

Discovering Psychology: Updated Edition

24 Applying Psychology in Life

- 1 01:28:38:27 >> ZIMBARDO: How can the study of psychology help you get a better night's sleep, improve the quality of space flight for astronauts, improve our judicial system...
- 2 01:28:49:15 >> ...guilty of first-degree...
- 3 01:28:52:25 >> ZIMBARDO: ...and help resolve conflicts?
- 4 01:28:57:02 Taking psychology out of the laboratory and applying it to the world around us is next on *Discovering Psychology* .
- 5 01:29:36:23 >> ZIMBARDO: The practical applications of psychology reach far beyond the therapist's couch.
- 6 01:29:42:05 Using psychology to better manage our lives and improve the human condition has long been a vital aspect of psychological science.
- 7 01:29:50:18 In this program, we will take you to a number of real-world situations in which psychological research helps us to master what we do and improve how we live in a complex modern world.
- 8 01:30:02:14 Psychologists apply their knowledge to many practical areas of life, among them education, human factors, law, promotion of peace, and health.
- 9 01:30:13:19 One important aspect of health psychology is sleep, where we spend a third of our life.
- 10 01:30:21:15 Some of the early research in sleep and dreaming began in the 1950s with the work of psychologist Rosalind Cartwright.
- 11 01:30:29:09 A pioneer in her field, Dr.
- 12 01:30:30:29 Cartwright explores sleep disorders and how dreams act as regulators for our emotions.
- 13 01:30:37:22 Her research continues to open the door for others to study the psychology of sleep, like Professor James Maas, who spends many waking hours educating the public about sleep deprivation.

- 14 01:30:51:02 >> Being tired during the day is an abnormal state not a normal state.
- 15 01:30:57:08 56% of shift workers fall asleep on the job at least once a week.
- 16 01:31:04:28 These are people flying us to Europe.
- 17 01:31:10:11 The first 747 commercial captain I asked, "Do you ever get drowsy in the cockpit?" He said, "It is not unusual for me to fall asleep in the cockpit and wake up 20 minutes later only to find the other two crew members totally asleep."
- 18 01:31:29:01 >> ZIMBARDO: Adults need a solid eight hours of sleep a night.
- 19 01:31:32:22 High school and college students need more than nine hours, but typically get six or less.
- 20 01:31:40:00 >> One of my favorite things to talk about in Psych 101 is what happens when you pull an all nighter.
- 21 01:31:47:21 Well, if you take a normally rested student and give that student what we call a functional MRI -- magnetic resonance imagery -- while they're doing, let's say, a math problem, the parietal lobe, which is the home, or the repository of all of our math skills, is firing away like mad in the cerebral cortex, and the student is getting the problem right.
- 22 01:32:10:01 Have that student pull an all nighter and work on the same problem and you will be lucky to find any activity going on in the brain whatsoever.
- 23 01:32:31:01 >> ZIMBARDO: Whether it's academic work or athletics, sleep enables you to retain newly acquired information by helping to lay down a physical record of it in your brain.
- 24 01:32:42:08 Sleep helps control heart functions, regulates hormonal activity, and is critical for the formation of long-term memory.
- 25 01:32:52:09 >> Because it is primarily during the first two hours and the last two hours of at least an eight-hour night that all of this memory formation goes from short-term to long-term.
- 26 01:33:05:02 So if you're getting less than eight hours of sleep, you are operating on half a battery.
- 27 01:33:12:09 Literally, you're stupid.

