Altered States - Crash Course Psychology #10

Crash Course: Psychology
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Lemme get your mind right about hypnosis.
First of all, it's a real thing -- but it's probably not what you think it is.
All kinds of hypnosis-esque practices have been around for centuries, but the Western version of it -- including the kind that you probably associate with people being made to cluck like chickens on stage -- cropped up around the 18th century, that's when German physician Franz Mesmer started treating all manner of medical problems by putting patients into a trance-like state, during which he claimed to align their "internal magnetic forces," which he called "animal magnetism."
And many of these mesmerized patients did feel better, but not because of any magnetism or whatever. Mesmer was inadvertently using the healing power of suggestion.
In addition to his magnetic quackery, other physicians didn't appreciate Mesmer's kitschy penchant for wearing capes and playing ethereal music on a glass harmonica, and eventually he was discredited.
So were his patients just gullible idiots, or was there something else going on?
Well, we've previously defined consciousness as our awareness of ourselves and our environment, and consciousness is at work pretty much whenever we're awake, but also while we're asleep and dreaming.
So hypnosis is a good example of an altered state of consciousness -- when you're fully conscious in the clinical sense, but also not in what you'd consider a normal waking state. As a person who considers himself only the product of one of several states of consciousness, this one that I am currently in right now, it's worth pointing out how TREMENDOUSLY WEIRD THIS IS! My brain has these other gears that it occasionally drops into during which, in a sense, I become not me any more.
Altered states can also include things like hallucinations, and the effects of psychoactive drugs. But these states aren't as uncommon as you might think. In fact, you've probably experienced an altered state yourself… even if you've never taken an illicit drug or been to a cheesy dinner-theater where the main act wore a glittering turban.
[INTRO]
So, personal opinions of Mesmer aside, here are some facts and fallacies worth knowing about hypnosis.
First off, let's define hypnosis simply as a calm, trance-like state during which you tend to have heightened concentration and focus, and in which you're typically more open to suggestion.
The phenomenon has been observed in lots of empirically rigorous studies, and it's been used effectively in treatments for stress and anxiety, weight loss, and chronic pain.
BUT! It's important to understand that even though you're more open to suggestion when hypnotized, you do NOT lose control over your behavior.
So, contrary to what you might see in The Manchurian Candidate or Zoolander, hypnosis can't make you act totally against your will and, say, jump off a building, rob a donut shop, or commit a murder most foul.
Nor is hypnosis a reliable way to enhance the recall of deeply buried memories. We don't file away every single one of our experiences. We only permanently store some of them, and even they tend to mutate over time. We'll be talking all about memory in an upcoming lesson.
Finally, only about 20 percent of us are thought to be highly hypnotizable. Those are the folks whom a hypnotist could get to smile at the smell of sour milk just by suggesting it was rosewater.
And even though we know hypnosis can increase your suggestibility, there's still some disagreement about what exactly constitutes a hypnotic state, or how it's achieved. Remember, just because we observe a phenomenon doesn't mean that we have a clue about its mechanisms of action, or whether it works the way we think it works.
One popular theory looks at hypnosis as phenomenon of social influence. This camp suggests that, like actors caught up in an intense role, hypnotized subjects may begin to feel and act like "good hypnotic subjects" if they just trust their hypnotist to sort of act like a director and focus their attention.
Other researchers suggest that it has more to do with a special dual-processing state of split-consciousness called dissociation.
Dissociation is a sort of detachment from your surroundings, which can range from mild spacing out all the way up to a total loss of your sense of yourself. It's something we all do to some degree or another, and we're often quite aware that we're doing it. It's not hard to think of instances where dissociation might even help us, like when we're faced with a dangerous situation that requires quick, reflexive action and not a ton of focus on our own thoughts and feelings.
In this way, hypnosis may ease pain, not by magically blocking pain receptors, but by helping us selectively not attend to that pain.
Clinicians can do this by basically guiding the patient into a very relaxed, but voluntary state, sort of spaced-out, and then further guiding them through a series of positive thoughts and suggestions.
So, in legitimate clinical hypnosis, people aren't being made to dissociate. Instead, think of them as being asked to dissociate - and some people are better at this than others, which is essentially what being "highly hypnotizable" means.
So, clearly there's a lot going on in our two-track brains at any given time, and hypnosis -- as researchers understand it -- seems to help us tap into some of that adaptive dissociative capacity that we all seem to have.
But say you're not so into the idea of someone feeding you suggestions.
Probably the most classic way to voluntarily enter an altered state of consciousness is by using drugs.
Most of us have used some kind of legal drug… your morning coffee, a beer at lunch, some Tylenol PM to put you the bed… and lots and lots of folks responsibly use prescription and nonprescription drugs.
But of course, some people develop problems.
The more you use a substance, legal or illegal, the less you feel its effects as your tolerance grows. And soon enough, a two-beer buzz turns into a four-beer buzz or a case-of-beer buzz. That's your brain chemistry adapting to offset the drug effect in a process called neuro-adaptation.
