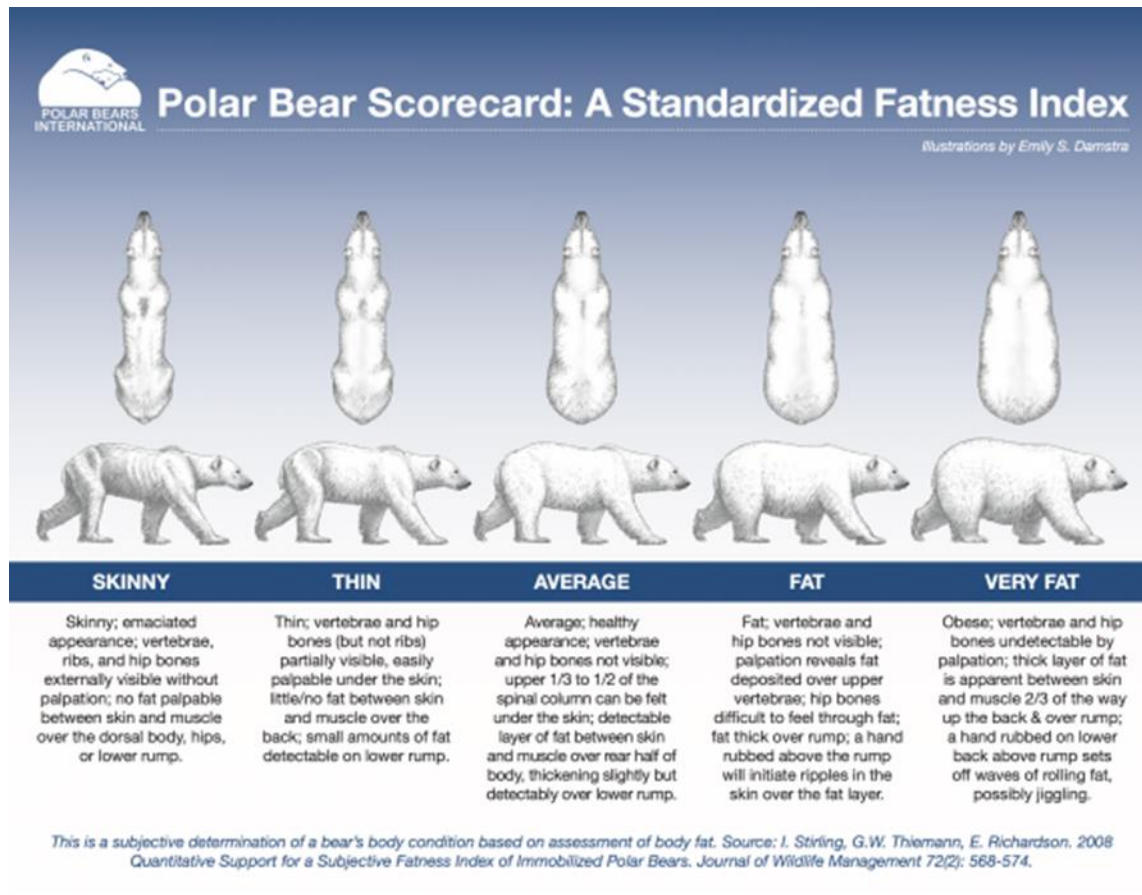


Figure 4

Appendix III

Wemmer Elephant Body Condition Index (BCI) for Asian Elephants

Criteria and point scores used to assess body condition in Asian elephants (*Elephas maximus*). When a particular body region is intermediate between two criteria, an intermediate point score (i.e. 0.5, 1.5 points) should be assigned.

A. Head - temporal depression (view from several angles)

2 points: full and convex in outline when viewed from behind (at the level of the neck or shoulder); frontal ridge vaguely outlined at best.

1 point: slightly to moderately concave; frontal ridge defined.

0 points: deeply concave; frontal ridge forms a crater-like rim around the temporal depression.

B. Scapula (shoulder blade) (view from side)

2 points: spinous process of the shoulder blade not visible, or slightly visible when the foreleg is in certain positions.

1 point: spinous process visible as a vertical ridge with a concavity between the ridge and the posterior edge of the scapula.

0 points: spinous process pronounced and bladelike with the acromial process pronounced as a knot.

C. Thoracic region (view from side)

2 points: ribs not visible, barrel smooth.

1 point: some ribs visible, but the extent and demarcation not pronounced.

0 points: many ribs strongly demarcated (even behind the scapula) with pronounced intercostal depressions.

D. Flank area - immediately in front of pelvic girdle (view from side and behind)

1 point: no depression visible; flank bulges outwards in front of the pelvis.

0 points: depression visible as a sunken area immediately in front of pelvis.

E. Lumbar vertebrae - behind ribs and in front of pelvis (view from behind, an elevated vantage point may be necessary)

2 points: not visible, lower back smooth and rounded.

1 point: visible as a ridge; skin slopes away from the top of the ridge; height of the vertebrae does not exceed width.

0 points: visible as a knife-like blade; sides of spinal ridge almost parallel, and the height equal to or exceeds the width.

F. Pelvic bone - external angle of the ilium (view from several angles)

2 points: not visible (or slightly visible); rump region between the ilium and caudal vertebrae filled with tissue (and not forming a depressed zone).

1 point: visible but not pronounced; the rump is a slightly depressed zone between the ilium and the caudal vertebrae.

0 points: visible as a jutting bone; rump is a pronounced sunken zone between ilium and the caudal vertebrae.

Appendix IV

Elephant Nutrition Table, from Nutrition Advisory Group Handbook, “Elephants: Nutrition and Dietary Husbandry” (Ullrey et al. 1997).

Nutrient	Maintenance, Breeding	Late pregnancy	Lactation	Juvenile growth
Crude Protein, %	8-10 ^a	12	12-14 ^b	12-14 ^c
Lysine, %	0.3	0.4	0.4-0.5	0.5-0.6
Calcium, %	0.3	0.5	0.5	0.5-0.7
Phosphorus, %	0.2	0.3	0.3	0.3-0.4
Magnesium, %	0.1	0.1	0.1	0.1
Potassium, %	0.4	0.4	0.5	0.4
Sodium, %	0.1	0.1	0.1	0.1
Sulphur, %	0.15	0.15	0.15	0.15
Iron, ppm	50	50	50	50
Copper, ppm	10	10	10	10
Manganese, ppm	40	40	40	40
Zinc, ppm	40	40	40	40
Cobalt, ppm	0.1	0.1	0.1	0.1
Iodine, ppm	0.6	0.6	0.6	0.6
Selenium, ppm	0.2	0.2	0.2	0.2
Vitamin A, IU/kg	3000	3000	3000	3000
Vitamin D, IU/kg	800	800	800	800
Vitamin E, IU/kg	100	100	100	100
Thiamine, ppm	3	3	3	3
Riboflavin, ppm	3	3	3	3

^aAdult maintenance, 8% CP, breeding bull, pregnant cow (1st two-thirds of pregnancy), 10%CP.

^bFirst year of lactation, 14% CP, 2nd year of lactation, 12% CP

^cWeanling, 14% CP; 3-year old, 13% CP, 4-year old to year old, 12% CP.