



Thinking and Decision Making – An Overview

KEYWORDS

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ABSTRACT *This study is an attempt to discuss the thinking and decision making process. Thought can refer to the ideas or arrangements of ideas that result from thinking, the act of producing thoughts, or the process of producing thoughts. In spite of the fact that thought is a fundamental human activity familiar to everyone, there is no generally accepted agreement as to what thought is or how it is created. Thinking allows humans to make sense of, interpret, represent or model the world they experience, and to make predictions about that world. It is therefore helpful to an organism with needs, objectives, and desires as it makes plans or otherwise attempts to accomplish those goals. Decision making can be regarded as the cognitive process resulting in the selection of a course of action among several alternative scenarios. Every decision making process produces a final choice. The output can be an action or an opinion of choice.*

Introduction:

Thought can refer to the ideas or arrangements of ideas that result from thinking, the act of producing thoughts, or the process of producing thoughts. In spite of the fact that thought is a fundamental human activity familiar to everyone, there is no generally accepted agreement as to what thought is or how it is created. Thinking allows humans to make sense of, interpret, represent or model the world they experience, and to make predictions about that world. It is therefore helpful to an organism with needs, objectives, and desires as it makes plans or otherwise attempts to accomplish those goals. Decision making can be regarded as the cognitive process resulting in the selection of a course of action among several alternative scenarios. Every decision making process produces a final choice. The output can be an action or an opinion of choice.

Emotion appears to aid the decision making process: Decision making often occurs in the face of uncertainty about whether one's choices will lead to benefit or harm. The somatic-marker hypothesis is a neurobiological theory of how decisions are made in the face of uncertain outcome. This theory holds that such decisions are aided by emotions, in the form of bodily states, that are elicited during the deliberation of future consequences and that mark different options for behavior as being advantageous or disadvantageous. This process involves an interplay between neural systems that elicit emotional/bodily states and neural systems that map these emotional/bodily states. Although it is unclear whether the studies generalize to all processing, subconscious processes have been implicated in the initiation of conscious volitional movements. Thinking has many benefits and specific characteristics, and it directly impacts decision making. Thinking is important when making decisions and training our self to think critically will increase our success and happiness in life. Thinking is the process in which information, facts, and theories are gathered and analyzed. Thinking is the process that is used to make effective decisions. Thinking also evaluates options and separates facts from opinions and valuable process that should be applied by everyone

Man is superior to all other creatures because of his superior ability to think and reason. He is endowed with the faculty of

thinking reasoning, hence is called a rational being. These powers of human being have produced vast domains of culture, science and systems of knowledge. Thinking of man has been an in evitable factor in the welfare of individual and society. It is the main object of education to develop capacity for independent thinking in children.

Nature of thinking:

Broadly speaking, thinking includes all forms of cognition. It includes perception, imagination memory and concept formation. But in a restricted sense it is considered as symbolic behavior. CT. Morgan regards thinking as a sequence of symbolic process. Munn also regards thinking as a sequential arousal of symbols. Thinking is manipulating the world internally with the aid of symbolic process. It makes use of memory, imagination and reasoning or problem solving.

Thinking is ideational activity which is deliberately controlled by a purpose. It is mental exploration of data in order to deal with the environment effectively. Thinking has a motive behind it. It cannot be studied apart from purpose, needs and derives. For example when there is an accident the individual at once starts thinking what should be done. Thus thinking enables the individual to solve the problem of his adjustment. Thinking is connective in nature and occurs when some difficulty crops up that requires the individual to make new adjustment.

Thinking according to Gilmer (1970) is a problem solving process in which we use ideas or symbols in place of ever activity. The most orderly process of thinking in problem solving. It is the highest form of thinking. According to Woodworth, thinking consists of the following elements:

1. Orientation towards a goal.
2. Recall of previously observed facts.
3. Grouping those recalled facts into new patterns.
4. Inner speech movement and gestures.
5. Thinking involves both the process of analysis and synthesis.

To get a clear idea of a problem we mentally analyse its process and cons and synthesise its different aspects. Without

the help of these two processes we cannot have a complete picture of a problem. According to Woodworth, thought involves hind sight as well as for sight. While thinking we utilize past events. This is a hind sight. Thinking also involves for sight which prepares as for future consequences. Some times thinking involves transfer. A principle or rule acquired from past experience is applied to solve a new problem. This is called transfer. Thus thinking has the following process:

1. It is essentially a cognitive process.
2. It is goal oriented. Discovery and invention are the goals of thinking.
3. It is a problem solving behavior.
4. It involves analysis and synthesis.
5. It involves both hind sight and for sight.
6. It is mental exploration rather than motor exploration.
7. It is symbolic activity.
8. Thinking of sub vocal talking. It involves inner speech.