Keep on that road and soon you'll risk a physical and/or psychological addiction to the substance you choose, or the substance that chose you. And that's not even to mention serious physiological and neurological damage, as happens with severe and long-term alcohol abuse.
We'll be delving more deeply into the science of addiction in an upcoming episode, but for now, let's take a look at some of these drug families and how they jack you up, knock you out, make you do dumb things, see imaginary stuff, and generally alter your consciousness.
Psychoactive drugs are chemical substances that alter your mood and perception. They're the ones that go right to your brain's synapses, mimicking the functions of neurotransmitters. They also work by tapping into the psychological component - in other words, the user's expectations about what substance use might mean.
Like if you really believe that drinking tequila makes you more aggressive, and I give you a virgin margarita, your mere expectation of getting all surly and aggro may actually lead you to punch someone in the neck. That's also called the placebo effect.
Whether smoked, snorted, ingested, or injected, we'll put all of them into three general categories: depressants, stimulants, and hallucinogens.
Depressants, like alcohol, tranquilizers, and opiates, do exactly what you'd expect--they bring the mellow, slow body functions, and suppress neural activity.
Historically, the world's favorite depressant is alcohol. Beat writer William S. Burroughs even called it "our national drug." A little bit of hooch may get the party started, but not because it's stimulating anyone. Rather, it's acting as a disinhibitor, impairing your brain's

judgment areas, while reducing your self-awareness and self-control.
And then because alcohol disrupts memory formations you may wake up wondering where one of your eyebrows went.
Similar to booze, tranquilizers, or barbiturates, depress nervous system activity and may be prescribed to ease anxiety or insomnia, though high doses can negatively affect memory and judgment.
And really high doses, or bad interactions with other substances like alcohol, can kill you.
Opiates, like poppy-flower superstar opium and its derivatives morphine and heroin, work in a similar way, depressing neural activity and enveloping the brain in a fog of no-pain bliss. The thing is, if a brain keeps getting flooded with outside opiates, it will eventually stop brewing its own natural pain killing neurotransmitters, endorphins. The resulting withdrawal is particularly nasty.
Stimulants, obviously, excite rather than suppress neural activity, and speed up body functions, bringing up your energy, self-confidence, and changing your mood. On the legal end of the spectrum here, we've got caffeine, nicotine, and prescription amphetamines, building up to the more serious illegal stuff like street amphetamines, meth, Ecstasy, and cocaine.
And you know who loved his coke? Freud. He loved i—t so much—it cheered him up when we was feeling down, opened up his mind, and turned him into chatty Kathy. He even wrote his first big publication, "Über Coca" in 1884 about it. During his famous coke years in his late 20s and 30s, he believed that the drug was a viable cure for morphine addiction. Which… not so much.
Luckily he gave his nose a rest and finally dropped the habit by his 40s to focus full-time on his cigar addiction. Which is the thing that ultimately killed him.
Cocaine hits the bloodstream in a flash of energetic euphoria that quickly taxes the brain's supply of dopamine, serotonin, and norepinephrine. Methamphetamine also triggers the release of dopamine. You'll remember from our lesson on neurotransmitters how these chemical messengers affect our moods, emotions, attention, and alertness. So when those neurotransmitters are excessively activated, they can become temporarily depleted, which is what causes that agitated, depressive crash that users often feel.
If you drink coffee every morning, and then you skip a day, you'll likely be tired and cranky with a pounding headache. Now multiply that awful feeling by like thousands and you'll see why people with coke and meth addictions might keep chasing that high while their bodies and lives fall apart around them.
In addition to depressants and stimulants, we've got hallucinogens, which come in a variety of plant and fungal forms, as well as synthetic forms like LSD or lysergic acid diethylamide. Also called psychedelics, these drugs distort perceptions and evoke sensory images in the absence of actual sensory input.
Which means you could end up seeing, hearing, smelling, or feeling things that are not real. This could be quite nice, if you're like, petting baby dolphins or something, but it could also be panic-inducing and generally messed up, if you think you've got a bunch of centipedes crawling under your skin.
The thing is, there are lots of ways to involuntarily hallucinate without the use of drugs. Seizures, brain injuries, diseases, sensory deprivation, fever, stress, or even extreme grief or depression can all cause neurological disturbances that spur hallucinations of one kind or another.
Many healthy people have reported experiencing vivid auditory hallucinations when in emergencies, like, you broke your knee skiing and you wanted to just fall asleep forever in that blanket of soft snow, but a strong, seemingly audible voice ordered you to KEEP MOVING.
And bizarrely, it isn't uncommon for people who lose the use of one sense—like vision or smell--to perceive sights and odors they are no longer capable of sensing as their brains pull from old memories to produce hallucinations as a way to compensate for that loss.
All this just goes to show that whether you're a psychologist, neuroscientist, or philosopher, our various states of consciousness provide a rich, complex world of inquiry to contemplate, showing yet again, just what a messy and marvelous thing the human mind is.
If your consciousness wasn't too altered today, you learned what hypnosis is and what it can and can't do; how psychoactive depressant, stimulant, and hallucinogenic drugs work on the brain; and how non-drug induced hallucinations can happen to anyone.
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