

Consciousness, Sleep and Dreams

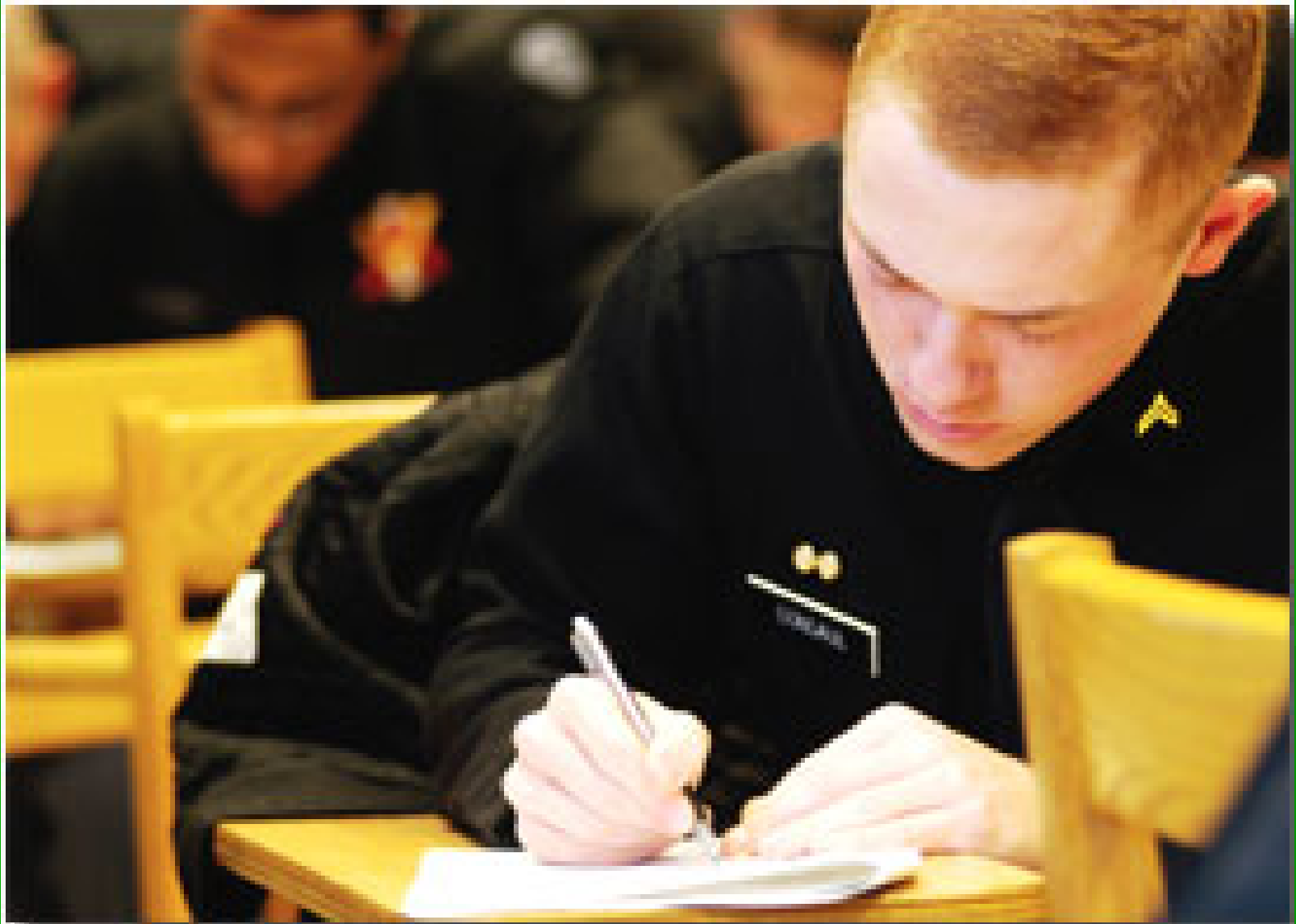
Module 7

Psychology 1

Continuum of Consciousness

- What is a continuum?
- Consciousness can vary from having TOTAL CONTROL over our sensory awareness to having NO CONTROL over it.
- Where do the following examples fall?