- 28 01:33:16:00 >> ZIMBARDO: We live in a 24- hour global society and run our lives on a 24/7 schedule, where rest is a luxury few people think they can afford.
- 29 01:33:25:29 No wonder we don't recognize how sleepy we are.
- 30 01:33:30:17 At any time, anyone can come under the spell of drowsiness.
- 31 01:33:37:23 >> Taxpayer's money being used to finance...
- 32 01:33:41:28 >> ZIMBARDO: Sleep analysis is a scientific approach psychologists often use to better understand the debilitating effects of sleep disorders such as apnea.
- 33 01:33:52:28 >> What is sleep apnea?
- 34 01:33:54:06 It's heavy snoring with repetitive pauses in breathing.
- 35 01:33:58:05 I'm going to emulate it, but I can't possibly put out the volume that wakes an entire household up when a person has sleep apnea.
- 36 01:34:06:07 It sounds like this.
- 37 01:34:07:17 (*loud snoring*) (*snoring stops*) And then no breath.
- 38 01:34:13:13 15 seconds, 30 seconds, 45 seconds...
- 39 01:34:16:06 (*gasps*) and a gasping for air.
- 40 01:34:18:20 And this happens up to 600 times a night, caused primarily by an obstruction in the upper airway passage.
- 41 01:34:27:05 Now, anybody who has had 600 apneic episodes a night is very sleepy the next day because you have to wake up for a microsecond in order to begin breathing.
- 42 01:34:39:09 And so you're unaware that you've been up up to 600 times a night, but during the next day, you are tired all day long.
- 43 01:34:50:04 >> ZIMBARDO: Apnea frequently leads to problems such as memory loss, impotence, high blood pressure and most importantly, chronic sleep deprivation.
- 44 01:35:01:04 Whether from a sleep disorder or a hectic lifestyle, lack of sleep is a serious health hazard.
- 45 01:35:08:04 Psychologists continue to study the negative effects of sleep deprivation and use their research to help change public

- awareness about the critical importance of getting a good night's rest.
- 46 01:35:22:08 (*rocket engines roaring*) Psychologists are not just concerned about how we live here on earth.
- 47 01:35:33:11 One of the greatest human achievements of our time has been the exploration of outer space.
- 48 01:35:40:29 While physics, engineering, and computer science have contributed to sending men and women safely into space, increasingly psychology is entering the picture.
- 49 01:35:51:10 After all, it is humans in all their psychological complexity who are living in this brave new world.
- 50 01:35:59:14 Think for a moment what it would be like to exist in a weightless environment.
- 51 01:36:04:03 Up is down, down is up.
- 52 01:36:06:24 There is no frame of reference, yet you are repeatedly required to perform demanding, often highly stressful tasks.
- 53 01:36:14:20 >> That's one small step for man, one giant leap for mankind.
- 54 01:36:22:02 >> ZIMBARDO: Psychologically and physiologically you are challenged by this unique environment.
- 55 01:36:27:06 >> Houston, how did it go, over?
- 56 01:36:29:23 >> ZIMBARDO: Psychologist Mal Cohen of NASA studies the effects of microgravity environments on human interaction, which is part of human factors research in psychology.
- 57 01:36:40:10 >> Put everything in nice order...
- 58 01:36:43:01 >> In the absence of gravity, blood flows in a different way than it does on earth, and the shift of blood to the upper part of the body gives a facial edema, or puffiness, to the face.
- 59 01:36:54:23 >> I may need you to check on...
- 60 01:36:56:04 >> This can mask your ability to understand if a person is smiling or frowning or what the expression on his face really means because the face is always puffy.

- 61 01:37:06:20 Another problem in space is that you and I are seeing one another and communicating with your forehead up and your chin down.
- 62 01:37:15:15 In space, gravity no longer anchors us, and so we can confront one another in multiple orientations.
- 63 01:37:21:20 This makes it much more difficult for you to read the facial expression that I have, or to read my lips.
- 64 01:37:28:20 Now, lipreading can be important in space because space stations can be noisy places.
- 65 01:37:33:29 >> Okay, that copies fine.
- 66 01:37:36:21 (*responding in Russian*) >> And when the noise gets higher, people tend to read lips to make sure that the communication is effective.
- 67 01:37:46:16 So taking those three points -- the facial edema, the noisy background, and the multiple orientations of the face -- communications between astronauts in space could become a problem.
- 68 01:38:02:22 >> ZIMBARDO: As the duration of space travel increases and the crews become more diverse in every way, greater attention is being focused on the human dimension of space flight.
- 69 01:38:14:22 Imagine you're one of a dozen or so people selected to spend three to six months on a permanent space station.
- 70 01:38:20:27 You'll be living with the rest of the crew in a cramped, noisy module.
- 71 01:38:25:11 No privacy or easy ways to escape the daily tensions.
- 72 01:38:32:06 Over time, stress-related medical problems -- including anxiety, depression, and hostility -- become threats to your optimal performance.
- 73 01:38:41:02 >> The manually flying up onto the V-bar and...
- 74 01:38:44:25 >> ZIMBARDO: For the first time in history, NASA funded a program to look at the psychosocial dynamics of space missions.
- 75 01:38:52:14 What better place to do this than on space station Mir?

