

## CHAPTER 7

# BIOLOGICAL PROCESSES AND PERSONALITY

### CHAPTER OUTLINE

- Early Ideas: Eysenck's Views on Brain Functions
- Incentive Approach System
  - Behavioral Approach
  - More Issues in Approach
  - Neurotransmitters and the Approach System
- Behavioral Avoidance, or Withdrawal, System
  - Neurotransmitters and the Avoidance System
- Relating Approach and Avoidance Systems to Traits or Temperaments
  - The Role of Sociability
  - The Role of Impulsivity
- A Third Dimension: Sensation Seeking, Constraint, and Effortful Control
  - Sensation Seeking
  - Relating Sensation Seeking to Traits and Temperaments
  - Two Sources of Impulse and Restraint
  - Neurotransmitters and Impulse versus Constraint
- Hormones and Personality
  - Hormones, the Body, and the Brain
  - Early Hormonal Exposure and Behavior
  - Testosterone and Adult Personality
  - Cycle of Testosterone and Action
  - Testosterone, Dominance, and Evolutionary Psychology
  - Responding to Stress: Men, Women, and Oxytocin
- Assessment
  - Electroencephalograms
  - Neuroimaging
- Problems in Behavior, and Behavior Change
  - Biological Bases of Anxiety and Depression
  - Biological Bases of Antisocial Personality
  - Medication in Therapy
- Biological Processes and Personality: Problems and Prospects
- Summary

### CHAPTER SUMMARY

The idea that personality is tied to the biological functions of the body leads to a variety of possibilities involving the nervous system and the hormone system. An initial approach of this sort was Eysenck's theory that brain processes underlie extraversion and neuroticism. He argued that introverts are more cortically aroused than extraverts and that people high in neuroticism are emotionally aroused.

Others have taken a different path, relying on newer knowledge. It is now often argued that personality rests on a *behavioral approach system (BAS)* that responds to incentives and an avoidance system that responds to threats. Work on emotions suggests that the approach system involves (in part) the left prefrontal cortex, and that the withdrawal system involves (in part) the right prefrontal cortex. The threat system seems to represent the biological basis for the trait of neuroticism. Some suggest that the BAS represents the biological basis for extraversion.

Many people now believe it is useful to assume another biological system that is responsible for variations in impulsiveness and sensation seeking (the tendency to seek out novel, complex, and exciting stimuli). Sensation seeking relates to Eysenck's psychoticism dimension and Tellegen's constraint dimension, and both relate to the temperament of *effortful control*. Variation in these qualities may be grounded in differences in the functions that cause people to take into account other people and long-term goals.

Another aspect of the biological view on personality focuses on the role in behavior played by hormones. Exposure to male hormones before birth can cause people years later to choose more aggressive responses to conflict and can increase girls' preference for boys' toys. Testosterone in adults relates to dominance behavior, sometimes expressed in antisocial ways. Testosterone also fluctuates with the context, increasing with challenges and victories and decreasing with failures.

An emerging area of work examines the possibility that another hormone, called *oxytocin*, is important in human social behavior. Oxytocin appears to relate to female responses to stress, termed a *tend-and-befriend response*. The roots of this response may be in the attachment system, and it may relate to social bonding more generally.

The biological process approach to personality suggests it may be possible to assess personality through biological functions. Although the attempt to do this is in its infancy, some believe recordings of brain activity—particularly fMRIs—hold great promise for the future.

With regard to problems in behavior, high levels of threat sensitivity activity promote disorders involving anxiety. Either a high threat response or a low approach response may contribute to depression. High approach–low avoidance can yield symptoms of antisocial personality, which also relates to impulsive sensation seeking and testosterone. This orientation to personality suggests that therapy based in part on medication is a means to bring about behavioral change. The idea is that medication can influence the underlying biological system, thereby altering the person's behavior and subjective experience.

## KEY TERMS

Anabolic steroids: Chemicals that mimic the body's tendency to rebuild muscle tissues.