Types of thinking:

- (1) Associative thinking: This type of thinking is non-directed and without goal.
- (2) Perceptual thinking: Perceptual thinking is carried out on the perception of concrete objects. This is the simplest form of thinking.
- (3) Conceptual thinking: Conceptual thinking is an abstract thinking where concepts are used. It economises effort in understanding and problem solving.
- (4) Creative thinking: A creative thought travels its own way and aims at creating something new. There are four phases of creative thinking, preparation, incubation, illumination and verification.
- (5) Wishful thinking: Offer our wishes, needs and desires-force as to think in the ways of their own satisfactions.

Tools of thinking:

The following are the tools of thinking (1) Images, (2) Concepts, (3) Languages and (4) Muscle activities.

1. Images: Thinking involves images of objects actually seen. The images rather than the real objects are usually manipulated in thinking.
2. Concepts: Concepts have been described as general ideas, symbols and names referring to the general classes of a particular object. When similar objects are perceived in different contexts, they are segregated as a class and named by the subjects. Concepts simplify the process of thinking by reducing the number of the objects of thought, concept classify things and economise thought. They are indispensable for reasoning.
3. Language: Generally, thinking is expressed in language. When we think over a difficult problem, very often we talk to ourselves internally. Language is the expression of thought and thought is aided by language.
4. Muscle activities: Thinking involves muscular movement. There is positive correlation between the thinking and muscular activities of a person.

Effective thinking:

In order that thinking may be effective, we should be conscious and try to avoid those factors which drag us in to wrong thinking. They may be described as follows:

- (1) Our desires and needs often force us to think in a particular way. Thus, our wishful thinking results in an incorrect thinking.
- (2) In correct thinking occurs when either there is no motivation or undesirable motivation.
- (3) There may be a number of variables of consequence failing to control these may results in to fallacious thinking.
- (4) Habitual methods of attack often restrict right thinking.
- (5) Strong emotion often check the above factors. Following conditions are also necessary for proper thinking;

1. Strong motivation
2. Wide range of knowledge.
3. Alertness.
4. Sufficient time for incubation.
5. Freedom from false assumption.

Thinking skill:

The thinking skill develops mental abilities and give3 emphasis on concept formation. Thinking in science is also closely related to the development of ability to carry on concept formation and to the development of thinking. Popular psychology believes that thnking is some inner kind of mental process on which mental contents follows one another and which can be studied independently of the needs motives and desires of an individual.

In a broad sense thinking includes all forms of cognition, perception, imagination, memory and conception. Thinking is often described as adjustment to a hypothetical situation. Thinking is a delayed response in which an absent or a future situation is respond to the mental behavior.

Brain and Decision Making

The anterior cingulate cortex (ACC), orbitofrontal cortex (and the overlapping ventromedial prefrontal cortex) are brain regions involved in decision making processes. A recent neuro-imaging study found distinctive patterns of neural activation in these regions depending on whether decisions were made on the basis of personal volition or following directions from someone else. Patients with damage to the ventromedial prefrontal cortex have difficulty making advantageous decisions. A recent study of a Two-alternative forced choice task involving Rhesus monkeys found that neurons in the parietal cortex not only represent the formation of a decision but also signal the degree of certainty associated with the decision. Another recent study found that lesions to the ACC in the macaque resulted in impaired decision making in the long run of reinforcement guided tasks suggesting that the ACC may be involved in evaluating past reinforcement information and guiding future action

Conclusion

Thinking allows humans to make sense of, interpret, represent or model the world they experience, and to make predictions about that world. It is therefore helpful to an organism with needs, objectives, and desires as it makes plans or otherwise attempts to accomplish those goals. Cognitive psychologists use psychophysical and experimental approaches to understand, diagnose, and solve problems, concerning themselves with the mental processes which mediate between stimulus and response. They study various aspects of thinking, including the psychology of reasoning, and how people make decisions and choices, solve problems, as well as engage in creative discovery and imaginative thought. The right direction of thinking to syntheses effective decision making process.

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