- 76 01:38:57:29 Mir was a 15-year, Russian-based project from 1986 to 2001 that was designed to study astrophysics and conduct biological research with international crews.
- 77 01:39:14:11 Psychiatrist Nick Kanas at the University of California in San Francisco was granted unprecedented access to study gender, cultural differences, and crew relations aboard space station Mir.
- 78 01:39:28:14 >> We studied a total of 13 astronauts and cosmonauts who had flown in space and 58 people on the ground, both Americans and Russians, who were based at the Russian mission control.
- 79 01:39:40:26 And we were interested in looking at tension, cohesion, and leadership in space; and tension, cohesion, and leadership on the ground; and the relationship between crew members and people on the ground.
- 80 01:39:52:02 There's a phenomenon called displacement, where you don't get along with your boss and you can't express your feelings to your boss so you go home and you yell at your wife or you take it out on somebody else who's innocent.
- 81 01:40:02:01 Well, that kind of phenomenon occurs in space.
- 82 01:40:04:05 >> Another four or five minutes and I think we'll be able to protect the payload.
- 83 01:40:08:08 >> I want you to protect the payload.
- 84 01:40:10:07 >> Sometimes when crew members are mad at people on the ground, it may reflect something about the crew more than the interaction itself.
- 85 01:40:19:18 I think studies like mine are beginning to open the door.
- 86 01:40:23:22 The psychology of these people are really important.
- 87 01:40:26:15 They're not just machines doing jobs.
- 88 01:40:30:21 Not only can you avoid problems and lead to more productivity, but I think one can even enhance the psychological well-being and make these experiences humanistically better for the subjects and the crew members they are launching into space.
- 89 01:40:51:20 >> ZIMBARDO: From solving interpersonal problems in

space to resolving social challenges on the ground, psychological research can improve our lives.

- 90 01:41:00:06 One of the areas in which psychology plays a crucial role is in our legal system.
- 91 01:41:05:06 Psychologists help assess testimony and advise jury selection.
- 92 01:41:09:14 One of the more dramatic uses of psychology in the courtroom involves evidence based on allegations from children.
- 93 01:41:16:16 Today psychological science is being used in law enforcement and in courts to better identify and decipher critical information to help separate fact from fiction.
- 94 01:41:29:02 In the early 1990s, seven people in Edenton, North Carolina, were indicted for sexual crimes based solely on the testimony of children.
- 95 01:41:38:16 >> We, the jury, unanimously find the defendant guilty of first-degree sexual offense.
- 96 01:41:44:08 >> ZIMBARDO: One of them was Little Rascals Daycare owner, Bob Kelly, who was convicted on 99 counts of child sexual abuse.
- 97 01:41:53:00 After having served several years in jail, the charges were overturned upon appeal.
- 98 01:42:02:09 Psychologist Stephen Ceci of Cornell University investigates the credibility of child witness testimony, how it was obtained, and how it stands up in court.
- 99 01:42:14:07 >> If you look at the mass allegation daycare cases, especially the ones in the '80s and early '90s, like the Edenton Little Rascals case in North Carolina, they all have something in common.
- 100 01:42:27:07 There is an initial disclosure made by one child -- it might be to a pediatrician, it might be to a parent, it might be to a teacher -- but the child says something that's interpreted suspiciously, that someone or group of persons did something to them.
- 101 01:42:42:06 And then what you find in these cases is a barrage of bad interviewing tactics.

