


Why Are You Doing That???

Abnormal behavior in laboratory animals

IACUC CE, Nov 2018

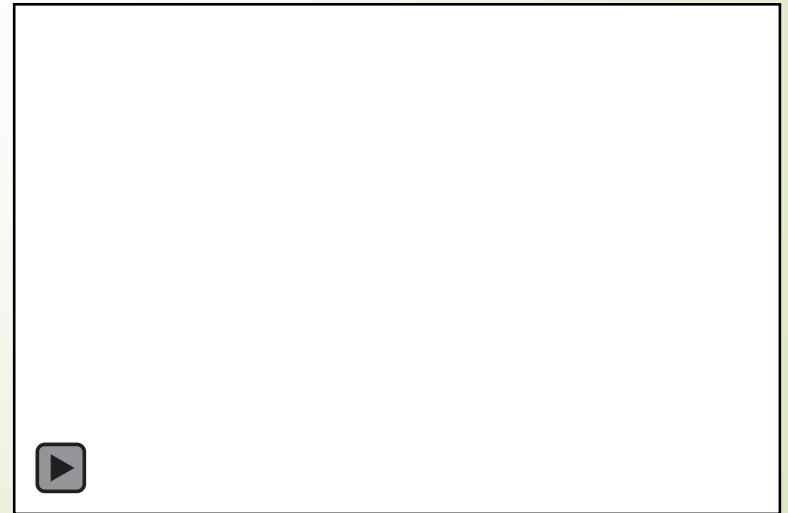
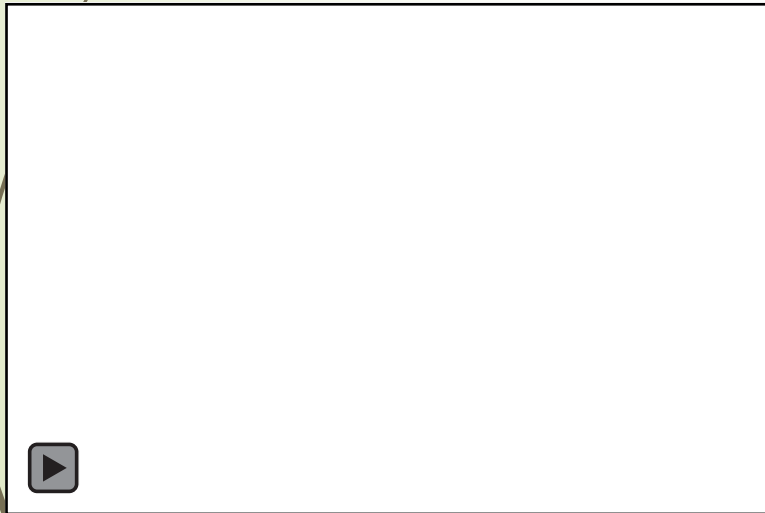
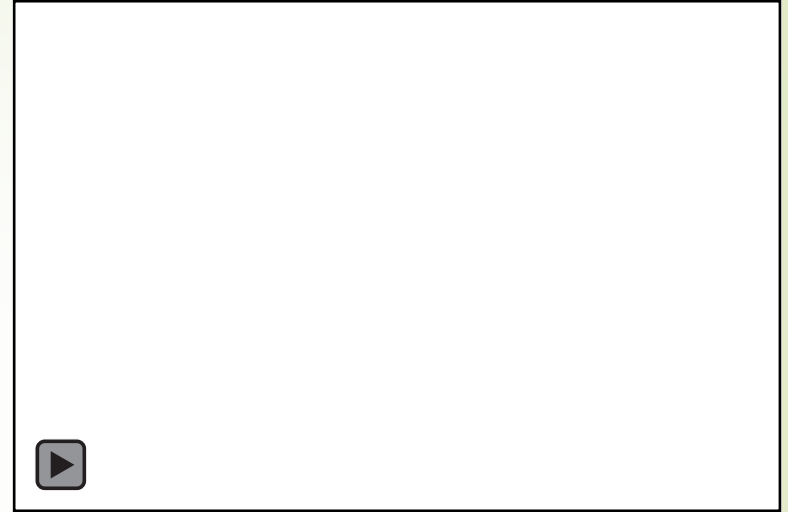
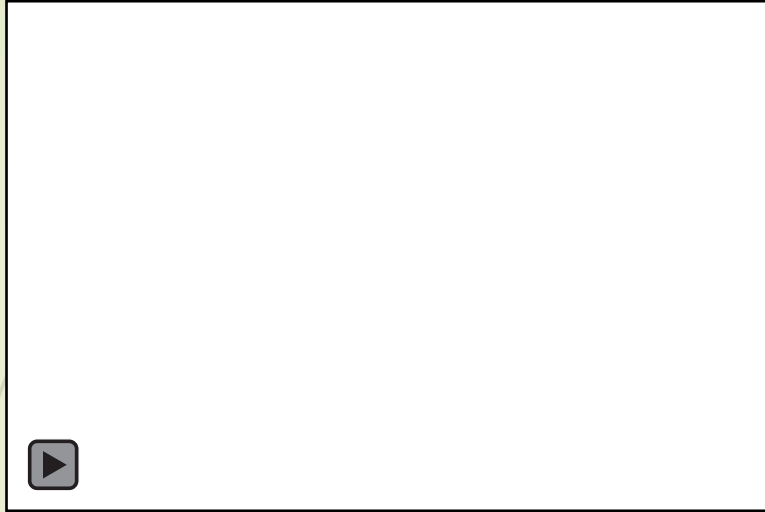


What is “abnormal behavior”?

