

## Appendix A

### Major Theories of Motivation and Behavior

Many theories, frames of reference, and models have been developed to describe or explain human motivation and behavior. Before discussing the model we have developed for our own use, we should briefly review some of the theories and frames of reference on which our model is based.

This appendix reviews theories concerning emotions, motivation, personality, human neurophysiology, specific traits, and various environmental influences on behavior. Several of these are early theories that have been updated. Several are early theories that have been discounted, but are notable because of their contributions to the development of more recent thought concerning behavior.

#### Early Theories Regarding Emotions and Instincts

##### James-Lange Theory of Emotions

James (1890) and Lange (1885) independently developed such similar theories regarding emotions that their work is now called the James-Lange Theory. They believed that emotion is an “organic-kinesthetic” reaction to internally- and externally-generated stimuli. In other words, perception of emotions occurs because of autonomic reactions (in lower brain areas) to emotion-producing internal and external stimuli.

##### Early Sociological/Anthropological Views

Various early sociologists and anthropologists observed instinctive behavior in both lower animals and human beings—e.g., “territorialism,” the “maternal instinct,” the instinct to “fight or flee,” and the “herd instinct.” These are several examples of territorial behavior: Wolves urinate on the boundaries of their territory to indicate “ownership” and warn off trespassers. Similarly, human beings erect walls or fences around their property. In organizations, people’s “territories” (responsibilities, authority, space) are delineated by titles, organization charts, and physical boundaries. In many cultures, people place a ring on their spouse’s finger, partly to indicate that he or she is “out of bounds to others.” These are examples of “herd behavior”:

Animals, birds, and insects group together into, for example, a herd of elephants, a pride of lions, a flock of geese, or a colony of ants. Similarly, human beings group together in clans, tribes, and neighborhoods.

#### McDougall’s Aspect Theory of Instinct and Emotion

During the latter half of the nineteenth century, many writers on psychology developed theories that related in-born instincts to motivation. Many of these theories were based on sociologists’ and anthropologists’ observations concerning animal and human behavior.

McDougall (1923), a “purposivist,” viewed instincts as being the primary motivating factors in human beings. He identified seven basic human instincts: flight (escape); pugnacity (combativeness); curiosity; disgust; parental behavior; self-assertion; and self-abasement. He paired each of these instincts with an emotion—e.g., flight with fear, and combat with anger. This theory has been replaced by more recent views.

#### Cannon-Bard Theory of Emotion

Influenced by the “thalamic theory” proposed by Head (1920), Cannon (1915) and Bard (1934) suggested that nerve impulses, which are generated by some stimulus, go to an integrative center in the thalamus (a structure in the lower area of the brain). From there, they thought, the impulses are conducted directly to the brain, where they determine the nature of the emotional experience.

#### Early Theories Regarding Motivation and Personality

##### Freudian School of Thought

One early theory of motivation was developed by the famous psychoanalyst, Sigmund Freud (1899). Freud believed that behavior is sexually oriented and, therefore, physiologically determined.

Freud's thesis was as follows: The motivation for life is libido, which involves sexually-oriented desires and provides the drive for an individual's actions. Fulfilling libido involves seeking pleasure and avoiding pain. The libido exists in the unconscious mind (the "id"), but is repressed by conscious activity. Conscious activity has two aspects: (a) the ego, which involves knowledge of possible outcomes of behavior; and (b) the superego (or "conscience"), which operates to censor primitive, self-centered pleasure-seeking. Repression of the id by the ego and superego results in internal conflicts and tensions. The conflict between libido fulfillment and reality determines whether personality will develop in a normal or an abnormal direction. Individuals having abnormal personalities tend to relieve inner tensions by "fleeing from reality." Their flight from reality is manifested in neuroses and psychoses.

### Adlerian School of Thought

Adler (1920), a contemporary of Freud, proposed the "theory of psychic compensation." He believed that human life begins with feelings of inferiority, and that the measure of one's adjustment is how and to what extent one compensates for these feelings. Today, those who adhere to Adler's basic views believe that one's compensatory behavior is influenced by social interaction with parents, family, co-workers, friends, and other individuals.