Antisocial personality: A person who displays impulsive action with little thought to consequences.

Avoidance or withdrawal system: The part of the brain that regulates responses to punishment.

Behavioral approach system (BAS): The part of the brain that regulates pursuit of incentives.

Dopamine: A neurotransmitter believed to be especially important to approach regulation.

Electroencephalogram (EEG): A record of overall electrical activity in higher regions of the brain.

Functional magnetic resonance imaging (fMRI): Use of MRI to create a picture of activity inside the brain in different mental states.

GABA: A substance, low levels of which appear to be linked to anxiety disorders.

Impulsive unsocialized sensation seeking (IUSS): Trait involving the capacity to inhibit behavior in the service of social adaptation.

Incentives: Things that people desire.

Magnetic resonance imaging (MRI): A picture of activity inside the brain based on the brain's electromagnetic energy.

Monamine oxidase (MAO): A substance that helps regulate several neurotransmitters that seems to be involved in constraint over impulses.

Neurotransmitter: A chemical involved in sending messages along nerve pathways.

Norepinephrine: A neurotransmitter that some believe is important in anxiety responses.

Oxytocin: A hormone that appears to be important in social bonding.

Pharmacotherapy: A therapy based on use of medication.

Positron emission tomography (PET): A picture of activity in the brain based on the brain's metabolism.

Sensation seeking: The tendency to seek out varied, unusual, and exciting stimuli.

Serotonin: A neurotransmitter that some believe is involved in anxiety and others believe is involved in constraint over impulses.

Testosterone: Male sex hormone that influences a wide range of behaviors.

## TEST ITEMS

### Multiple Choice

- (b/140) 1. Eysenck suggests that differences between introverts and extraverts are based on differences in:
- exposure to hormones prior to birth.
  - cerebral cortex activation.
  - how parents respond to young infants.
  - endocrine functioning.
- (a/140) 2. Relative to extraverts, introverts have \_\_\_\_\_ levels of cortical arousal.
- higher
  - lower
  - similar
  - more fluctuating
- (a/140) 3. Introverts are characterized by a:
- preference for lower levels of stimulation.
  - base level of lower cortical arousal.
  - lower degree of alertness.
  - all of the above
- (d/140) 4. According to Eysenck's theory of cortical arousal:
- introverts should prefer lower levels of stimulation.
  - extraverts seek stimulation to increase arousal.
  - introverts have higher baseline levels of alertness.
  - all of the above
- (b/141) 5. In studies of drug effects on introverts, they:
- were less responsive to stimulants and depressants than were extraverts.
  - needed more of a depressant drug to reach a level "unalertness" than did extraverts.
  - needed more of a stimulant to reach a given level of arousal than did extraverts.
  - none of the above
- (c/141) 6. Eysenck argued that the intensified emotional arousal associated with neuroticism:
- makes extraverts less extraverted.
  - makes introverts less introverted.
  - makes extraverts more extraverted and introverts more introverted.
  - does not interact with extraversion or introversion.

- (a/141) 7. The BAS is assumed to be involved when a person is:
- a. pursuing an incentive.
  - b. avoiding a punishment.
  - c. experiencing negative emotion.
  - d. experiencing neutral emotion.
- (d/141- 8. The behavioral approach system or BAS:  
142)
- a. is involved with approach tendencies.
  - b. moves the person toward desired incentives.
  - c. is responsible for creating positive emotions.
  - d. all of the above
- (c/142) 9. Incentives and positive feelings lead to:
- a. more right prefrontal cortex activity.
  - b. less right prefrontal cortex activity.
  - c. more left prefrontal cortex activity.
  - d. less left prefrontal cortex activity.
- (d/143) 10. The neurotransmitter \_\_\_\_\_ is thought to be critically involved in the system that engages in the approach system.
- a. epinephrine
  - b. norepinephrine
  - c. GABA
  - d. dopamine
- (d/143) 11. Dopamine has been associated with:
- a. higher positive emotionality.
  - b. greater social dominance.
  - c. ability to shift goals flexibly.
  - d. all of the above
- (b/143) 12. Higher dopamine levels are associated with:
- a. greater ability to focus on one goal.
  - b. ability to hold larger amounts of information in working memory.
  - c. lesser social dominance.
  - d. all of the above

(b/143) 13. According to Gray, the behavioral inhibition system:

- a. is responsible for positive emotions.
- b. reacts to punishment and threat.
- c. organizes behavior in response to reward cues.
- d. is not linked to a particular part of the brain.