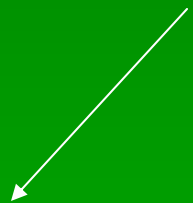


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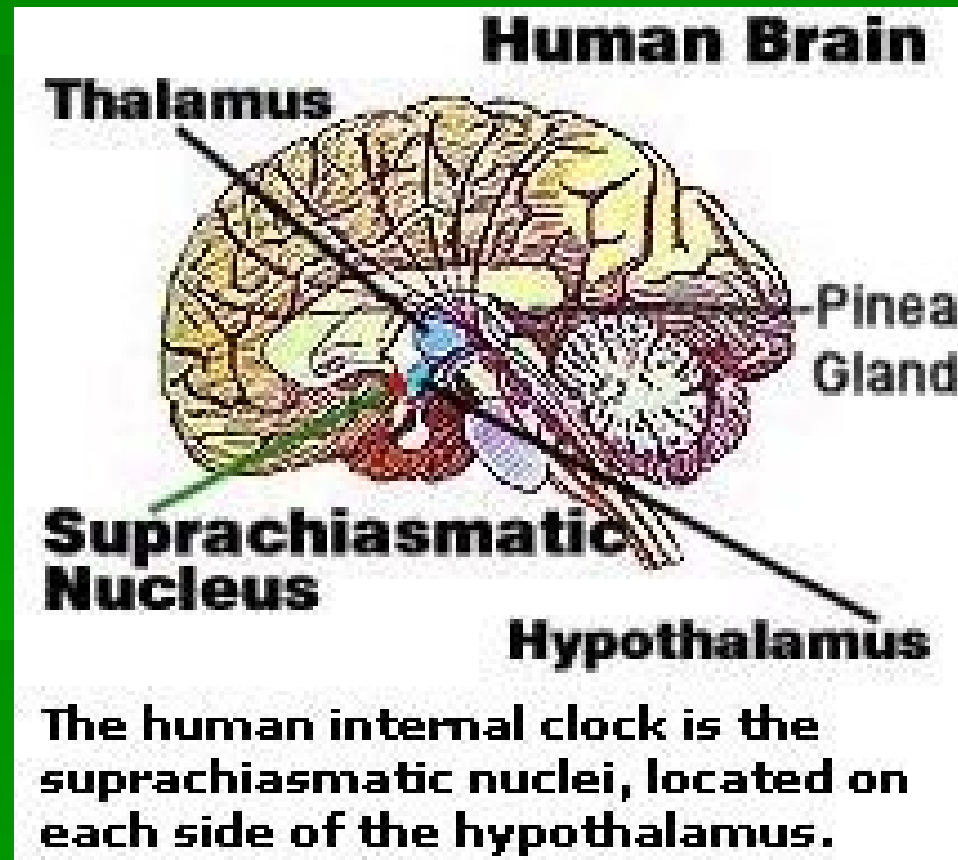




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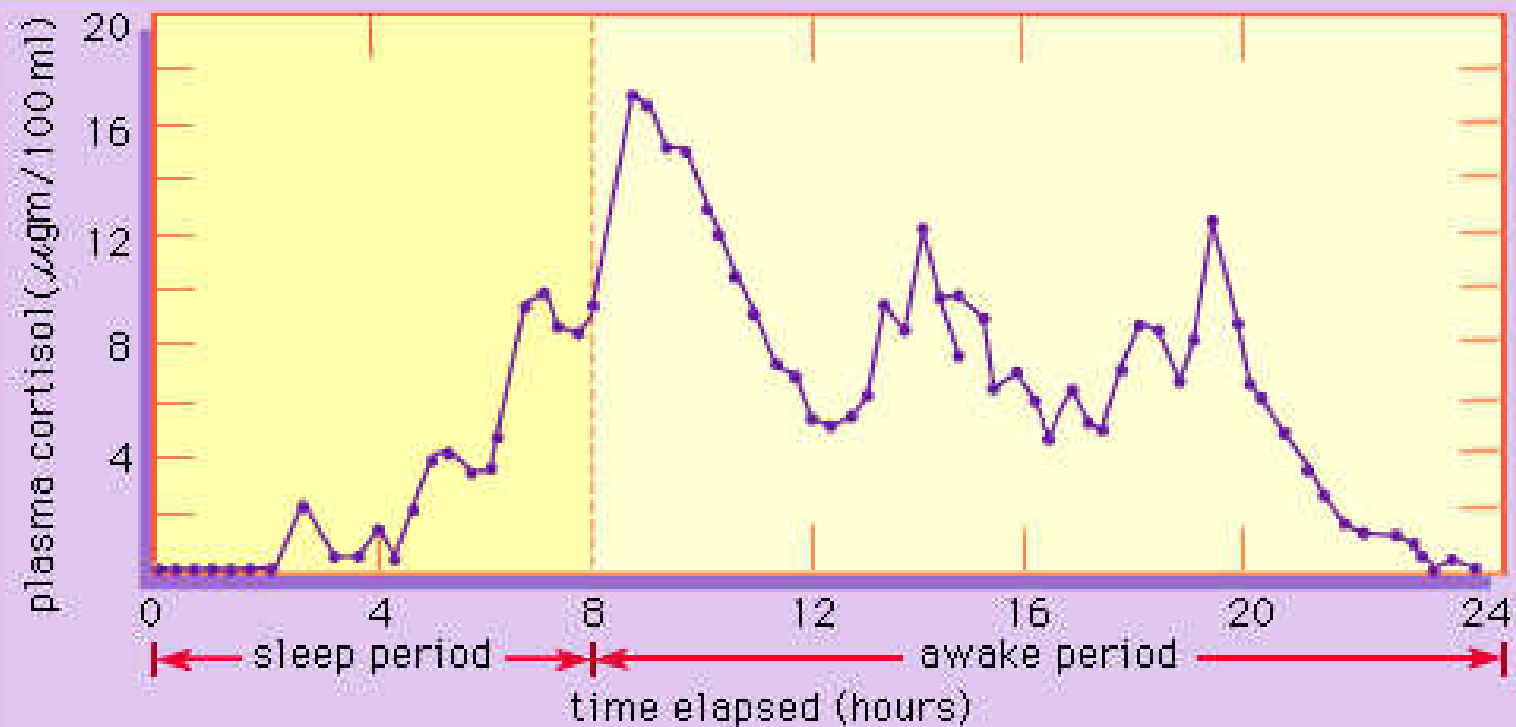


Biological Clocks



An internal timing device set to regulate responses such as body temperature, going to the bathroom, hormones, etc.