### Jungian School of Thought

Jung (1917), also a contemporary of Freud, proposed an "introvert-extrovert type theory." Jung defined libido as "psychic energy." He believed that behavior is essentially either extroverted or introverted. Extroverts, he said, direct psychic energy outward toward people, objects, and activities. Introverts, on the other hand, direct their psychic energy inward toward their own thoughts, daydreams, and fantasies.

### Lewin's Topological Theory

Lewin (1935), another of Freud's contemporaries, proposed a "topological theory of personality." He identified three types of conflicts that affect personality:

Approach - Approach conflicts arise when an individual is motivated toward two positively stimulating factors having about equal strength. *Example*: Which should the young man approach, the attractive blond or the attractive brunette?

Avoidance - Avoidance conflicts arise when a person is motivated away from two negatively stimulating factors having about equal strength. *Example*: You would like to "get out of the frying pan," but it would mean "stepping into the fire."

Approach - Avoidance conflicts arise when an individual is confronted by one positively motivating factor and one negatively motivating factor, each about equal in strength. *Example*: The young man wants to ask the attractive blond to dance, but hesitates to approach her for fear that she might refuse him, thereby embarrassing him and wounding his ego.

Lewin believed that approach-avoidance conflicts are most likely to create unresolved tensions and anxieties.

### Behaviorist Theories

Behaviorist theories were originated by Watson (1924), who experimented with "conditioned" or "habituated" behavior in rats. Watson was influenced by the work of Pavlov (1928), who experimented with "conditioned reflexes" in dogs.

These theories involve associations among several events: Stimulus — Response — Reward. They hold that human behavior, like the behavior of lower animals, is "mechanistic" and can be conditioned by repetitiously associating a desired response with a given stimulus. This is achieved by giving rewards for correct responses—and perhaps punishments for incorrect responses.

### Gestalt School of Thought

These theories were initially advanced by Wertheimer (1938). He and others noted that (a) an individual can form different perceptions of the same set of stimuli (e.g., when shown an optical illusion); and (b) different people can perceive the same situation (set of stimuli) differently. As a result, they developed the view that consciousness cannot always be explained in terms of component parts, especially when individuals' perceptions of stimuli differ significantly from the stimuli themselves. As Lewin put it, "The whole is different from the sum of its parts."

Today, gestalt theorists view behavior as being integrated within some total context or "structure" (the German word for which is "gestalt"). This total context involves (a) all of an individual's characteristics, past experiences, and prior learning; and (b) all of the stimuli or circumstances comprising the environmental situation.

## Neurophysiological Theories

Although scientific knowledge regarding neurological systems is increasing at an accelerating rate, much is already known about how these systems function to enable human beings to interact with their environment. (In fact, many people are unaware of just how much is known.) Insights into neurological processes underlie the basic formula on which modern theories of human motivation and behavior are based. This is the “S-I-R” formula: Stimulation (of sensory nerves by either internal or external, environmental stimuli) — Integration (interpretation of sensations and the formulation of a response to the stimuli) — Response.

The following sections very briefly describe the major neurological systems and brain structures, areas, and functions. The description is extremely basic, general, and simplified. By no means does it deal with the complexities that are actually involved.

### Basic Systems

Central Nervous System: This entire system consists of nerve cells. Some are arranged into thread-like tracts similar to chains made up of individual links. Others are arranged into centers or units composed of groups or masses of cells.

All the tracts and centers of the central nervous system are organized into two major subsystems: the cerebro-spinal system and the autonomic nervous system.

Cerebro-Spinal System: This complex system receives and interprets sensory information, integrates (formulates) a response, and then effects some physical response (behavior). Mainly consisting of the brain and spinal cord, it is connected by afferent nerve tracts to two types of receptor nerves in the body: exteroceptors and proprioceptors. Exteroceptors, which are located in sense organs (eyes, ears, nose, tongue, and skin), sense environmental stimuli. Proprioceptors, which are located in the linings of muscles, joints, and tendons, send feedback regarding bodily movement to the brain. The cerebro-spinal system is also connected by efferent nerve tracts to effector nerves. These nerves, which are located in muscles, trigger movement based on “instructions” or “messages” sent from motor areas of the brain.

