Introduction

Lateral thinking is solving problems through an indirect and creative approach, using reasoning that is not immediately obvious and involving ideas that may not be obtainable by using only traditional step-by-step logic. The term was coined in 1967 by Edward de Bono. According to de Bono, lateral thinking deliberately distances itself from standard perceptions of creativity as either "vertical" logic (the classic method for problem solving: working out the solution step-by-step from the given data) or "horizontal" imagination (having many ideas but being unconcerned with the detailed implementation of them).

Critical Thinking

Critical thinking is primarily concerned with judging the true value of statements and seeking errors. Lateral thinking is more concerned with the "movement value" of statements and ideas. A person uses lateral thinking to move from one known idea to creating new ideas. Edward de Bono defines four types of thinking tools:

- Idea-generating tools intended to break current thinking patterns—routine patterns, the status quo
- Focus tools intended to broaden where to search for new ideas
- Harvest tools intended to ensure more value is received from idea generating output
- Treatment tools that promote consideration of real-world constraints, resources, and support

Tools and Techniques

- Random Entry Idea Generating Tool: The thinker chooses an object at random, or a noun from a dictionary, and associates it with the area they are thinking about.
- Provocation Idea Generating Tool: The use of any of the provocation techniques—wishful thinking, exaggeration, reversal, escape, distortion, or arising. The thinker creates a list of provocations and then uses the most outlandish ones to move their thinking forward to new ideas.
- Challenge Idea Generating Tool: A tool which is designed to ask the question "Why?" in a non-threatening way: why something exists, why it is done the way it is. The result is a very clear understanding of "Why?" which naturally leads to fresh new ideas. The goal is to be able to challenge anything at all, not just items which are problems. For example, one could challenge the handles on coffee cups. The reason for the handle seems to be that the cup is often too hot to hold directly. One could challenge the handles on coffee cups.
- Concept Fan Idea Generating Tool: Ideas carry out concepts. This tool systematically expands the range and number of concepts in order to end up with a very broad range of ideas to consider.

Methods

- **Movement Techniques:** The thinker develops provocation operations [clarification needed] by the following methods: extract a principle, focus on the difference, moment to moment, positive aspects, special circumstances.
- **Disproving:** Based on the idea that the majority is always wrong (as suggested by Henrik Ibsen & John Kenneth Galbraith), take anything that is obvious and generally accepted as "goes without saying", question it, take an opposite view, and try to convincingly disprove it. This technique is similar to de Bono's "Black Hat" of Six Thinking Hats, which looks at the ways in which something will not work.

Lateral thinking and problem solving

- **Problem Solving:** When something creates a problem, the performance or the status quo of the situation drops. Problem solving deals with finding out what caused the problem and then figuring out ways to fix the problem. The objective is to get the situation to where it should be. For example, a production line has an established run rate of 1000 items per hour. Suddenly, the run rate drops to 800 items per hour. Ideas as to why this happened and solutions to repair the production line must be thought of, such as giving the worker a pay raise...

Creative Problem Solving:

- **Creative Problem Solving:** Using creativity, one must solve a problem in an indirect and unconventional manner. For example, if a production line produces 1000 books per hour, creative problem solving could find ways to produce more books per hour, use the production line, or reduce the cost to run the production line.
- **Creative Problem Identification:** Many of the greatest non-technological innovations are identified while realizing an improved process or design in everyday objects and tasks either by accidental chance or by studying and documenting real world experience.
- **Lateral Problem "Solving":** Lateral thinking will often produce solutions whereby the problem appears as "obvious" in hindsight. That lateral thinking will often lead to problems that you never knew you had, or it will solve simple problems that have a huge potential. For example, if a production line produced 1000 books per hour, lateral thinking may suggest that a drop in output to 800 would lead to higher quality, more motivated workers etc. etc.
Lateral thinking puzzles: These are puzzles that are supposed to demonstrate what lateral thinking is about. However any puzzle that has only one solution is "not" lateral. While lateral thinking may help you construct such puzzles, the lateral thinking tools will seldom help you solve puzzles.