Cortisol values over a 24-hour period.



Sleep.....

- Controlled by a circadian rhythm (24 hours) called the sleep/wake rhythm.
- Resets every morning with bright sunlight
- Circadian problems can result in accidents and jet lag
- Problems can be treated with light therapy or melatonin
- What is an interval timing clock?

Are you an owl or a lark?

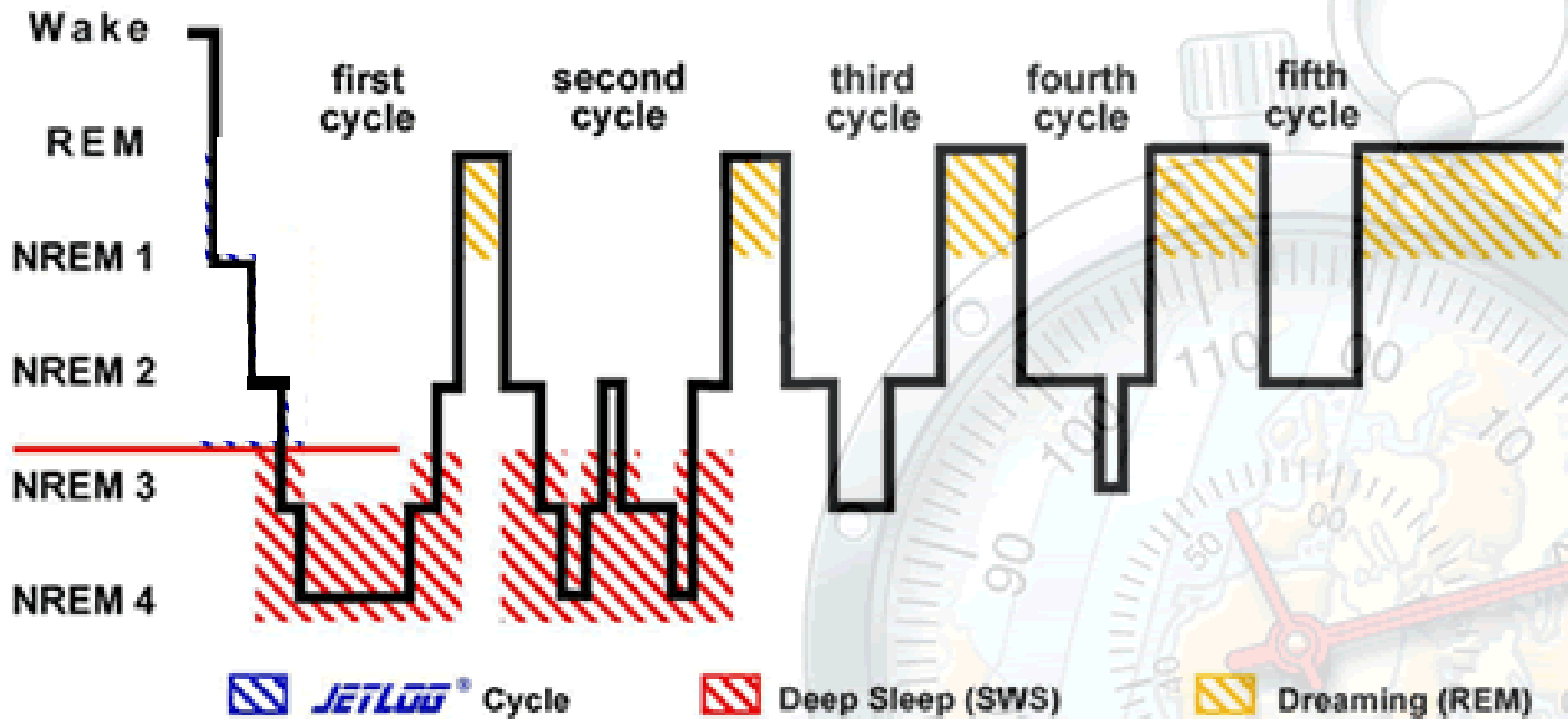
- Take this quiz to see if you are a morning person or a night owl.....

