

Psychology – Evolutionary (Ecological) Theories of Sleep

What determines sleep patterns?

- Predator or Prey? :
 - Predators sleep more (not worried about being caught)
- Nutrition? :
 - Meat – carnivores - should sleep longer due to less time eating
 - Non-meat – herbivores - should sleep less as more time spent eating
 - Both – herbivores
- Body mass and metabolic rate? :
 - Fast metabolic rate means more sleep? (less time spent eating)
 - More body mass should mean less sleep
- Primitiveness? :
 - Reptiles and fish (sleep patterns only distinguishable from birds upwards)
 - Birds
 - Primate mammals
 - EVOLUTION MEETS RESTORATION – bigger brain, more sleep.

Explanations contradict each other!

When trying to explain sleep patterns through evolutionary or ecological theories, we can end up explaining a particular sleep pattern of an animal in at least two ways. This makes it difficult to show that any one explanation is wrong. This therefore means that in these circumstances, such evolutionary theories lack falsifiability. In addition, it is sometimes possible to provide contradictory explanations for a particular pattern of sleep, therefore making it difficult to prove which one is right, again resulting in a lack of falsifiability.