Autonomic (Sympathetic) Nervous System: This system governs unconscious or “automatic” functions in the body (e.g., heartbeat, breathing, and digestion). It, too, is mainly composed of nerve cells in the brain and spinal cord. It is connected by afferent nerve tracts to receptor nerves called “interoceptors.” These nerves, which are lo-

cated in the digestive, respiratory, and circulatory systems, sense changes within the body. The system is also connected by efferent nerve tracts to effector nerves, which are located in various glands and in various muscles (e.g., the heart and lungs).

### Brain Structures, Areas, and Functions

The brain has several major neurological structures and areas, each devoted to particular functions.

Medulla: The medulla’s chief function is to provide relay centers between the spinal cord and higher centers of the brain. It also contains neural connections that automatically control physiological processes such as breathing and blood pressure.

Pons: The pons mostly affects equilibrium and motor (muscular) coordination. It contains nerve fibers that interconnect various parts of the brain stem, the cerebellum, and the cerebrum.

Cerebellum: The cerebellum largely influences muscular coordination. It is activated by impulses from receptor nerves.

Thalamus: The thalamus is the center that directs all sensory impulses from receptor nerves to appropriate regions of the cerebrum for processing. In addition, sensory and motor connections between it and lower levels underlie much unconscious or automatic behavior.

Cerebrum: The cerebrum is by far the largest and most complex structure. It contains three major areas: sensory, associative (or interpretive), and motor.

- A. Sensory areas: These areas are located in the parietal, occipital, and temporal lobes of the cerebral cortex. They convert impulses from receptor nerves into sight, sound, taste, smell, touch, and muscle activity sensations.
- B. Associative/Interpretive areas: These areas translate various types of sensations into meaningful perceptions. They are generally grouped into three classes: sensory, motor, and frontal.
  1. Associative Sensory areas: These interpret sensations involving stimuli such as light and sound.
  2. Associative Motor areas: These interpret motion-related stimuli and control motor processes.
  3. Frontal areas: These areas are involved in memory, reasoning, and motivation.
    - a. Memory areas contain specialized areas for recording visual, auditory, and motor sensations. Experiential sensations are recorded

and stored in memory areas in the form of organized patterns of “interconnected” brain cells (neurons).

- b. Reasoning areas are where information is processed as we solve problems and make decisions.

c. Motor areas: Once instructions involving muscular movement have been formulated in associative motor areas, these separate motor areas translate the instructions into impulses or “messages” that are carried by efferent nerve tracts to effector nerves. When activated by these impulses, effector nerves stimulate muscular movement in, for example, speech apparatus, legs, arms, and hands.

All the processes that occur within the central nervous system are the result of electro-chemical reactions within and between nerve cells.

## Need/Drive Theories

More recent theories of motivation hold that human behavior is basically motivated by certain biological and psychological needs or drives.

Maslow (1943), whose “Hierarchy of Needs” we will discuss in Chapter 2, refers to physiological, safety, social, ego, and self-actualization needs. McClelland (1961) refers to the needs for affiliation, achievement, and power. Alderfer (1969) refers to existence, relatedness, and growth needs.

## Trait Theories

Rather than being theories of behavior per se, these might better be described as “frames of reference for categorizing and measuring distinct patterns of behavior.” Largely the work of clinical psychologists, these frames of reference separate behavioral phenomena into broad groups—and then into more finite traits.

As early as 1903/1905, Binet and Simon began testing certain attributes of intelligence. Many others, including Terman (1916), Thurstone (1924), and Wechsler (1939), also developed tests to measure various aspects of intelligence. Since the 1930s, various test instruments have been developed to measure mechanical, artistic, musical, clerical, and other aptitudes. Gordon (1960), Allport, Vernon, and Lindzey (1960), and others identified different sets of specific values, and designed test instruments to measure them. Bernreuter (1933), Guilford (1940), Thurstone (1950), and many others defined various sets of personality

traits, and developed tests to measure them. Strong (1933) and Kuder (1938) identified various types of interests, and designed instruments to measure them. It should be noted that many of these test instruments have been updated and are still used today.