Body Temperature

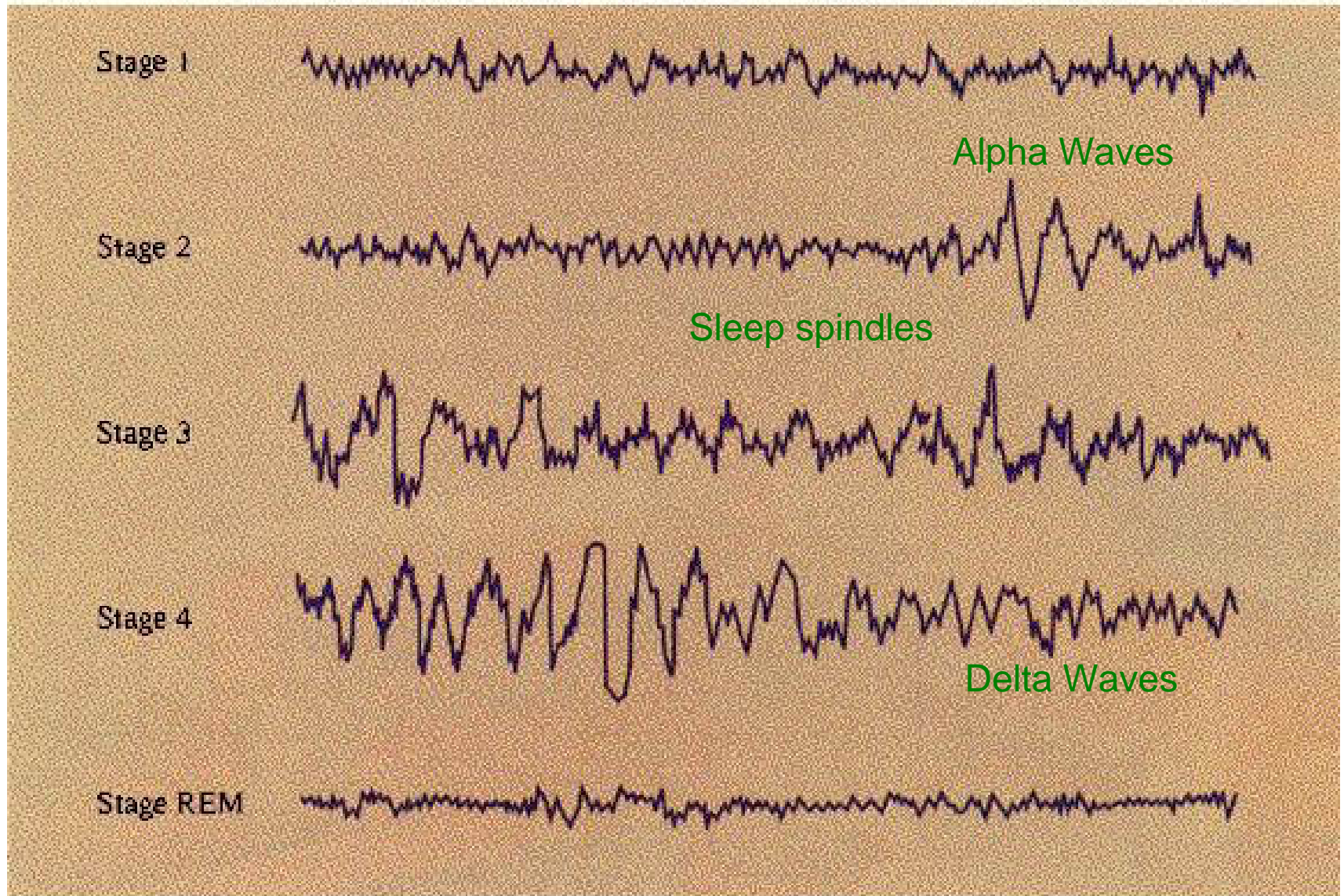
- As temperature rises, you wake up; as temperature falls, you go to sleep.
- (Another circadian rhythm....)
- If you are a lark, your body temperature rises more quickly, so you get up earlier than...
- A night owl, who gets up later.
- Controlled by our friend, the superchiasmatic nucleus in the hypothalamus.