- 102 01:42:47:06 By that, I mean things like repeated suggestions over long periods of time, encouraging the child to fantasize or engage in pretense play.
- 103 01:42:59:09 >> Bridget, who killed the babies?
- 104 01:43:01:17 >> Sometimes Ms. Betsy or Mr.
- 105 01:43:03:16 Bob.
- 106 01:43:05:12 >> Now, you told Ms. Judy it happened in outer space, didn't you, Bridget?
- 107 01:43:11:20 >> It was a space ship.
- 108 01:43:15:11 >> They're interested in getting the goods.
- 109 01:43:17:09 They're not interested in testing alternative explanations of their suspicion.
- 110 01:43:21:28 They're interested in confirming their pet explanation.
- 111 01:43:27:26 >> ZIMBARDO: There are over three million children interviewed every year by law enforcement, child protection, and mental health services.
- 112 01:43:36:13 So it's imperative to use forensic interviewing methods that get the facts of an event in the child's own words without repeated, leading, or suggestive questions.
- 113 01:43:48:24 >> A therapeutic interviewer engages the child in activities that a forensic interviewer would never use.
- 114 01:43:53:02 >> Jamie, can you tell me, did you like that school?
- 115 01:43:56:04 >> A therapist that's interviewing a child may feel that the child is not disclosing because there's some emotional blockage maybe due to fear, and they'll say things to a child like, "Don't be afraid to tell.
- 116 01:44:08:24 You'll feel better once you tell."
- 117 01:44:10:25 Now, therapeutically speaking, that's not a bad thing to do.
- 118 01:44:15:04 Forensically speaking, it's a very bad thing to do.
- 119 01:44:18:14 Scientific research shows that when you give those kinds of instructions, you increase the rate of false responding by the child.

- 120 01:44:26:14 They have a hard time distinguishing things that they really remember from things that they imagined.
- 121 01:44:33:27 >> I wasn't there that day, and I want to know what happened when you came to visit.
- 122 01:44:39:02 >> He was doing it so fast that...
- 123 01:44:42:01 >> ZIMBARDO: Contrary to thinking of children as being naively unbiased in recalling an event, Ceci has conducted research which reveals what can happen when a child is repeatedly suggestively interviewed.
- 124 01:44:52:26 >> ...ripped off.
- 125 01:44:53:20 >> Really?
- 126 01:44:56:04 >> I'm going to show you a little boy.
- 127 01:44:57:23 He's four years old.
- 128 01:44:58:23 The first time he's asked the question, "Did you ever get your finger caught in a mousetrap and have to go to the hospital?" he correctly says no.
- 129 01:45:05:22 "Never been to a hospital."
- 130 01:45:07:05 "We don't have a mousetrap at our house."
- 131 01:45:09:26 And then the interviewers ask him to pretend that he got his finger caught in a mousetrap, to imagine what it would feel like, and so on.
- 132 01:45:17:00 And the interviewer asked him to do that week in, week out for eight, ten, 12, 14 straight weeks.
- 133 01:45:25:02 >> Yeah, and then what happened?
- 134 01:45:26:12 >> And then... and then I went downstairs and said, "Daddy, I want you..." and then it got stuck in the mousetrap.
- 135 01:45:36:20 >> Oh, down in the basement?
- 136 01:45:37:29 Was your daddy down in the basement?
- 137 01:45:40:18 >> Yeah.
- 138 01:45:41:15 >> Yeah?

- 139 01:45:42:03 What was he doing?
- 140 01:45:43:11 >> He was... he was collecting firewood.
- 141 01:45:47:20 >> Oh.
- 142 01:45:48:18 >> And you'll notice how believable he is, because he's not lying.
- 143 01:45:53:27 He's come to internalize the fantasy play, the imaginations, and the suggestions.
- 144 01:45:59:19 >> I bought it yesterday.
- 145 01:46:01:23 A mouse was there yesterday.
- 146 01:46:04:11 I caught my finger in there yesterday.
- 147 01:46:07:03 >> Yesterday.
- 148 01:46:08:02 So when did you go to the hospital?
- 149 01:46:10:15 >> Yesterday.
- 150 01:46:11:06 >> Yesterday?
- 151 01:46:13:16 And do you... did you take the bandage off your finger?
- 152 01:46:16:15 I see it's not there now.
- 153 01:46:18:06 >> When a child's lying, when they're trying to deliberately mislead their listener, there's always inconsistencies from session to session and even within sessions.
- 154 01:46:27:06 >> Yesterday you took your bandage off, too.
- 155 01:46:29:24 >> In other words, none of the telltale signs of lying are on these kids' faces, and that's why experts, when they look at them -- whether they're psychiatrists, psychologists law enforcement, judges -- are misled by them.
- 156 01:46:42:14 They say, "Well, yeah, that had to have happened.
- 157 01:46:45:21 You can't get a kid to make up something like that or to lie that convincingly."
- 158 01:46:49:10 And we say, "You're right, we don't think they're lying."
- 159 01:46:52:27 We think they've come to believe it themselves because we

