

THE USE OF LATERAL THINKING

Break the stranglehold of logical thinking

Edward de Bono

Many years ago when a person who owed money could be thrown into jail, a merchant in London had the misfortune to owe a huge sum to a money-lender. The money-lender, who was old and ugly, fancied the merchant's beautiful teenage daughter. He proposed a bargain. He said he would cancel the merchant's debt if he could have the girl instead.

Both the merchant and his daughter were horrified at the proposal. So the cunning money-lender proposed that they let Providence decide the matter. He told them that he would put a black pebble and a white pebble into an empty money-bag and then the girl would have to pick out one of the pebbles. If she chose the black pebble she would become his wife and her father's debt would be canceled. If she chose the white pebble she would stay with her father and the debt would still be canceled. But if she refused to

pick out a pebble her father would be thrown into jail and she would starve.

Reluctantly the merchant agreed. They were standing on a pebble-strewn path in the merchant's garden as they talked and the money-lender stooped down to pick up the two pebbles. As he picked up the pebbles the girl, sharp-eyed with fright, noticed that he picked up two black pebbles and put them into the money-bag. He then asked the girl to pick out the pebble that was to decide her fate and that of her father.

Imagine that you are standing on that path in the merchant's garden. What would you have done if you had been the unfortunate girl? If you had had to advise her, what would you have advised her to do?

What type of thinking would you use to solve the problem? You may believe that careful logical analysis must solve the problem if there is a solution. This type of thinking is straightforward vertical thinking. The other type of thinking is lateral thinking.

Vertical thinkers are not usually of much help to a girl in this situation. The way they analyze it, there are three possibilities:

- 1. The girl should refuse to take a pebble.**
- 2. The girl should show that there are two black pebbles in the bag and expose the money-lender as a cheat.**
- 3. The girl should take a black pebble and sacrifice herself in order to save her father from prison.**

None of the suggestions is very helpful, for if the girl does not take a pebble her father goes to prison, and if she does take a pebble, then she has to marry the money-lender.

The story shows the difference between vertical thinking and lateral thinking. Vertical thinkers are concerned with the fact that the girl has to take a pebble. Lateral thinkers become concerned with the pebble that is left behind. Vertical thinkers take the most reasonable view of a situation and then proceed logically and carefully to work it out. Lateral thinkers tend to explore all the different ways of looking at something, rather than accepting the most promising and proceeding from that.

The girl in the pebble story put her hand into the money bag and drew out a pebble. Without looking at it she fumbled and let it fall to the path where it was immediately lost among all the others.

‘Oh, how clumsy of me,’ she said, ‘but never mind—if you look into the bag you will be able to tell which pebble I took by the colour of the one that is left.’

Since the remaining pebble is of course black, it must be assumed that she has taken the white pebble, since the money-lender dare not admit his dishonesty. In this way, by using lateral thinking, the girl changes what seems an impossible situation into an extremely advantageous one. The girl is actually better off than if the money-lender had been honest and had put one black and one white pebble into the bag, for then she would have had only an even chance of being saved. As it is, she is sure of remaining with her father and at the same time having his debt canceled.

Vertical thinking has always been the only respectable type of thinking. In its ultimate form as logic it is the recommended ideal towards which all minds are urged to strive, no matter how far short they fall. Computers are perhaps the best example. The problem is defined by the programmer, who also indicates the path along which the problem is to be explored. The computer then proceeds with its uncomparable logic and efficiency to work out the problem. The smooth progression of vertical thinking, from one solid step to another solid step is quite different from lateral thinking.

If you were to take a set of toy blocks and build them upwards, each block resting firmly and squarely on the block below it, you would have an illustration of vertical thinking. With lateral thinking, the blocks are scattered around. They may be connected to each other loosely or not at all. But the pattern that may eventually emerge can be as useful as the vertical structure.

Lateral thinking is easiest to appreciate when it is seen in action, as in the pebble story. Everyone has come across the sort of problem which seems impossible to solve until suddenly a surprisingly simple solution is revealed. Once it has been thought of, the solution is so obvious that one cannot understand why it was ever so difficult to find. This sort of problem may indeed be difficult to solve so long as vertical thinking is used.

Lateral thinking is not only concerned with problem solving; it has to do with new ways of looking at things and new ideas of every sort.

If a story like the pebble story is read straight through and the solution given immediately, then the listeners are inclined to wonder what the fuss is about. It is only if there is a pause for the listeners to find the solution for themselves that the difficulty of finding one is appreciated. With the best examples of lateral thinking, the solution does seem logically obvious once it has been reached. It is very easy to forget that it has been reached by lateral thinking and not by vertical thinking. Once the solution has been revealed many people are prepared to explain how it could perfectly well have been reached by vertical thinking. In retrospect, the logical sequence from the problem to its solution may be quite easy to see.

While in a trance a hypnotized person can be instructed to carry out some bizarre behaviour after emerging from the trance. When the time comes the subject duly carries out the hypnotist's instructions, which may have been to put up an umbrella in the drawing-room, to hand everyone a glass of milk, or to drop on all fours and bark like a dog. When asked why he is behaving in the odd way the subject immediately provides a perfectly reasonable explanation. Such an explanation offers an unforgettable demonstration of the powers of rationalization. Everyone present knows the real reason behind the odd behaviour and yet the person carrying it out can construct a perfectly reasonable explanation which would convince any latecomer.

There is no harm in rationalizing a vertical-thinking path to the solution after it has been reached by lateral thinking. The danger lies in assuming that because such a path can be constructed in retrospect, all problems can be solved as easily with vertical thinking as they might be with lateral thinking.