Stages of Sleep

Sleep Stages

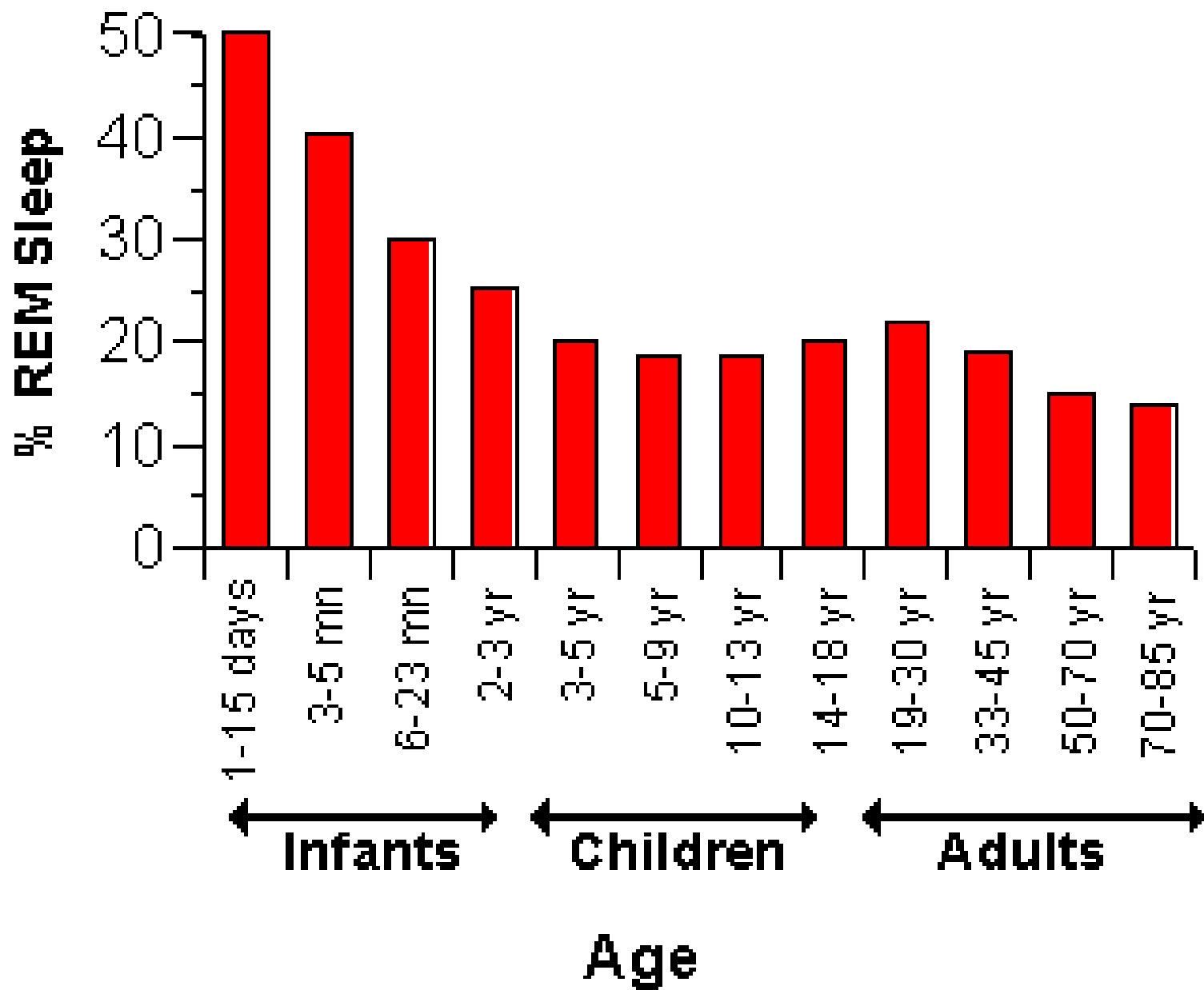


Stages of Sleep



REM Sleep

- Makes up 20% of your sleep time
- When dreaming takes place
- Brain waves look similar to when you are awake.
- What happens to your body during REM?
- Why is it called paradoxical sleep?
- Why do we need REM sleep? to store or encode information in memory.



Why is sleep like a roller coaster ride?



Human Sleep Cycle

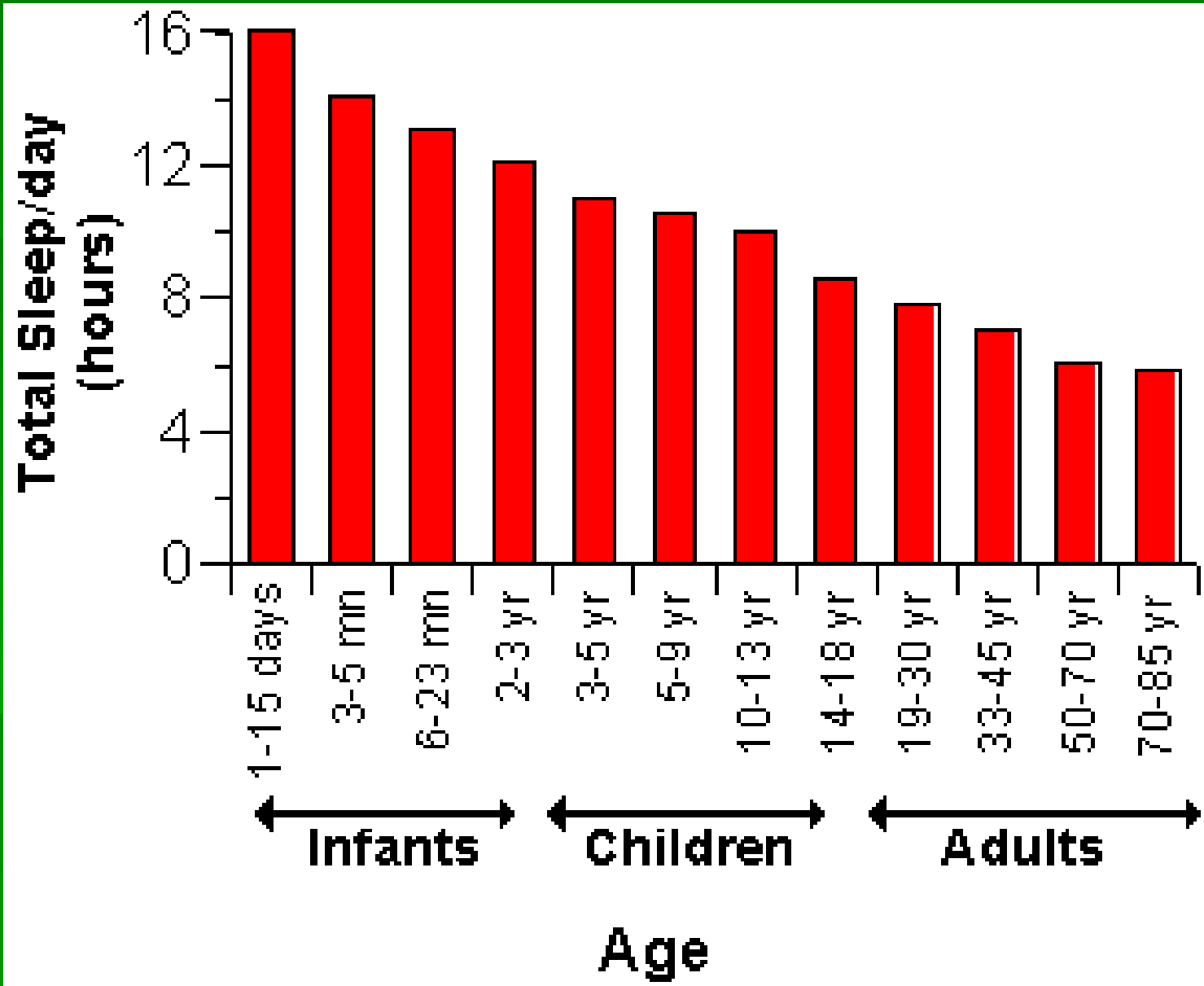
- Now it's our turn to pretend....