have repeatedly suggestively interviewed them over fairly long periods of time -- that's what a kid can look like.

- 160 01:47:05:21 >> ZIMBARDO: The research of psychologists such as Dr. Ceci is designed to optimize the accuracy of what children say and ultimately to improve how justice is served.
- 161 01:47:17:27 >> I'll often get calls from judges' organizations asking me to come and do a full-day workshop for them.
- 162 01:47:24:04 And oftentimes those workshops develop into sets of uniform guidelines for interviewing kids in their jurisdictions.
- 163 01:47:32:10 >> Susie, tell me in your own words what happened that day.
- 164 01:47:39:06 >> And again I find that really heartening as someone who wants to have their research valid beyond the laboratory.
- 165 01:47:47:08 >> ZIMBARDO: From courtrooms to classrooms, a major interest of many applied psychologists is discovering ways to prevent or modify conflicts.
- 166 01:48:00:27 Increasingly, violence among the young has become a tragic commonplace.
- 167 01:48:05:27 Youth hostility all too frequently makes the headlines as unresolved anger, pain, and fear are expressed in deadly ways.
- 168 01:48:23:21 >> How would you empathize...
- 169 01:48:25:02 >> ZIMBARDO: Jared Curhan of MIT's Sloan School of Management has developed the Program for Young Negotiators.
- 170 01:48:31:19 Used in many states and several countries, the program teaches effective conflict-negotiating techniques to adolescents.
- 171 01:48:38:21 >> ...like I wasn't there, she kind of just ignored me.
- 172 01:48:41:20 >> Oftentimes in the program, we teach negotiation by showing what might happen if you're not using effective negotiation skills and then what might happen if you start to use effective negotiation skills.
- 173 01:48:54:20 >> Guess what, Erica.

- 174 01:48:56:05 >> What?
- 175 01:48:57:10 >> ZIMBARDO: Professor Curhan teaches problem-solving techniques by having young students role-play a scene using alternative strategies.
- 176 01:49:05:21 >> Take one, which shows you without using effective negotiation what happens when there's an angry person.
- 177 01:49:13:17 >> Erica?
- 178 01:49:14:23 I can't believe you told Bob my secret when I told you not to.
- 179 01:49:17:16 >> Sorry.
- 180 01:49:18:26 >> No, you're not sorry, Erica, because it's just... you... I trusted you and you...
- 181 01:49:24:07 >> Oh, well.
- 182 01:49:25:21 >> Oh, no, Erica, that's wrong that you told, okay?
- 183 01:49:28:10 >> You want me to say sorry, so I did that, and you need to leave now because...
- 184 01:49:32:09 >> Right now is when I want to talk about it, and it's my problem that you told...
- 185 01:49:36:13 >> ZIMBARDO: In this case, Lindsey approaches Erica with anger and hostility.
- 186 01:49:41:01 >> You know, I can't erase it.
- 187 01:49:43:05 >> ZIMBARDO: Erica reacts defensively without trying to understand Lindsey's perspective.
- 188 01:49:48:00 >> You're not a friend to me anymore.
- 189 01:49:49:13 >> Oh, well, I have other friends.
- 190 01:49:51:11 >> Good.
- 191 01:49:52:07 >> See ya.
- 192 01:49:54:03 >> I can't believe you.
- 193 01:49:55:06 >> Then, take two, where there's an angry person, and they're actually dealing with the angry person in a productive, constructive way and ultimately can resolve the

conflict that's there.