(a/144) 14. The behavioral inhibition system is:

- a. responsible for feelings of anxiety.
- b. responsible for positive affect.
- c. associated with "approach" responses.
- d. intimately linked with the neurotransmitter dopamine.

(d/144) 15. People with reactive inhibition systems are highly sensitive to \_\_\_\_\_ cues.

- a. affective
- b. intangible
- c. positive
- d. threat

(d/145) 16. \_\_\_\_\_ seems to be involved in threat sensitivity or anxiety.

- a. Serotonin
- b. Gamma-aminobutyric acid (GABA)
- c. Norepinephrine
- d. all of the above

(d/145) 17. The avoidance system links most easily to which of the following traits?

- a. extraversion
- b. openness to experience
- c. agreeableness
- d. neuroticism

(a/145) 18. Theorists tend to disagree about which qualities are subsumed by the trait extraversion. However, most theorists agree it includes sociability and:

- a. positive emotions.
- b. impulsivity.
- c. lack of agency.
- d. none of the above

(d/145) 19. Extraversion appears related to the:

- a. behavioral inhibition system.
- b. avoidance system.
- c. withdrawal system.
- d. none of the above

(b/146) 20. Eysenck ultimately included impulsiveness in \_\_\_\_\_, because it consistently related better to it than did \_\_\_\_\_.

- a. extraversion; psychoticism
- b. psychoticism; extraversion
- c. negative emotionality; sensation-seeking
- d. sensation-seeking; negative emotionality

(c/147) 21. According to Zuckerman, people who continually search for new, complex and exciting experiences are:

- a. extraverts.
- b. introverts.
- c. sensation seekers.
- d. sociopaths.

(d/147) 22. Compared with people lower in sensation seeking, sensation seekers are more likely to:

- a. be sexually responsive.
- b. use a variety of drugs.
- c. be dissatisfied in relationships.
- d. all of the above

(c/148) 23. According to Zuckerman, people high in sensation seeking tend to have a difficult time:

- a. completing projects they start.
- b. regulating their emotions.
- c. inhibiting behavior in the service of social adaptation.
- d. all of the above

(d/150) 24. Monoamine oxidase has been linked to:

- a. sensation-seeking.
- b. dominance.
- c. drunk driving.
- d. all of the above

- (c/150) 25. In one study, experimentally lowering serotonin levels led to:
- decreased hostility in everybody.
  - increased hostility in everybody.
  - decreased hostility for those already high in aggressiveness and no change for those low in aggressiveness.
  - increased hostility for those already high in aggressiveness and no change for those low in aggressiveness.
- (b/151) 26. Over a two-week period, higher serotonin levels were associated with:
- higher levels of both positive and negative feelings.
  - lower levels of both positive and negative feelings.
  - higher levels of positive feelings and lower levels of negative feelings.
  - lower levels of positive feelings and higher levels of negative feelings.
- (a/151) 27. The basic template for the development of the human body is:
- female.
  - male.
  - both male and female.
  - androgynous.
- (d/152) 28. Evidence suggests that the two sides of the cerebral cortex are:
- equivalently connected in women and men.
  - more richly connected in women than men at birth, but equivalently connected in women and men in adulthood.
  - more richly connected in men than women.
  - more richly connected in women than men.
- (a/153) 29. Compared to same-sex siblings not similarly exposed, children exposed to a synthetic male hormone before birth:
- chose physical aggression more often in interpersonal conflict situations.
  - chose verbal aggression more often in interpersonal conflict situations.
  - were more likely to be clinically depressed.
  - were unable to develop plans in low-level problem-solving situations.
- (b/153) 30. Research on hormones and behavior suggests that early exposure to masculinizing hormones can affect the:
- development of verbal skills later in life.
  - type of toys that children chose to play with years later.
  - development of interpersonal skills during adolescence.
  - none of the above