How much sleep?

- Babies sleep 17 hours a day (50% in REM)
- Teens need 10 hours
- Adults get 7-8 hours
- In our 60's, we drop to 6.5 hours of sleep



Getting enough sleep helps you do your best in whatever you do.



Why Sleep?

Two Theories:

- Restorative/Repair
- Our brain and body need to be repaired/replenished by sleep.
- Hormones secreted
- REM aides in memory
- Circadian/Adaptive
- Sleep may have developed as a way for animals to protect themselves.
- Conserve energy
- Stay safe

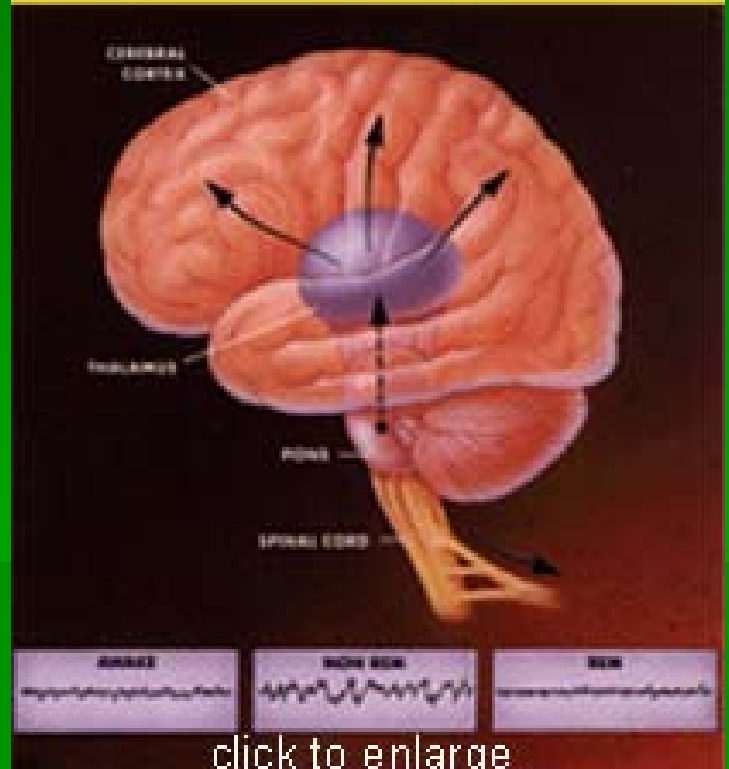
Did you know....

- Giant armadillo sleeps 18 hours a day
- Tiger: 15.8 hours
- Cat: 12 hours
- Chimpanzee: 9.7 hours
- Guppy: 7 hours
- African elephant: 3.3 hours
- Giraffe: 3.1 hours

How do we fall asleep?

- VPN switch in the brain turns on
- Secretes GABA
- Turns off the reticular formation (arousal system)
- Pons sends out chemicals and neurotransmitters
- Body temperature influences waking/sleep

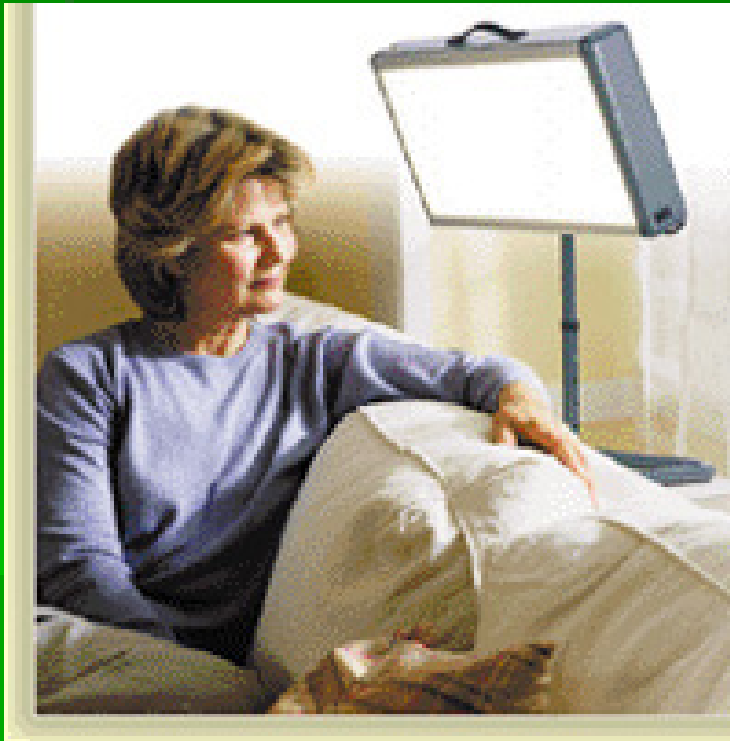
This is your Brain...



This is your Brain...

In **SLEEP**...
any Questions?

