

Weight Management in Animal Training



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DEFINITION

WEIGHT MANAGEMENT

- A weight range that corresponds to acceptable behavioral responses to food is established, a diet is prepared to maintain the bird in that weight range.
- The weight range may be adjusted depending on response during training sessions.
- Various conditions may influence behavior, and should be taken into consideration.
- The goal is to maintain the highest weight possible and provide the greatest amount of food while maintaining the desired behavioral response.

Ref. IAATE Position Statement on Weight Management





WHY QUESTION THIS PRACTICE?

- What has weight have to do with motivation?
- Does a certain weight mean an animal is not hungry?
- Gaining weight doesn't necessarily alleviate hunger
- Other animals are not trained using weight management
- The data exists. We can successfully train birds without weight management
- Is this strategy needed or in the best interest of the animals we train?





HUNGER VS MOTIVATION

HUNGER

- Hunger is not well defined
- Negative subjective state
- Animal seeks relief from it
- Measured metabolically
- Measured behaviorally

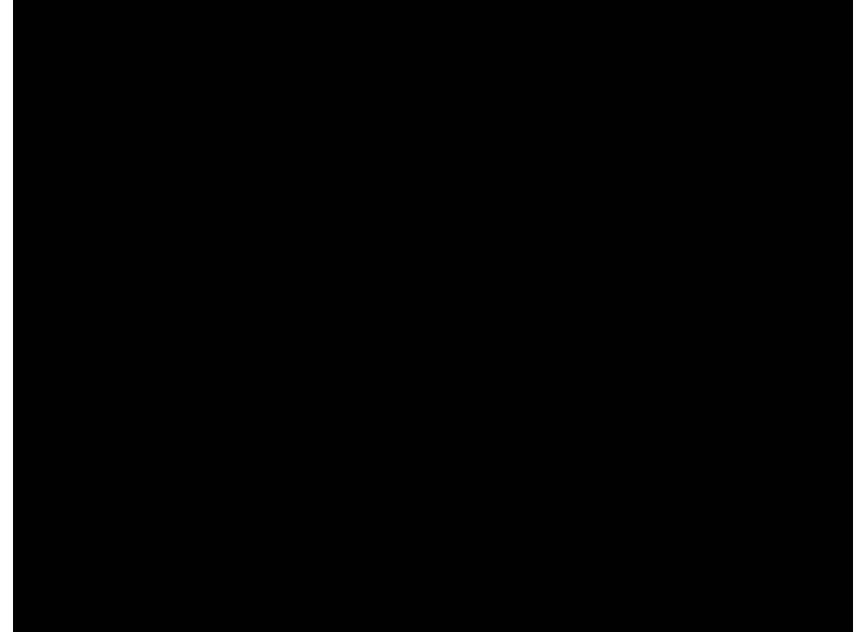




HUNGER VS MOTIVATION

MOTIVATION

- Motivation and hunger are not synonymous
- Animals will present behavior for many types of non food reinforcers
- Extinction procedures can create vigorous performance of behavior
- Diff schedules of reinforcement can allow numerous presentations of behavior before reinforcers are delivered





HUNGER VS MOTIVATION

MOTIVATION

- Humans will present food acquisition behavior in the absence of hunger
- Animals do too (ex caching)
- This distinction between hunger and motivation is important because it allows trainers other options for acquiring behavior that do not rely solely upon hunger.





MEASURING HUNGER

- Metabolic measures not practical in animal training
- Behavioral measures – how quickly animal eats, compensatory feeding behaviors, activity levels, species specific indicators
- Operant response measuring – force of the response, response latency and relative frequency of responses
- Rather than focuses on a weight to measure hunger, trainers should focus on behavior



Observed Behaviors	Level of motivation
Holds pine nut in foot	Low
Bites tiny pieces off of pine nut slowly	Low
Drops half of the nut	Low
Wipes beak on perch (feaking observed)	Low
Proceeds to preen after drops nut	Low
Holds pine nut in foot and brings to mouth quickly	Medium
Quickly breaks nut into 2-3 pieces and swallow pieces	Medium
Directs attention back to trainer once nut is consumed	Medium
Swallows nut immediately without breaking into pieces	High
Quickly directs attention to trainer once nut is consumed	High
Offers trained behaviors in rapid succession	High
Presents behaviors equated with frustration or anxiety about food: may redirect aggressive behavior on nearby objects, birds, or people, stereotypic pacing, etc	Excessive
Aggressive behavior presented towards other birds if competing for the same food resource	Excessive



ASSESSING HUNGER





PITFALLS OF THE SCALE

- Trainers can become focused on maintaining a weight range and miss behavioral indicators that an animal is too hungry.
- Trainers can desensitize to an excessively hungry animal and see this as “normal” motivation.
- The result can be “poor application” of weight management strategies.