(c/154) 31. Compared to those low in testosterone, prison inmates with higher levels were:

- a. better able to control their behavior and thus obey prison rules.
- b. less likely to have committed violent crimes.
- c. more dominant in prison.
- d. more likely to come from broken homes.

(d/154) 32. Among a sample of men who had committed murder, those with higher testosterone levels were more:

- a. remorseful.
- b. likely to have killed strangers.
- c. likely to have committed the murder without planning ahead.
- d. none of the above

(a/154) 33. Studies on testosterone focus more often on:

- a. antisocial behavior.
- b. adult sexual behavior.
- c. sexual development.
- d. prison inmates.

(d/155) 34. Military veterans higher in testosterone were more likely to have:

- a. gone AWOL while in the military.
- b. assaulted other adults.
- c. abused alcohol and other drugs.
- d. all of the above

(c/155) 35. Which of the following statements is true about attorneys?

- a. Male but not female trial attorneys are higher in testosterone than nontrial attorneys.
- b. Female but not male trial attorneys are higher in testosterone than nontrial attorneys.
- c. Both male and female trial attorneys are higher in testosterone than nontrial attorneys.
- d. Both male and female nontrial attorneys are higher in testosterone than trial attorneys.

(c/156) 36. Booth and Dabbs found that men with higher testosterone were:

- a. more likely to have married.
- b. less likely to have divorced.
- c. more likely to have engaged in extramarital sex and domestic abuse.
- d. all of the above

(b/156) 37. Testosterone levels drop following:

- a. successful competition.
- b. a failure or humiliation experience.
- c. sexual intercourse.
- d. all of the above

(a/156) 38. Following sexual intercourse, testosterone levels:

- a. rise for both men and women.
- b. fall for both men and women.
- c. rise for men but fall for women.
- d. rise for women but fall for men.

(c/157) 39. From an evolutionary perspective, the adaptive nature of dominance and aggressiveness in males:

- a. is staying about the same.
- b. is increasing.
- c. is decreasing.
- d. cannot be known.

(b/158) 40. Taylor argues that men and women differ in their responses to stress because of a difference in:

- a. the way in which men and women are socialized.
- b. evolutionary pressures.
- c. social norms for men and women.
- d. testosterone levels.

(a/158) 41. As opposed to the fight-or-flight response identified in men, Taylor has argued that women respond to stress by:

- a. calming offspring and bonding with others.
- b. trying to avoid the situation causing the stress.
- c. becoming sexually aroused.
- d. all of the above

(b/159) 42. Changes in the electrical activity that occurs in the brain can be obtained using:

- a. positron emission tomography (PET).
- b. an electroencephalogram (EEG).
- c. magnetic resonance imaging (MRI).
- d. all of the above

- (a/159) 43. In computer-aided assessment techniques like PET and MRI, different colors are used to represent:
- different levels of brain activity.
  - different types of brain waves.
  - the presence of different neurotransmitters.
  - different brain regions.
- (a/161) 44. The easiest psychological problem to link to problems with the approach/avoidance system is:
- anxiety.
  - depression.
  - phobias.
  - antisocial personality.
- (c/162) 45. The term \_\_\_\_\_ is used to describe therapies that involve the administration of drugs:
- toxicology
  - pharmacology
  - pharmacotherapy
  - none of the above
- (a/162) 46. What medication appears to be a viable therapeutic technique for bipolar disorder?
- lithium
  - dexamethasone
  - dopamine
  - no medication works
- (b/162) 47. Treatment of schizophrenia is based on the hypothesis that schizophrenic symptoms arise because of:
- too much epinephrine.
  - too much dopamine.
  - too little dopamine.
  - too little epinephrine.
- (d/163) 48. Prozac is just one example of a class of antidepressants called:
- neuropeptides.
  - MAO inhibitors.
  - beta-blockers.
  - selective serotonin reuptake inhibitors (SSRIs).

