Hypnosis

A brief introduction

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Tonight’s agenda

• 19:00 – 19:30  Introductory lecture
• 19:30 – 19:40  Break
• 19:40 – 20:00  Hypnosis demonstration with EEG
• 20:00 – 20:15  Writing your own scripts
• 20:15 – 20:30  Break
• 20:30 – 21:00  Working on your own scripts
Part 1

HYPNOSIS –
A BRIEF INTRODUCTION
Hypnosis
History of hypnosis

James Braid (1790 – 1865)
What is hypnosis?

- **Altered state of consciousness** in which the subject is particularly receptive to suggestions
- **APA definition:**

Hypnosis typically involves an introduction to the procedure during which the subject is told that suggestions for imaginative experiences will be presented. The hypnotic induction is an extended initial suggestion for using one's imagination, and may contain further elaborations of the introduction. A hypnotic procedure is used to encourage and evaluate responses to suggestions. When using hypnosis, one person (the subject) is guided by another (the hypnotist) to respond to suggestions for changes in subjective experience, alterations in perception, sensation, emotion, thought or behavior.
Does it work?

- Not in everybody!
- ~15% of population is highly hypnotizable
- *Harvard Group Scale of Hypnotic Susceptibility*
- *Stanford Hypnotic Susceptibility Scale:*
  - Around 13 – 15% of the population pass the ‘difficult’ items
<table>
<thead>
<tr>
<th>Item</th>
<th>Brief Characterization</th>
<th>SHSS:C Pass, Based on 0-3 Scoring of SPS</th>
<th>Percentage Passing in SPS Standardization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Easier Items</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recall of meal</td>
<td>Hypermnesia or short regression over a week</td>
<td>3</td>
<td>46%</td>
</tr>
<tr>
<td>Personality alteration</td>
<td>Reduced intelligence</td>
<td>2 or 3</td>
<td>36%</td>
</tr>
<tr>
<td>Agnosia: house</td>
<td>Loss of meaning of word &quot;house&quot;</td>
<td>3</td>
<td>34%</td>
</tr>
<tr>
<td>Hand analgesia</td>
<td>Insensitivity to mild shock</td>
<td>3</td>
<td>31%</td>
</tr>
<tr>
<td>Arithmetic impairment</td>
<td>Inability to do simple calculations</td>
<td>2 or 3</td>
<td>30%</td>
</tr>
<tr>
<td>Agnosia: scissors</td>
<td>Loss of meaning of word &quot;scissors&quot;</td>
<td>3</td>
<td>27%</td>
</tr>
<tr>
<td>Heat hallucination</td>
<td>Positive hallucination of heat in non-heated rod</td>
<td>3</td>
<td>27%</td>
</tr>
<tr>
<td>Posthypnotic automatic writing</td>
<td>Hand writes &quot;yes&quot; or &quot;no&quot; opposite to spoken answer</td>
<td>3,</td>
<td>27%</td>
</tr>
<tr>
<td>Hallucinated ammonia</td>
<td>Smells distilled water as ammonia</td>
<td>3</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Harder Items</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selective deafness</td>
<td>Deaf to watch tick</td>
<td>3</td>
<td>17%</td>
</tr>
<tr>
<td>Missing watch hand</td>
<td>Hallucinates hour hand as missing</td>
<td>3</td>
<td>17%</td>
</tr>
<tr>
<td>Music hallucination</td>
<td>Hears hallucinated music clearly</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Hallucinated light</td>
<td>Hallucinates second light, in addition to one lighted, with eyes open</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Posthypnotic verbal compulsion</td>
<td>Says &quot;February&quot; to any presentation of &quot;3&quot;</td>
<td>3</td>
<td>13%</td>
</tr>
</tbody>
</table>
Alcohol...

BEER WILL CHANGE THE WORLD

I don't know how, but it will
What does it do?

<table>
<thead>
<tr>
<th>Frequency Band Name</th>
<th>Frequency Bandwidth</th>
<th>State Associated with Bandwidth</th>
<th>Example of Filtered Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw EEG</td>
<td>0–45 Hz</td>
<td>Awake</td>
<td>![Raw EEG Waveform]</td>
</tr>
<tr>
<td>Delta</td>
<td>0.5–3.5 Hz</td>
<td>Deep Sleep</td>
<td>![Delta Waveform]</td>
</tr>
<tr>
<td>Theta</td>
<td>4–7.5 Hz</td>
<td>Drowsy</td>
<td>![Theta Waveform]</td>
</tr>
<tr>
<td>Alpha</td>
<td>8–12 Hz</td>
<td>Relaxed</td>
<td>![Alpha Waveform]</td>
</tr>
<tr>
<td>Beta</td>
<td>13–35 Hz</td>
<td>Engaged</td>
<td>![Beta Waveform]</td>
</tr>
</tbody>
</table>

Figure 1. Condition effect in theta power.
What does it do?
What does it do?
However...
• Hypnosis derives its effectivity from increased cognitive flexibility
• Theta waves are probably crucial in this!
Let’s try!
HOW TO WRITE YOUR OWN SCRIPTS
Basic features

• Bodily relaxation
• Focus on breathing
  – Required to get into theta state
• Deepening
• Focus on suggestions/voice hypnotist
  – Required to induce
• Reversal stage (waking up)
Create a relaxing atmosphere
Creating a relaxing atmosphere
Relaxation exercise

• Visualization is key!
• Make sure you know your subject (i.e. no use of using a beach visualization if your participant hates the beach)
• Muscle relaxation is important – subject should sit comfortable, but some tension is ok
Relaxation exercise

- Make use of naturally occurring sensations
  - ‘your eyes become heavier’ → they always do!
  - ‘you feel your body sinking into the chair’ → increases attention to feeling the chair!
  - ‘you feel the tension dropping from your shoulders’ → shoulder are usually most tense, will always feel more relaxed
Deepening

- To into deep relaxation, use visualization of a staircase or path leading to an even nicer place
- Count down from 10 to 1
Deepening

- Use visualization to further emphasize relaxation
- Induce sleep
- Keep drawing attention to your voice
Some easy suggestions

- Arm being pushed down
  - Occurs naturally when palm faces upward, strengthens suggestion
- Arm being pulled up
- Finger lock
Awakening

- Gently give the prospect of awakening
- Let subject climb the stairs, slowly counting up and guiding each step
- Give suggestion of increased wakefulness with each step
- At last step: “Eyes open, wide awake!”