RESULTS OF POOR APPLICATION

- Frantic or anxious behavior when anticipating food or eating food
- Water gorging & food related stereotypies
- Stunted growth
- Persistent juvenile behaviors
- Other possible issues
- Other fallout –companion parrot community





PSYCHOLOGICAL APPETITE

If weight management is applied well, it has been possible for the animal to work at a weight higher than when offered food ad lib. The motivation to present behavior in this scenario has been called psychological hunger, appetite and recently the food paradox. And is described to be caused by a perceived food shortage, not hunger or a need to food.





CHALLENGES WITH PSYCHOLOGICAL APPETITE

- Implies animal is not experiencing hunger
- Assumes weight and hunger are linearly related
- Seems to suggest good animal welfare
- Motivation attributed to perceived food shortage – which leads to further questions about animal welfare





PSYCHOLOGICAL APPETITE VS. FOOD HOARDING

- Food hoarding behavior in humans is strikingly similar.
- Typically exhibited by people who were deprived of food (prisoners of war, adopted children from food insecure areas, etc.)
- When humans are deprived of food, they have a very predictable response: they become obsessed with seeking food.





PSYCHOLOGICAL APPETITE VS. FOOD HOARDING

- Mildly deprived people will hoard food in response to a time when food was not available.
- Food hoarding and bingeing/gorging on food persists even when food is readily available.
- Even birds working above ad libitum weight and perceived to be responding due to psychological hunger are often obsessed with food acquisition, anxiety before feeding times, gorging when food is available, and overeating until sick when put on feed up or free feed.





DOES IT REPLICATE NATURE?

- Birds in shows have very limited food seeking opportunities compared to their wild counterparts
- And opportunity to seek food is our terms, not theirs
- In the wild food can be abundant at times and deprivation is not chronic
- Birds flown in falconry typically have greater opportunity to practice food seeking behavior