What is SAD?



Dreams

Psych 1

Module 7

Who Dreams?

- *Everyone* dreams, but not everyone remembers them



Why Do We Dream?

- There are four theories:
 1. Provides the brain with **stimulation** to make up for loss of stimulation while asleep.
 2. **Transfers information** we learned while awake from short term to long term memory.



3. Activation Synthesis Theory-

Brain is just trying to make sense of **random firings** of our neurons.



4. Freud's theory of dreams-
dreams are a way to **fulfill wishes** in a safe, acceptable way. **Symbols** have meaning.



Your book adds two more...

- **Extensions of Waking Life**-our dreams reflect the same thoughts, concerns, and problems we have when we're awake.
- **Spirit World**- the souls of animals, departed relatives and supernaturals are made known.

Freud's Ideas

- There are two ways to look at dreams:
- **Manifest content:** actual events of your dreams
- **Latent content:** what your dreams really mean or represent

Biology of Dreams

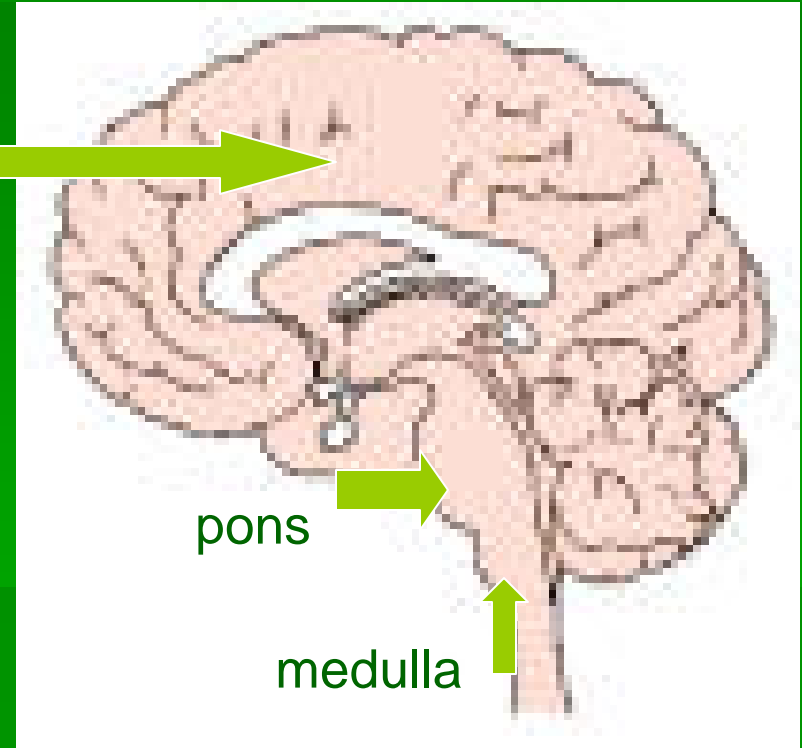
- Pons stimulate the forebrain

Medulla controls body paralysis

forebrain

pons

medulla



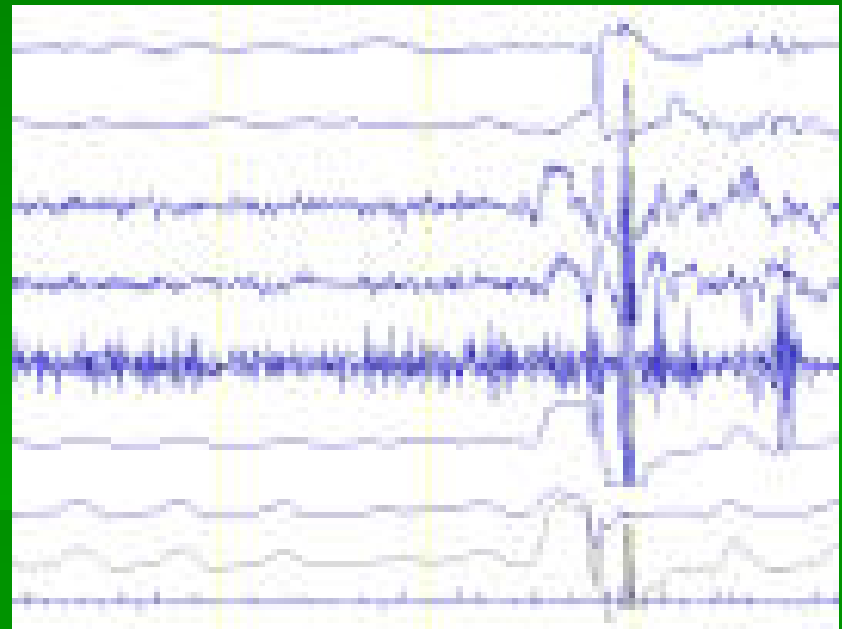
Content of Dreams

- A **typical dream**.....
 - is commonplace with people you know
 - Is indoors, not out
 - Involves some fear/anxiety, not joy or happiness
 - Involves movement: because we can't move our limbs while dreaming.
- But we tend to remember our strangest dreams!

REM Sleep

- REM is important:
 - because we need to sort through information;
 - it helps us sift through our daily experiences.
 - Shift events into our long term memories

- Not enough REM?
 - REM rebound!