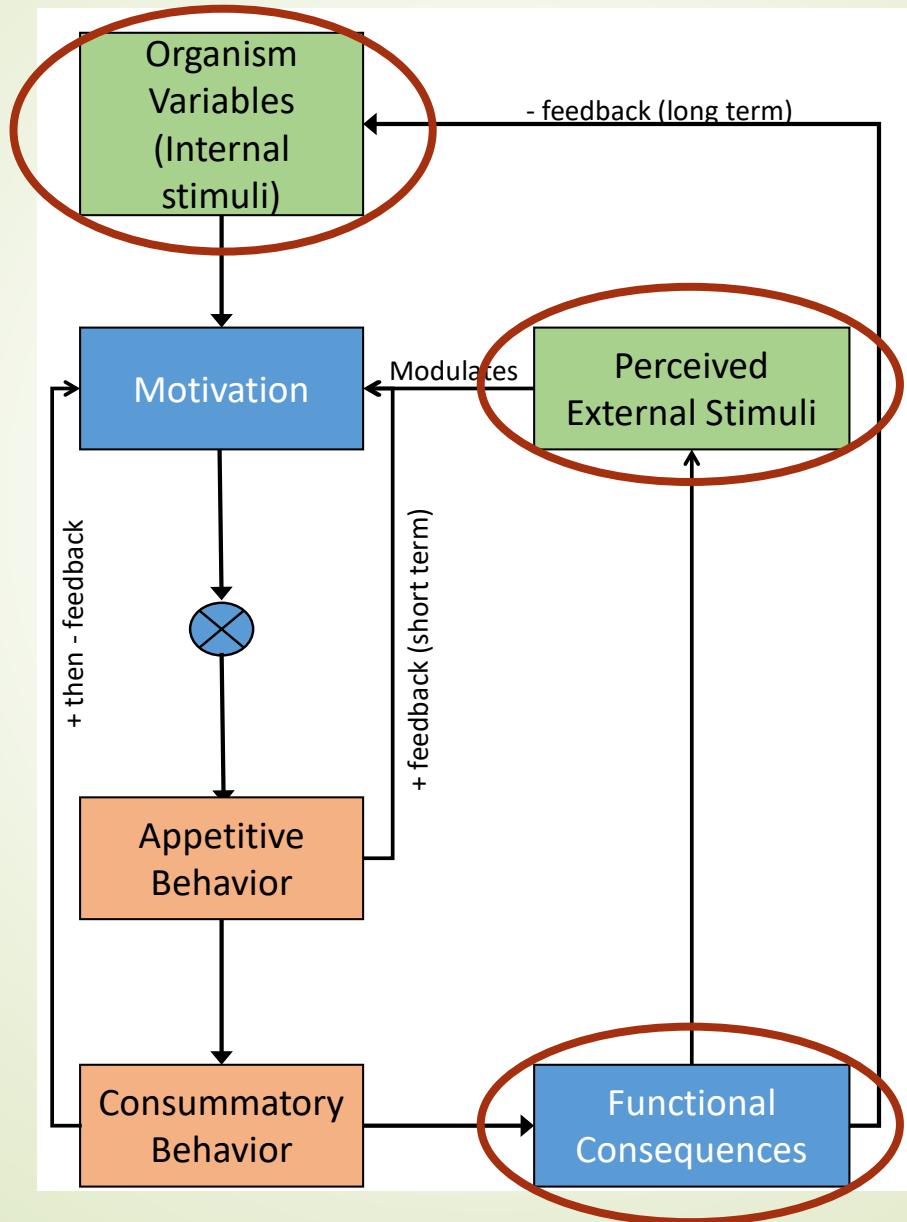
- Significantly differs from population as whole
 - Duration
 - Intensity
 - Frequency
- Also in the eye of the beholder?
 - Working for rewards
 - Problematic vs indicative?



Examples



Why does any animal do anything?



Hughes and Duncan,
1988

Types of behaviors



- Natural (innate?) behaviors
 - Not necessary, not motivated
 - Predator escape
 - Not necessary, highly motivated
 - Hiding from potential predators
 - Necessary, motivated
 - Foraging for food, social interactions, grooming
- Non-natural behaviors
 - Taught (by humans or other animals)
 - Husbandry behaviors
 - Original to animal
 - Enrichment interaction
 - Modified natural behavior
 - Overgrooming
 - Wheel running
 - Sham dust bathing



Causes of abnormal behavior

- DIY enrichment
- Self soothing, coping mechanism
- Muscle memory/habit
- CNS dysfunction (perseveration)

What should we do about abnormal behavior?



- Symptom, rather than disease?
- Preventing development better than treatment
- BUT preventing performance can negatively impact welfare
- Consider implications
 - Perseverative may be particularly averse to change
- Treat when possible
 - Some respond quickly to treatment, some may never



Specific examples



- Bar biting, jumping
 - Arise from behaviors directed outside the cage (escape and exploration, Wurbel 1996)
- Barbering
 - Similarities to trichotillomania in humans (Kurien et al 2005)
 - NAS can be effective
- Wheel running
 - May be normal OR abnormal
- Food grinding
 - Unknown etiology, heritable component
 - Provision of sunflower seeds can reduce, but not eliminate (Pritchett-Corning et al 2013)
- Pacing
 - In some animals, begins as anticipatory behavior (Spruijt et al 2001)
- Self-injurious behavior
 - Redirected frustration/aggression (Reinhardt & Rossell, 2001)