(c/163) 49. A study of the influence of Prozac on people WITHOUT disorders revealed that:

- a. the side effects were much more severe than for people with disorders.
- b. the side effects were non-existent for this group.
- c. positive feelings did not increase for this group.
- d. these people displayed fewer positive social behaviors.

True and False

(T/140) 1. According to Eysenck, introverts and extraverts differ in the level of functioning of the cerebral cortex.

(F/140) 2. According to Eysenck, the resting levels of cerebral cortex activity among introverts are typically lower than those of extraverts.

(T/140) 3. Hans Eysenck made one of the first modern attempts to link personality with biology.

(F/140) 4. Extraverts seek out social interaction to avoid becoming overstimulated.

(T/140) 5. Extraverts look for stimulation to increase arousal levels.

(T/140) 6. Studies have shown that introverts are more alert than extraverts during vigilance tasks.

(F/140) 7. Introverts require more stimulants to reach a given level of arousal.

(F/141) 8. As compared to introverts, extraverts need to receive more of a depressant drug to reach a given level of "unalertness."

(F/141) 9. Emotional arousal makes both extraverts and introverts more outgoing.

(F/141) 10. The BAS is an avoidance-based system, responsive to cues of punishment.

(F/142) 11. Recent research indicates the BAS may be based in the right frontal cortex.

(T/142) 12. The BAS is thought to be responsible for many kinds of positive emotions.

(T/142) 13. Higher BAS sensitivity relates to higher resting levels in the left prefrontal cortex.

(F/142) 14. BAS sensitivity relates to learning both positive and negative outcomes.

(F/142) 15. Neurobiological evidence suggests that the social incentive and threat systems overlap entirely with the more general approach and avoidance systems.

(T/143) 16. Research on monkeys has revealed connections between dopamine to social dominance.

- (T/143) 17. The behavioral inhibition system reacts to punishments and threats.
- (T/144) 18. The behavioral inhibition system is implicated in anxiety, fear, and guilt.
- (F/144) 19. The behavioral inhibition system is involved in learning positive but not negative outcomes.
- (T/145) 20. Research links sensitivity of GABA receptors to neuroticism.
- (F/145) 21. Norepinephrine is produced when a person is calm.
- (T/146) 22. Lucas and Diener found that extraversion was linked to seeking pleasant experiences, even if they were not social in nature.
- (T/147) 23. Sensation seekers are characterized by their search for new and exciting experiences.
- (F/148) 24. IUS is related to a focus on the long-term rather than short-term consequences of behavior.
- (T/149 25. If a person has a chronically high serotonin level, receptors will adjust to become  
Box 7.1) less sensitive.
- (T/150) 26. The enzyme monoamine oxidase (MAO) has been found to be associated with sensation seeking.
- (F/150) 27. MAO is related to passivity.
- (F/151) 28. The basic template for the development of the human body is male.
- (T/153) 29. Exposure to some kinds of hormones before birth can lead children to say they will respond with more aggression in hypothetical situations.
- (T/154 30. Anabolic steroids are thought to produce aggressiveness and dominance.  
Box 7.2)
- (F/154) 31. Research on adults suggests that sex hormones influence sexual but not social behavior.
- (F/154) 32. Of men who have committed murder, those with higher testosterone levels were more likely to have killed a stranger.
- (T/155) 33. High testosterone levels can lead men into lower-SES occupations.
- (F/156) 34. Testosterone levels stay relatively constant over time and situations.
- (T/157) 35. Overt aggressiveness in females does not confer an advantage and may even confer a disadvantage.