SOLUTIONS/OPTIONS

- Use food management

PREFERRED FOOD ITEMS





WORKING FOR PREFERRED FOOD ITEMS





TRAIN BEFORE REGULAR MEAL TIMES





FEED UNTIL SATIATED SEVERAL TIMES A DAY

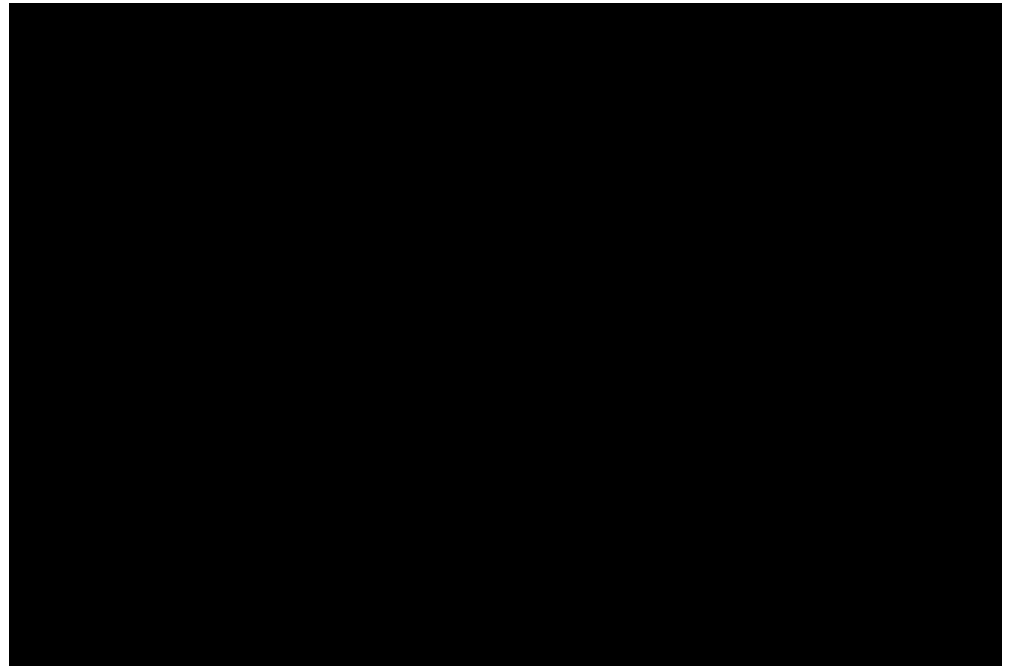




SOLUTIONS/OPTIONS

NON FOOD REINFORCERS

- Use a variety of reinforcers (food and non food)





SOLUTIONS/OPTIONS

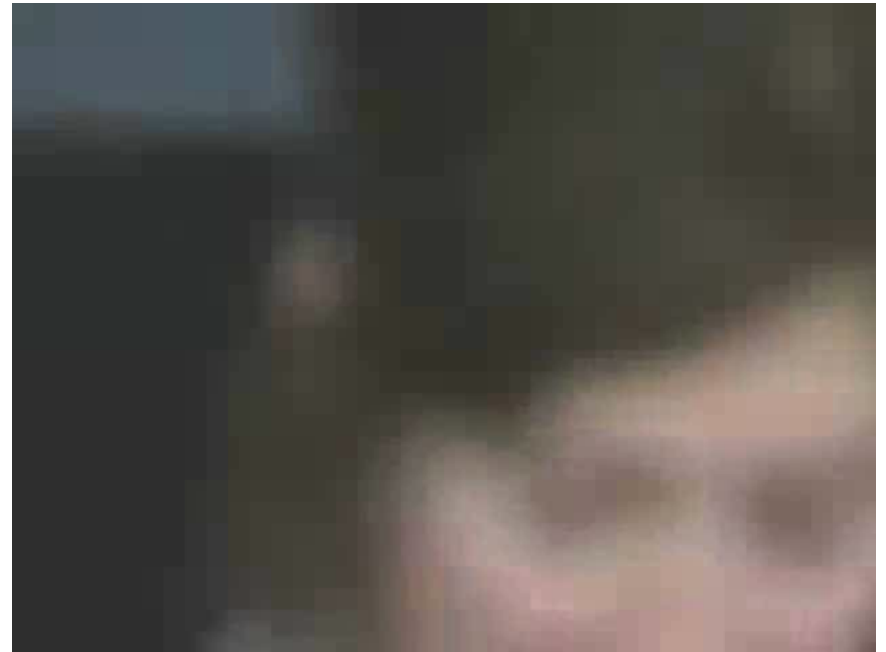
- Use food management
- Use a variety of reinforcers (food and non food)
- Train to a higher level
- Have birds present multiple behaviors with unpredictable schedules of reinforcement





SCHEDULES OF REINFORCEMENT

- Bird shows tend to stick to FR1
- Yet there are many different schedules that help make behaviors resistant to extinction
- Bird shows also often ask birds to present one behavior or the same predictable behavior patterns.





SCHEDULES OF REINFORCEMENT

Other schedules are
AWESOME for duration and
building behaviors resistant
to extinction





SOLUTIONS/OPTIONS

- More generalization of behaviors in different environments
- Reduce structured patterned behaviors, repeated over and over.
- When everything is predictable and not generalized it makes sense the animal must be physically hungry or obsessed with food to get consistent performance of behavior. (i.e the weight managed bird that flies off and doesn't come back, gets his diet cut)
- Examples of successful bird training without the use of weight management.





TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. WILD PIGEONS





TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. MACAW FLOCK



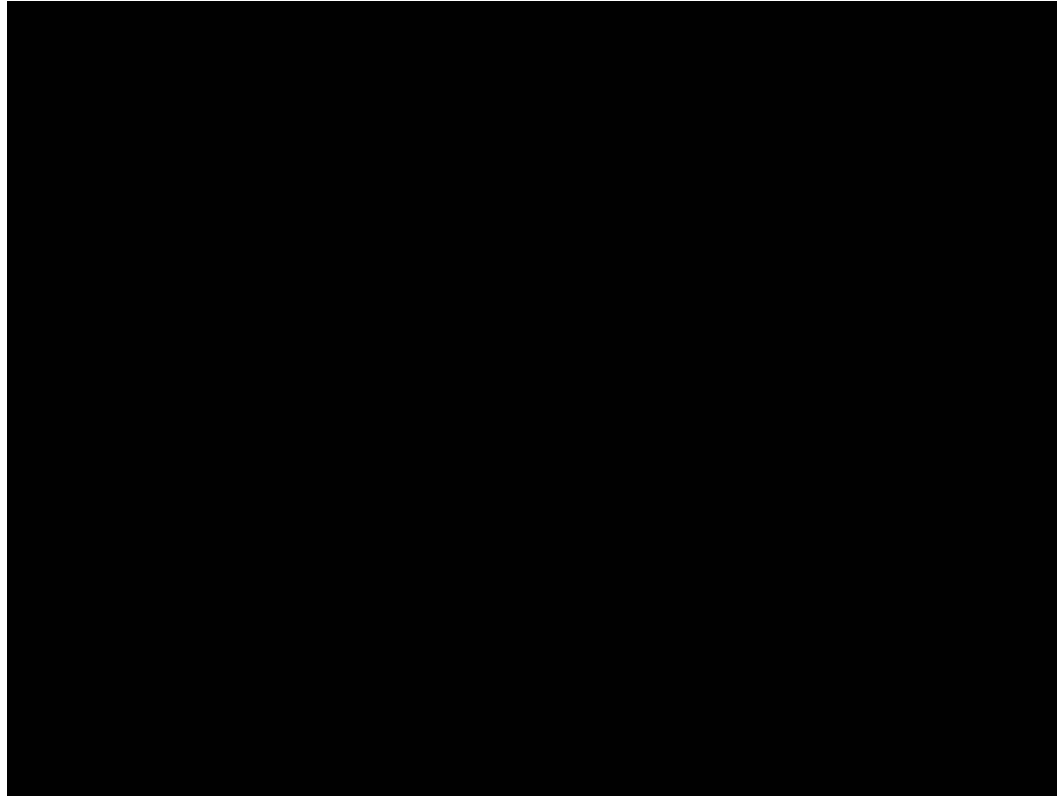


TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. HARPY EAGLE



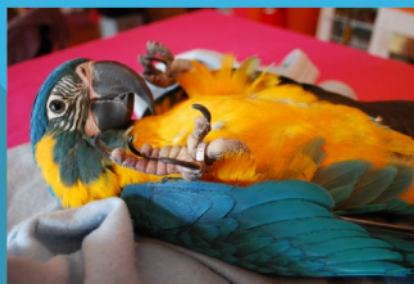


TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. RAVENS AND KEAS IN RESEARCH





TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. FREE FLIGHTED CRANE, HORNBILL, PARROTS





TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. KAKAPO IN CONSERVATION PROJECT

Problem: Aggressive behavior & relentless attempts

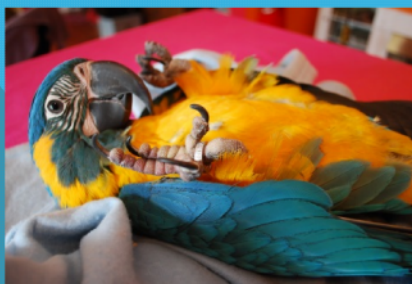


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TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. BREEDING KING VULTURES





TRAINING EXAMPLES WITHOUT WEIGHT MANAGEMENT EX. FREE FLIGHTED FLOCK OF COCKATOOS





CONCLUSION

- Training birds involves the use of many different strategies to influence motivation.
- Skilled trainers are drawing upon all those tools (reinforcement history, schedules of reinforcement, variety in reinforcers, generalizing behaviors, food management, etc.) Weight management for many has been a part of this toolbox. In some cases it has been the primary tool. However when scrutinized, weight management presents questions about welfare.
- More and more people are demonstrating birds can be trained without micromanaging diets and weights. Their successes open the door to strategies that allow reaching behavior goals and at the same time attending to high standards of animal welfare. These revelations suggest perhaps it is time to stop putting so much weight on the scale.

