

Dement & Kleitman (1957):

SLEEP AND DREAMING



Areas to learn about:

- **Function of sleep**
- **Sleep deprivation**
- **Investigating sleep**



Introduction:

Aim; to consider the nature of dreaming
some questions;

1. How can you be certain that at this moment you are not actually dreaming?
2. When your alarm wakes you in the morning do you have a vivid recall of your dreams? (why/why not)
3. How could you investigate **when** people actually dream?

Function of sleep

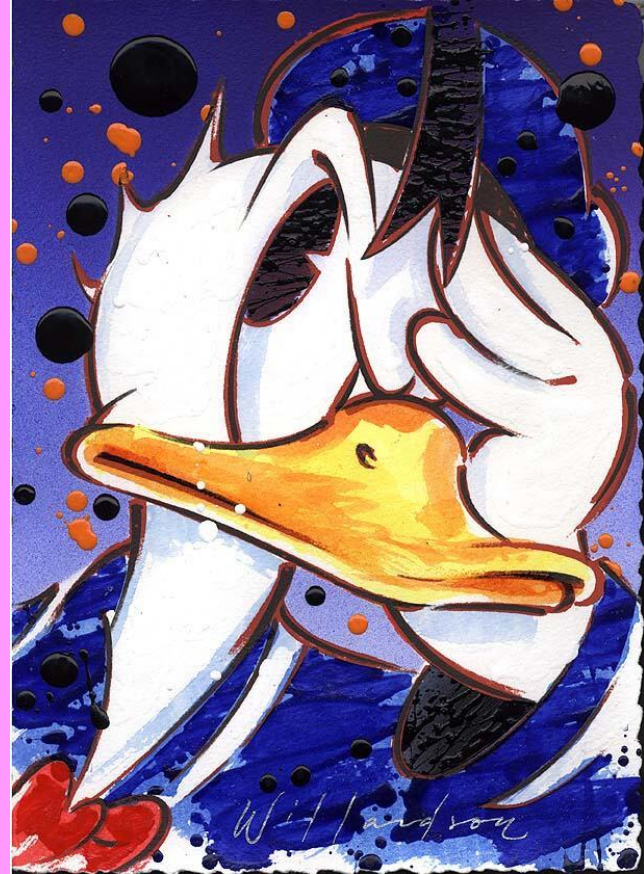
- How important is sleep?
- Does it matter how much sleep you get?

Physiological restoration 1

- Immune system regenerated, but no evidence of change in cell division.
- Exhausting day – not necessarily longer sleep (Horne & Minard, 1985)
- However, may be more non-REM sleep (Hartman, 1984)

Psychological Restoration

- Essential for brains
- Necessary for efficient functioning of processes; memory, attention, perception.



Evolutionary

- **Evolutionary function** similar to hibernation; lower metabolic rate, lower temperature, blood pressure, etc.
- **Animal research:** sleep dependent on lifestyle.
Eg; horses sleep for approx. 3 hours per day, whereas cats sleep approx. 14-15 hours per day



Sleep Deprivation

- How do you feel when you don't get enough sleep?
- **Research** shows lack of sleep affects complex tasks linked to frontal cortex; planning, thinking, problem solving.
- If deprived of sleep, you catch up with more REM sleep than normal (rebound)
- If **REM** sleep deprived, there could be **extreme reactions**; paranoia, hallucinations, etc



Sleep Deprivation

- Disruption to circadian rhythms;
- Jet lag
- Shift work



Investigating Sleep

- Sleep laboratory
- Physiological measurement; monitor activity in nervous system
- Three types of machines
 - EEG; measures brain activity
Electrodes placed over head.
 - EMG; measures muscle activity. Electrodes placed over jaw area.
 - EOG; measures eye movements. Electrodes placed around eye socket



- **Sleep states:**
 - ‘**Sleep cycles**’ lasting approx. 90 minutes.
 - **Four stages** to this cycle; light to very deep sleep, ending in REM sleep.
- **REM sleep** (rapid eye movement):
 - Active brainwaves, rise in blood pressure, respiration, etc.
 - Body ‘paralysed’, immobile, difficult to wake