- (F/157) 36. If insulted, men from the American North have stronger testosterone responses than men from the American South.
- (T/158) 37. According to Taylor, women tend to respond to stress with a tend-and-befriend response.
- (F/158) 38. Oxytocin appears to be involved in mother-infant bonding but not social bonding more generally.
- (T/159) 39. Assessment techniques, like EEG, can be used to determine whether people are dominated by incentive or avoidance motivation.
- (F/159) 40. PET makes use of electrical activity rather than glucose to provide images of the brain.
- (F/160) 41. fMRI provides less information than EEG, but it is cheaper to administer.
- (T/161) 42. The avoidance system creates anxiety in response to punishment cues.
- (F/161) 43. Deficits in the effortful control system are related to more severe cases of anxiety but are unrelated to the severity of depression.
- (T/161) 44. Antisocial personality has been hypothesized to result from possessing an overactive BAS.
- (T/162) 45. Around 80% of people with bipolar disorder are responsive to lithium treatment.
- (F/162) 46. The side effects of lithium are only mildly unpleasant.
- (F/163) 47. Antidepressants like Prozac can help treat depression without influencing other aspects of people's personalities.
- (F/163) 48. Participants without psychological disorders demonstrated increased positive affect after being given Prozac for four weeks.
- (T/163) 49. People without disorders who took SSRIs for four weeks reported less hostility and negativity.

### Short Essay

- (140) 1. How does Eysenck use activity occurring in the cerebral cortex to explain the difference between introverts and extraverts?

When the cerebral cortex is highly activated, the person is alert. When it's only slightly activated, the person may feel sluggish or drowsy. Eysenck argued that introverts have higher base levels of cerebral cortex activity, and that they may become overstimulated quite easily because of this. They may avoid social interaction to avoid such overstimulation. Extraverts (who have lower base levels of cerebral cortex activity), on the other hand, may seek out social contact to increase their level of arousal.

- (141) 2. According to Eysenck, what happens when neuroticism combines with introversion?

Introverts, being cortically more aroused, are easily conditioned. If they are also very reactive emotionally, they have many opportunities for conditioning, and thus many instances of conditioning. During socialization, conditioning often involves punishment and frustration. Therefore, emotions conditioned in are mostly unpleasant, leading to conditioned anxiety and depression. Thus, emotional introverts should be susceptible to psychological disorders of anxiety and depression.

- (141-145) 3. Identify the BAS and the behavioral inhibition system. Then briefly describe each system's function.

(1) BAS: Arouses person to move toward desired incentives; involved in any approach tendency and responsible for positive emotions.

(2) Behavioral inhibition system: Causes person to inhibit movement toward goals; responsive to cues of punishment and responsible for feelings of anxiety; involved in any avoidance or inhibition tendency.

- (141-145) 4. Behavioral avoidance system and behavioral inhibition system activity are thought to be tied to differences in biological functioning. What neurotransmitters are thought to be closely linked with behavioral avoidance system and behavioral inhibition system functioning?

The neurotransmitter dopamine appears critically involved in the functioning of the system that engages the pursuit of incentives (behavioral avoidance system). In contrast, serotonin and gamma-aminobutyric acid (GABA) are thought to mediate behavioral inhibition system functioning.

- (145-147) 5. How is the BAS similar to extraversion? In what ways does BAS differ from extraversion?

Both BAS-impulsivity and extraversion incorporate incentive seeking and the tendency to experience positive emotions. Gray's BAS differs from the concept extraversion in two ways. First, unlike the concept extraversion, the BAS does not include a sociability component. Second, the BAS encompasses the notion of impulsivity, which the concept of extraversion does not.

- (147-148) 6. Describe three ways in which high and low sensation seekers have been found to differ.

People who are high in sensation seeking are continually in search of new, complex, varied, exciting, and often arousing experiences. Compared with people lower on this dimension, sensation seekers are: (1) faster drivers; (2) more likely to use various drugs; (3) more likely to engage in high-risk sports such as sky-diving. (NOTE: See page 147-148 of the text for additional differences.)