Sleep Disorders

- Insomnia
- Night Terrors
- Sleep Apnea
- Narcolepsy...meet Rusty

You are getting very
sleepy.....



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Hypnosis- “Dissociated consciousness’

- What? Procedure where hypnotist suggests a person will experience changes in sensations, perceptions, thoughts, feelings or behaviors.



- Who? Not everyone can be easily hypnotized. More responsive subjects have vivid fantasies, cooperation. Test is given for suggestibility.
- How? Trust, concentrate (sound, image) then suggests what will happen.
NOT ASLEEP...because you can control your behavior.

Why does it work?

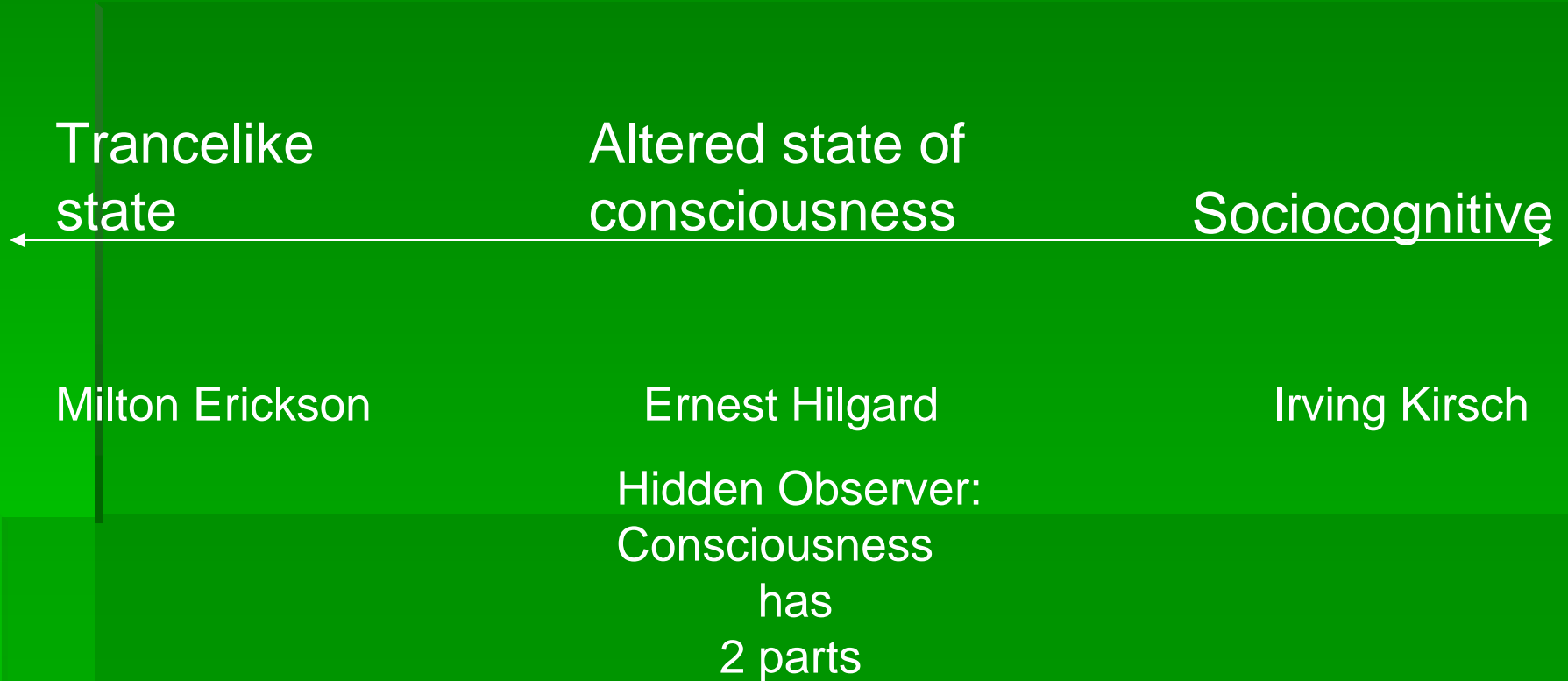
- **Altered State Theory**

- Not a trancelike state, but altered state of consciousness.

- **Sociocognitive Theory**

- Due to social influences and pressures. Subject is doing this to self, to please others, the hypnotists.

Hypnosis Continuum



Uses for Hypnosis

- Medical/Dental
- ***Reduce pain
- Reduce fear and anxiety
- Best at reducing pain vs. quit smoking

Ten Box Questions

Chapter 7/8 Consciousness

<p>1. Write a typical night's sleep. Include the correct order of the stages involved. (Think human sleep cycle).</p>	<p>6. Which three parts of the brain are actually involved in dreaming?</p>
<p>2. Explain the difference between REM and NREM sleep. When does dreaming take place? _____</p>	<p>7. What is the difference between the way Freud viewed "The Unconscious" and the way psychologists view it today (implicit memory)</p>
<p>3. Why do scientists think we dream? State four of the theories we discussed.</p> <p>A B C D</p>	<p>8. Explain the two theories of how hypnosis works:</p>
<p>4. What is the difference between latent and manifest content?</p>	<p>9. Explain the following theories of sleep: Circadian/Adaptation Restorative/Repair</p>
<p>5. What is the purpose of REM sleep? How do psychologists know this for sure?</p>	<p>10. Explain the activation synthesis theory.</p>