- 194 01:50:08:01 >> Erica!
- 195 01:50:09:10 I can't believe you told Bob, Erica.
- 196 01:50:11:08 I told you not to tell Bob the secret I told you, remember?
- 197 01:50:14:29 >> Sorry.
- 198 01:50:16:05 >> I can't believe you told, Erica.
- 199 01:50:18:05 >> Can I just tell you...
- 200 01:50:19:03 >> No, Erica, I can't believe you told, because... that blows it.
- 201 01:50:23:03 That just blew our friendship -- over a secret, Erica.
- 202 01:50:25:14 >> Okay, I understand how you feel, and I'm really, really sorry.
- 203 01:50:28:29 Can I just tell you what happened?
- 204 01:50:30:27 >> I guess.
- 205 01:50:31:15 Go.
- 206 01:50:32:11 >> What happened was, I was just eating lunch, and then Bob just came up to me and he started blabbing about how much you were so pretty and stuff, and then he got to the question where, you know, "Does Lindsey like me, does Lindsey like me?" And then I was just so nervous and he kept asking and asking, and I guess I just kind of blurted it out.
- 207 01:50:50:23 (*sighs*) >> Oh, okay.
- 208 01:50:52:24 I'm so really mad at you, but I just want you to tell me before anything goes, you know, just like that.
- 209 01:50:58:28 >> I'll try not to get so nervous.
- 210 01:51:00:24 >> ZIMBARDO: What's different this time is that Erica first listens to Lindsey, then empathizes with her, opening up effective communication, and ultimately conflict resolution.
- 211 01:51:10:23 >> Okay then, um, I'll just...
- 212 01:51:12:20 I'll see you tomorrow then.

- 213 01:51:14:10 It's okay, don't worry about it.
- 214 01:51:16:01 I'm okay now.
- 215 01:51:16:26 >> Okay.
- 216 01:51:18:00 >> The objective of the program is to train kids to be incredibly effective at achieving their goals without the use of violence.
- 217 01:51:26:16 We teach some of the most powerful skills that we know.
- 218 01:51:31:02 These are the same skills that are taught in business schools, in schools of government, in schools of education or law, and we take those same skills and teach them to middle school students, and those are skills for achieving your goals that don't involve violence.
- 219 01:51:48:02 >> ZIMBARDO: There are various levels of negotiation for the complexities of conflict at home and around the world.
- 220 01:51:56:08 >> People often assume that negotiation is about getting what you want -- that people go into a negotiation with a fixed set of preferences, goals, or objectives and that the negotiation process is just about achieving those specific, stable, unchanging objectives.
- 221 01:52:15:23 Results from the research that I've been doing suggest that negotiation is about changing what we want.
- 222 01:52:23:17 Negotiation is about going into a situation and deciding what would make us happy, what would make us feel satisfied.
- 223 01:52:32:06 And throughout the process of the negotiation, we learn what we want.
- 224 01:52:41:00 >> ZIMBARDO: Violence and conflict prevent us from living our lives fully as individuals and as communities.
- 225 01:52:50:02 Discovering methods that can diffuse tension and promote peace among nations is the goal of increasing numbers of psychologists who embrace the psychology of peace.
- 226 01:53:02:01 Of all of psychology's applications, it could be the most important.
- 227 01:53:08:19 These are but a few examples that illustrate applied psychology in action.

- 228 01:53:13:20 Psychological research continues to improve and enhance individual and societal well-being by better integrating political, economic, legal, health, and educational realms of existence in our daily lives.
- 229 01:53:27:26 In our next program, we move from these broad areas of psychology to investigate the individual psyche in action.
- 230 01:53:34:24 We will explore what happens in the brain when a person perceives, remembers, learns, imagines, forms prejudice, and where in the brain those actions are taking place.
- 231 01:53:46:16 The complex world of cognitive neuroscience is next on *Discovering Psychology* .
- 232 01:53:51:29 I'm Philip Zimbardo.
- 233 01:53:57:13 [Captioned by The Caption Center WGBH Educational Foundation]
- 234 01:54:33:05 >> *Funding for this program is provided by Annenberg/CPB to advance excellent teaching* .