Drive reduction theory

A popular theory of the 1940s and 1950s that attributed behavior to the desire to reduce tension produced by primary (biological) or secondary (acquired) drives.

Many psychologists believed that all motivation depended upon the pleasure experienced when basic needs are met. A person who is hungry, for instance, eats in order to reduce the tension that hunger produces. All human behavior could be attributed to the pleasure gained when these drive-induced tensions were reduced.

Drive reduction theory lost favor over the years because it failed to explain human actions that produced, rather than reduced, tension. Many people enjoy riding roller coasters or skydiving, for instance, despite the fact that such activity may cause fear and anxiety. Similarly, drive theory could not adequately explain sexual behavior in humans or animals. For example, experiments showed that rats persisted in seeking sexual gratification even when their biological urges to mate were interrupted and thus tension was not reduced.

More modern motivational theory includes the principle of optimal arousal, that is, individuals act to main-
tain an appropriate—rather than a minimal—level of stimulation and arousal. Optimal levels vary from person to person, which explains why some people drive race cars and others prefer an evening at the symphony.

Further Reading

### Drugs/Drug abuse

Any chemical substance that alters normal biological processes.

**Psychoactive drugs** alter behavior, thought, or emotions by changing biochemical reactions in the nervous system. They can be addictive (habit-forming), and they can be legal or illegal.

Drug abuse is the self-administration of drugs in ways that depart from medical or social norms, and it can lead to psychological or physical dependence. Physical dependence, or addiction, which can occur together with psychological dependence, is characterized by withdrawal symptoms and can involve increased tolerance for the drug. The causes of substance abuse are multiple: some people are high-risk for dependence due to genetic or physiological reasons; others become dependent on drugs to cope with emotional or social problems, or physical pain.

**Depressants** reduce activity of the central nervous system. The most common depressant drug is alcohol, which calms, induces sleep, decreases inhibitions and fears, and slows reflexes. With continued use, the nervous system accommodates alcohol, requiring increasing amounts to achieve the alcoholic state, and produces withdrawal symptoms. Sedatives are another major category of depressants, notably barbiturates, such as Secoanal and Nembutal. Overdoses can be fatal, and withdrawal symptoms are among the most severe for any drug. Anxiolytics (traditionally referred to as tranquilizers) are also sedatives and include the benzodiazepines (Librium, Valium) and meprobamate (Miltown). Many users of these drugs become both psychologically and physically dependent, and their withdrawal symptoms resemble those of barbiturate takers. Taken in combination with alcohol, anxiolytics can be fatal. Anxiolytics are still used in the clinical treatment of anxiety and are the most widely prescribed and used legal drugs. Because they pose little danger of death from overdose, the benzodiazepines have remained popular for the treatment of patients suffering from anxiety. A new member of this class of drug, Xanax, has also been widely used in the treatment of panic disorders and agoraphobia.

**Narcotics**, such as opiates which include heroin and its derivatives, are drugs with sedative properties; they are addictive and produce tolerance. They have a complex combination of effects, causing both drowsiness and euphoria, and are also pain-killers. Eaten, smoked, inhaled, or injected intravenously, heroin impairs the respiratory system, induces changes in the heart and blood vessels, constipation, and loss of appetite. It is derived from morphine, but is several times more powerful. An overdose of heroin can result in death.

**Psychedelics**, or hallucinogens, such as marijuana, are consciousness-altering drugs that affect moods, thought, memory, and perception. They can produce distortion of body image, loss of identity, and hallucinations. Usage can produce impaired performance on intellectual and psychomotor tasks, psychoses, and psychological dependence. LSD (lysergic acid diethylamide) is one of the most powerful psychedelic drugs. It can cause bizarre hallucinations, its effects are highly unpredictable, and some users suffer long-term side effects. While low doses of marijuana are considered relaxing and relieve anxiety with minimal health risks, long-term usage in larger amounts may cause major health hazards such as asthma and other respiratory disorders, suppression of the immune system, and heart problems.

**Psychostimulants**, such as amphetamines and cocaine, are drugs that in moderate or low doses increase mental and behavioral activity. They stimulate alertness, reduce fatigue, increase excitability, elevate moods, and depress appetites. Benzedrine, Dexedrine, Methedrine, (also called “uppers” or “speed”), raise the heart rate and blood pressure, constrict blood pressure, shrink mucous membranes (thus their use as decongestants), and reduce appetite. Many people abuse amphetamines in order to lose weight, remain productive and alert, or to “get high.” The symptoms of severe amphetamine abuse can resemble those of paranoid schizophrenia. Cocaine and its derivative, “crack,” are both highly addictive and take effect more rapidly than amphetamines. Overdoses, especially of crack, can be fatal, and small doses may induce cardiac arrest or stroke. Cocaine addiction is especially difficult to break.

Two popular stimulants that most people do not consider “drugs” are caffeine and nicotine. Caffeine is found in coffee, tea, chocolate, and many soft drinks. It decreases drowsiness and speeds up thought, but at high doses can produce anxiety and induce tremors. Caffeine is addictive; its withdrawal symptoms include headaches, fa-