Many of the traits contained in our models are from several of these frames of reference.

## Balance Theories

Largely influenced by the earlier theories of Freud, Adler, Jung, and Lewin, these more recent theories hold that behavior is initiated, directed, and sustained by a person’s conscious and/or unconscious attempts to maintain some internal balance of psychological tension.

In his theory of “cognitive dissonance,” for example, Festinger (1957) proposed that (a) conflicting cognitive-emotional perceptions or impressions create psychological tensions within an individual; (b) this tension (inner conflict) is unpleasant; and (c) the individual will act to relieve the tension.

## Reinforcement Theories

Also called behavior modification theories, these are largely based on behaviorists’ theories and on certain accepted theories of learning. They hold that the direction and level of a person’s expenditure of energy can be changed by altering either (a) the positive feedback being used to reward appropriate or desirable behavior, or (b) the negative feedback being used to punish or discourage inappropriate or undesirable behavior.

We all experience both positive and negative feedback. In general, feedback can be defined as inputs (stimuli/data) that indicate whether or not our behavior has been appropriate, correct, adequate, desirable, or functional for accomplishing some intended purpose. Feedback can come from the environment (e.g., other people) or from inside ourselves.

As evidenced by the description above, reinforcement theory largely focuses on how to influence someone else’s behavior (externally). In this context, positive and negative feedback can be described as follows:

Forms of external positive feedback, which are often called “reinforcers,” “positive strokes,” or “warm fuz-zies,” include: praise; rewards; attention; acknowledgement of status; and expressions of support, approval, concern, affection, or love—among others.

Forms of external negative feedback, which are often called “negative strokes,” “aversive stimuli,” or “cold

pricklies,” include: ridicule; sarcasm; derogatory remarks; blame; criticism; reproof; reprimands; punishment; and expressions of disapproval, dislike, disdain, or rejection—among others.

The following are basic principles of reinforcement theory:

- A. Any behavior pattern (response) followed immediately by positive feedback has a greater probability of being used again.
- B. Any behavior pattern (response) not immediately followed by positive feedback has a lesser probability of being used again.
- C. Any response followed immediately by mild negative feedback has a lesser probability of being used again.
- D. Any response followed immediately by strong negative feedback leads to avoidance behavior (or perhaps to aggressive behavior).
- E. Following a response with the cessation of negative feedback (which can seem like mild positive feedback) increases the probability of the response being made again.
- F. To generate a positive response to a neutral object, pair or associate the neutral object with a positive stimulus (reinforcer).
- G. To generate a negative response to a neutral object, pair or associate the neutral object with an aversive stimulus.

While our behavior generally elicits either positive or negative feedback from the environment, we can also experience positive and negative feedback coming from inside ourselves.

Forms of internal positive feedback include: pleasure that accompanies the gratification of a need; awareness of personal progress (toward some goal or intended outcome); recognition of achievement; and awareness of a goal’s attainment.

Forms of internal negative feedback include: pain or discomfort due to an unsatisfied need; awareness of lack of progress; recognition of the failure to achieve; awareness that a goal has not been attained; and feelings of frustration, discouragement, or anxiety.

### **Instrumentality Theories**

Various instrumentality theories have been advanced by Georgopolous, Mahoney, and Jones (1957), Vroom (1964), Porter and Lawler (1968), and others. These theories focus on conscious processes involved in making choices. They are based on the proposition that we purposefully decide to undertake an activity if we perceive that it will somehow benefit us. In other words, the activity is seen as being “instrumental” in achieving some valued outcome. According to these theorists, we ask ourselves, “What’s in it for me” and “Should I expend the energy or not?”

The “VIE Theory” proposed by Vroom (1964) is a good example of this thesis. “V” stands for “valence”; “I” stands for “instrumentality”; and “E” stands for “expectancy.” This theory suggests that people ask themselves the following: (a) whether or not the activity has a high probability of leading to an outcome (*expectancy*); (b) whether or not that outcome will lead to other outcomes (*instrumentality*); and (c) whether or not those other outcomes have some value (*valence*).