- (152-153) 7. Describe some of the findings that support the link between prenatal exposure to male hormones and aggression.

(1) Both boys and girls who have been exposed to synthetic hormones (that act like male hormones) report that they would use physical aggression in an interpersonal conflict more than boys and girls not exposed to such hormones. (2) Girls who were prenatally exposed to androgens (masculinizing hormones) spent more time playing with boys' toys and less time with girls' toys than did girls not exposed to the hormones. (3) Higher testosterone levels at birth in boys were related to more boldness for 18 months after birth.

- (154 Box7.2) 8. How is use of anabolic steroids related to behavior?

Heavy use of steroids can result in: (1) powerful, irrational bursts of anger, (2) manic symptoms, and (3) depressive symptoms during steroid withdrawal. Animal research indicates that use of steroids during adolescence can create permanent aggressive tendencies that persist after steroid use is ceased.

- (158) 9. According to Taylor, the fight-or-flight response is not the only important response to stress. What are other important responses and why were they neglected for so long?

According to Taylor, other responses were neglected because research focused on men for whom the fight-or-flight response is quite strong. Taylor argues that the “tend-and-befriend” response is stronger in women. This response involves tending to offspring and forging social bonds with others.

- (159-160) 10. Describe one of the assessment techniques theorists who research biological processes commonly use.

(1) Electroencephalogram, or EEG. An EEG uses electrodes to assess changes in electrical activity in the cerebral cortex. The use of this tool is based on the idea that different psychological states produce different patterns of brain activity.

(2) Positron emission topography, or PET. PET derives a picture of brain functioning based on metabolic activity. PET is often used to measure neurotransmitter functioning.

(3) Magnetic resonance imaging, or MRI. MRI translates the magnetic resonances of a person’s brain into a visual image. MRI is primarily used to examine structural damage in the brain.

(4) Dexamethasone suppression test, or DST. DST measures the body’s sensitivity to cortisol suppression. People who show a shortened suppression effect may have a biological predisposition to depression.

- (162-163) 11. How have antidepressants (such as SSRIs) changed the way some people view personality?

In lifting the depressed mood, the drugs also seem to change people’s personalities with just slight alterations in brain chemistry. It seems that personality may not be something that simply resides fixed and stable within people. Rather, personality may be a function of the biological processes that also contribute to psychological symptoms.



## TEST YOURSELF 7-1

Source: Zuckerman, M., Eysenck, S., & Eysenck, H. J. (1978). Sensation seeking in England and America: Cross-cultural, age, and sex comparisons. *Journal of Consulting and Clinical Psychology*, **46**, 139-149.

Description of Scale: This article presents items from the Sensation Seeking Scale, Form V (Zuckerman, Eysenck, & Eysenck, 1978). For each pair of statements, students choose the statement that they agree with most. The following is an example of a pair of items: (a) I sometimes like to do things that are a little frightening, or (b) A sensible person avoids activities that are dangerous.

This instrument was developed to measure several facets of sensation seeking as a personality disposition. Although an overall index can be derived from the answers across all items, there are also separate subscales. One score reflects the tendency toward "Thrill and Adventure Seeking." This tendency involves a positive reaction to risk taking, as well as a desire for excitement. A second score reflects the tendency toward "Experience Seeking." This tendency involves more of a desire for experiences that are new and unusual, a quest for novelty and breadth in experience. It is sensation seeking that focuses on diversity rather than thrills. A third score reflects the tendency toward "Disinhibition." This tendency involves a desire to remove social and sexual inhibitions, or more generally to escape from whatever restraints are imposed by ordinary social reality. The Sensation Seeking Scale also has another subscale, which measures "Boredom Susceptibility." This tendency, obviously enough, involves a dislike of sameness or repetition, an aversion to predictability. This is the only subscale that focuses on a "dislike," but it is a dislike that is logically consistent with the sensation-seeking disposition.

## PRIMARY SOURCES

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