

## Motivation—What is it?

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**Motivation literally means:** “that which produces motion.”

It is often used interchangeably with the term drive. **Drives** have been thought of as *internal states of tension* that motivate behavior to reduce the tension.

Motivation deals with the problem of variation in behavioral responsiveness to constant external stimuli.

Motivation thus represents the variables other than external stimuli that control behavior.

In other words, motivation is the general name for the fact that an organism's acts are partly determined in direction and strength by its own nature, i.e., its enduring structure, or traits, and its momentary internal state.

**Motivations/drives may be defined as:** Hypothetical physiological processes that sensitize the organism to certain sets of stimuli, and that energize certain sets of responses, in order to attain certain goals, also called incentives, which may be either primary/intrinsic or secondary/learned. (This is my operational definition.)

Example: If a man developed a *hunger drive*, he would become *sensitized* to food stimuli, such as deer, and he would have hunting behaviors *energized*, in order to obtain the *goal* of nutrients.

Since goals are associated with needs, the *function of motivations, or drives*, is to satisfy the needs of the organism.

Motivations are essential for *survival*. They are the means by which the organism's needs are translated into behavioral acts.

## Properties of motives/drives:

- 1) Activate and direct behavior;
- 2) Lead to persistent behavior and reduce irrelevant behavior;
- 3) Are multi-factorially determined by both internal and external stimuli as well as by heredity and experiential factors;
- 4) Interact with experience such that previously neutral stimuli may, by association, acquire motivational properties, and appropriate goal-directed/achieving behaviors are elicited under different circumstances (hence learning and motivation are related);
- 5) Possess an affective component, in that they often lead to the activation/expression of emotions, which in turn are a powerful means by which incentives/goals do their motivating (hence motivation and emotion are interrelated)—motives, in fact, are said to be *emotionally charged states* that anticipate goal objects (McClelland).

**Hull's Drive Theory:** Postulated that all learning depends on the reduction of basic drives—drive reduction, and that current behavior is thus a product of drive reduction in the past, i.e., what worked (similar to hedonism: we live our lives to seek pleasure & avoid pain).

**Note:** Rewarding brain stimulation is associated, surprisingly, with areas of the brain related to *drive induction*, not *drive reduction*. To resolve this paradox, it has been proposed that perhaps it is not drive reduction, but rather an anticipatory cue stimulus to a consummatory or procurement response that is *reinforcing*, and/or that the consummatory or procurement (or avoidance/escape) response itself is *reinforcing* (i.e., the activation of brainstem mechanisms for species-typical behavior). As examples, are not the stimuli and behaviors associated with the hunger and sexual drives rewarding in and of themselves?

**Maintenance of a satisfactory internal environment** is the basis of many of the needs of an organism.

Examples: 1) The organism must maintain an adequate *blood-sugar level* in order to satisfy its energy needs. Thus, it possesses the *drive* to eat, or hunger *motivation*.

2) The organism must also maintain an adequate *water balance* for its metabolic processes to take place. Thus, it possesses the *drive* to drink, or thirst *motivation*.

3) Another example would be the need for *temperature regulation*.

**Homeostasis** is the term that refers to the *maintenance* of the organism's internal environment within the rather narrow limits conducive to normal functioning.

It is also defined as the *maintenance of equilibrium or a steady state* in the internal environment.

Its literal meaning comes from the Greek word *stasis* meaning standing and the Latin word *homeo* meaning same, thus: *standing the same*. The term was coined by Walter Cannon, an American psychologist.

While many of an organism's motivations are associated with its homeostatic needs, all are not.

Examples: Drive to have sex, i.e., *reproduction* motivation. Another example might be the drive to *explore*, i.e., *exploration* motivation.

In addition to *biological needs*, there are also motivations/drives associated with *social needs*, e.g., for achievement and recognition, belongingness and love, order and play; as well as *cognitive needs*, e.g., for knowledge and understanding (hence exploration), order and beauty (hence appreciation of the arts), and self-actualization (defined as the realization of one's full potential).

**Homeostatic regulatory systems** consist of at least 4 components: and are comparable to mechanical thermostat systems, and to the servomechanism system responsible for the maintenance of posture.

- 1) The system variable, which is the condition monitored.
- 2) “Set-point” mechanisms, which generate values representing the balance to be maintained by the system in the face of internal or external fluctuations.
- 3) Sensory mechanisms, which monitor conditions in the internal and external environment.
- 4) Effector/correctional mechanisms, which initiate behavioral and/or physiological control processes to reduce discrepancies from the set point, or set range, through *negative feedback*.

A more complete and modern definition of homeostasis would be: The tendency of the internal state to remain stable within *adaptive levels*, i.e., a *set range*, due to *automatic, negative-feedback*, physiological mechanisms, as well as behavioral mechanisms, that not only react to current needs, but that also anticipate future needs.

Example: Hunting for food *before* blood glucose level drops too low.

A homeostatic drive or process is one that tends to keep some variable near a certain *set point*, or level, or within a *set-range*.

As noted earlier, many goal-directed behaviors are not initiated by biological deficits. When they are, we refer to it as deficiency motivation.

On the other hand, as for example in the case of sex, motivated behavior may also be initiated by other physiological processes, e.g., hormone cycles, as well as by cognitive processes.

**Three kinds of biological theories** have historically been proposed to explain motivated behavior:

- 1) Local theories, also called peripheral theories, postulated that the mechanisms underlying motivated behavior are to be found in structures outside the central nervous system, e.g., the stomach contracting and stretching.
- 2) Central theories proposed that the mechanisms which regulate motivated behavior are located within the central nervous system, e.g., glucoreceptors for monitoring glucose levels.
- 3) General, or mixed, theories, which suggested that motivated behavior is controlled by both peripheral and central mechanisms (these mechanisms not being mutually exclusive).

The *general, or mixed, theories* are supported by contemporary data.

The central mechanisms of motivated behavior appear to be localized in the *hypothalamus* and the *limbic system*, which also play critical roles in emotion and visceral regulation (these three are interrelated).

In place of the older conception that neural activity in restricted *hypothalamic centers* control various motivated behaviors, such as eating, drinking, and sex; we now have the more contemporary understanding that *complex neural circuits*, i.e., diffusely distributed systems/networks of localized structures, which involve the hypothalamus, limbic system, and other nervous system structures, control the execution of integrated patterns of behaviors that are involved in the expression of motivation, or drive, as well as their affective component, emotion.