One of the techniques of lateral thinking is to make deliberate use of this rationalizing facility of the mind. Instead of proceeding step by step in the usual vertical manner, you take up a new and quite arbitrary position. You then work backwards and try to construct a logical path between this new position and the starting point. Should a path prove possible, it must eventually be tested with the full rigours of logic. If the path is sound, you are then in a useful position which may never have been reached by ordinary vertical thinking. Even if the arbitrary position does not prove tenable, you may still have generated useful new ideas in trying to justify it.

A few people come to like the idea of lateral thinking so much that they try to use it instead of vertical thinking on all occasions. Many more people resent the idea of lateral thinking and insist that vertical thinking is quite sufficient. In fact, the two types of thinking are complementary. When ordinary vertical thinking is unable to find a solution to a problem or when a new idea is required, then lateral thinking should be used. New ideas depend on lateral thinking for vertical thinking has inbuilt limitations which make it much less effective for this purpose. These limitations of vertical thinking cannot be set aside, for they are its very advantages, looked at from a different point of view.

The functional organization of the mind as an optimizing system makes it interpret a situation in the most probable way. The order of probability is determined by experience and by the needs of the moment. Vertical thinking is high-probability thinking. Without such high-probability thinking, everyday life would be impossible. Every action and every sensation would have to be intensely analyzed and carefully considered—nothing could ever be taken for granted. Like the centipede, confused by self-consciousness, everyone would be incapacitated by complexity. The function of thought is to eliminate itself and allow action to follow directly on recognition of a situation. This is only possible if the most probable interpretation of a situation gives rise to the most probably effective action.


Just as water flows down slopes, settles in hollows and is confined to riverbeds, so vertical thinking flows along the most probable paths and by its very flow increases the probability of those paths for the future. If vertical thinking is high-probability thinking, then lateral thinking is low probability thinking. New channels are deliberately cut to alter the flow of the water. The old channels are dammed up in the hope that the water will seek out and take to new and better patterns of flow. Sometimes the water is even sucked upwards in an unnatural fashion. Then the low-probability line of thought leads to an effective new idea; there is a 'eureka moment', and at once the low-probability approach acquires the highest probability. It is the moment when the water sucked upward with difficulty forms a siphon and at once flows freely. This moment is always the aim of lateral thinking.

Since lateral thinking is to do with new ideas, it would seem to be related to creative thinking. Creative thinking is a special part of lateral thinking which covers a wider field. Sometimes the achievements of lateral thinking are genuine creations, at other times they are nothing more than a new way of looking at things, and hence

somewhat less than full creations. Creative thinking often requires a talent for expression, whereas lateral thinking is open to everyone who is interested in new ideas.

In this book, creative thinking in the true artistic sense has not been used as an example of lateral thinking because the outcome is too subjective. It is easy to demonstrate the effectiveness of lateral thinking with an invention, which either works or does not. It is also easy to decide whether a problem has been effectively solved with lateral thinking. But the value of artistic creative effort is a matter of taste and of fashion. The further lateral thinking diverges from the rules of reason and vertical thinking, the more it must seem to approach madness. Is lateral thinking only a form of deliberate and temporary madness? Is low-probability thinking any different from the random associations of the schizophrenic? One of the most characteristic features of schizophrenia is the butterfly mind which flies from idea to idea. If one wants to escape temporarily from the obvious way of looking at things, why not use a psychedelic drug? The essential difference is that with lateral thinking the whole process is firmly controlled. If lateral thinking chooses to use chaos it is chaos by direction, not chaos through absence of direction. All the time the logical faculty is waiting to elaborate and eventually judge and select whatever new ideas are generated. The difference between lateral and vertical thinking is that with vertical thinking logic is in control of the mind, whereas with lateral thinking logic is at the service of the mind.

Does a person have a fixed skill in thinking or only as much ability as he has had interest and opportunity to develop? Only a few people have a natural aptitude for lateral thinking, but everyone can develop a certain skill if they set about it deliberately. Orthodox education usually does nothing to encourage lateral thinking habits and positively inhibits them with the need to conform one's way through the successive examination hoops.

Lateral thinking is not a magic formula which can be learned at once and usefully applied thereafter. It is an attitude and a habit of mind. The various techniques described are intended to bring about an awareness of lateral-thinking processes; they are not meant to be used as a problem-solving cook-book. There is no sudden conversion from a belief in the omnipotence of vertical thinking to a belief in the usefulness of lateral thinking. Lateral thinking is a matter of awareness and practice—not revelation. 

From his book of the same title.

Dr. Edward de Bono is regarded by many as the leading authority in the field of creative thinking, innovation and the direct teaching of thinking as a skill. He is equally renowned for his development of the Six Thinking Hats technique and the Direct Attention Thinking Tools. He is the originator of the concept of Lateral Thinking, which is now part of language and is listed in the Oxford English Dictionary. Dr. de Bono was born in Malta. He was a Rhodes Scholar at Oxford, holds an MA in psychology and physiology from Oxford, a D. Phil. in Medicine and also a Ph.D. from Cambridge. He has held faculty appointments at the universities of Oxford, Cambridge, London and Harvard. Dr. de Bono's background in self-organizing systems led him to derive an understanding which he then applied to the neural networks of the brain (see *The Mechanism of Mind*, 1969, Penguin Books).

He has written 67 books with translations into 38 languages and has been invited to lecture in 57 countries.

Dr. de Bono was chosen by a group of academics as one of the 250 people who had contributed most to humanity in the whole history of the human race.

The appeal of Dr. de Bono's work is its simplicity and practicality. It can be used by four year olds and by senior executives; by Down syndrome youngsters and Nobel laureates.

Dr. de Bono is currently the chairman of the Council of Young Enterprise Europe, which has a membership of 1,500,000 youngsters across Europe, Israel and Russia, who set up mini-businesses while at school.

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