

## **PROVOCATION AND PO**

### **CRITICAL THINKING**

Critical thinking is our check on truth: is this true?

There is 'game truth' when we have ourselves set up the game or system and we judge whether the game is being played according to our rules. Mathematics is an example.

Then there is 'reality truth' when we try to match what we are saying to the outside reality of the world around. There are different levels of truth. There is truth based on experience of ourselves or of others.

There is checkable truth when anyone can check what we claim. Then there is truth based on some authority (science, reference books etc.).

We need to develop the thinking habit of always asking ourselves: What is the truth value here?

What is important is the level of claimed truth. This can range from a claimed absolute certainty to something that is only offered as a possibility. Over-claiming needs to be challenged.

The next role of critical thinking is to check on the logic that is being used. With logic we seek to derive a further truth from truths which we already have.

We need to ask the habit question:

Does this follow?

A much more important question is: Must this follow?

With a logical argument it is claimed that the conclusion must follow from the preceding step. We need to look closely at this 'must'. Very often it is claimed that something must follow because the thinker cannot imagine an alternative. If you can imagine an alternative, that destroys the 'must' aspect.

At the end critical thinking (black-hat thinking) may conclude:

This is false.

This is doubtful.

This is not proven. This is proven.

### **CREATIVE (LATERAL) THINKING**

With creative thinking we are not so much concerned with proving something as with moving forward with possibilities. Once we have reached a new idea, we can set about proving its truth and value.

In logical thinking we seek to move step by logical step from where we are to a new position.

In creative thinking we can make jumps ahead and when we have reached a new position we then set about checking the value of that position.

Hypothesis, speculation and provocation are all ways of making that creative jump ahead. Sometimes we have to guess because we do not have enough information for action. In creative thinking we guess in order to have new ways of looking at information and in order to explore the possibility of new ideas.

The analysis of information is not sufficient to produce new ideas because the mind can see only what it is prepared to see - and that means the old ideas. We need to develop skill in speculation.

Speculation may range from a very reasonable guess (what we seek in a hypothesis) to a mere possibility to a provocation which makes no claim to truth whatever. The purpose of a provocation is to get us to look at something in a new way - not by presenting the new way but by jerking us out of the old way.

A creative jump ahead can pull our thinking forward. We lead from in front. Without creative thinking we lead from behind and we have to strive to push forward, building on what we know.

The creative attitude involves a willingness to go forward and to explore possibilities.

## GENERAL AND SPECIFIC

The specific meaning of 'lateral thinking' covers the use of specific techniques which are used to help us generate new ideas and new perceptions. This is directly concerned with creative thinking.

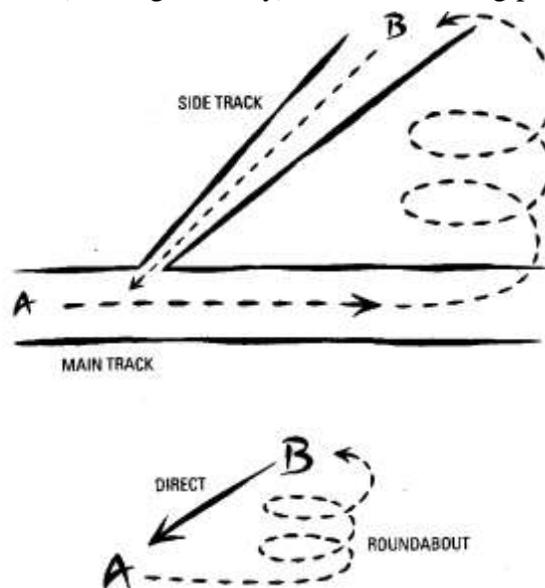
The general meaning of 'lateral thinking' covers thinking that sets out to explore and to develop new perceptions instead of just working harder with the existing perceptions. In this sense lateral thinking is closely connected with perceptual thinking. Many of the attention directing tools (CAF, OPV, C&S) are part of this general exploration of lateral thinking.

In this section I am looking at the specific creative sense of lateral thinking. This involves thinking tools like provocation and the use of the new word 'po'.

## PATTERNS

As a self-organizing system the brain allows incoming information to organize itself into patterns.

Those interested in exploring this matter further should read my books *The Mechanism of Mind* (1969) and *I Am Right - You Are Wrong* (1990).\* 'A self-organizing information system allows incoming information to organize itself into patterns. These patterns are not symmetric. We need a means for cutting across patterns (moving laterally). Lateral thinking provides that means.'



Obviously this is a technical definition and will not mean much to those who do not understand what is meant by a self-organizing system. This is the technical definition of lateral thinking and indicates that it is more than just a descriptive term. Lateral thinking is based on information behaviour in self-organizing systems.

This pattern-making activity of the brain is most useful. Without the routine patterns that are established life would be impossible. A person who has been blind from birth is unable to see when sight is given to him or her, until the visual patterns we take for granted have been set up. Reading, writing, talking, crossing the road, recognizing friends, recognizing food are possible only because of this superb pattern-making ability of the brain.

So we should all be immensely grateful for the pattern-making behaviour of our brains. But patterns are not symmetric. In the diagram opposite there is a side pattern. As we go along the main track we are not even aware that the side track exists. But if we start on the side track, the route back to the first

point is direct and obvious. In other words the route from A to B may be roundabout but from B to A is direct. That is what I mean by 'not symmetric'. This is a property of all patterning systems and there is nothing mysterious about it.

## HUMOUR

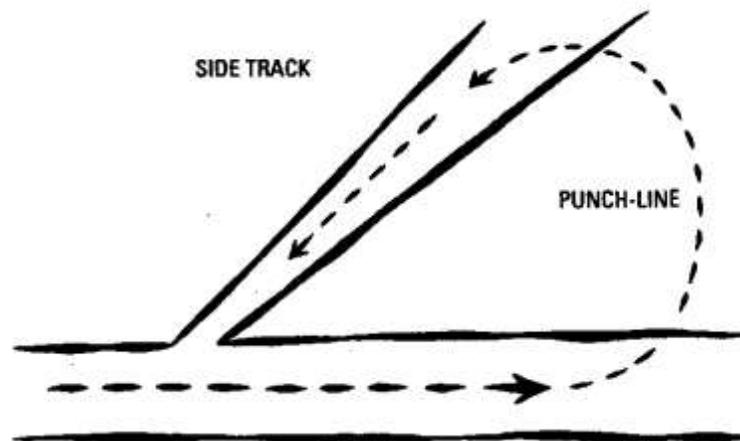
Humour is an excellent model of lateral thinking. As we listen to a joke our thinking travels along the main track. Suddenly the punchline takes us across to the side track. Once there we can see the 'logic' of the connection. This process is shown in the diagram on p. 190. This sudden switch of perception is made more powerful if it draws upon emotions, prejudice and topical events. We accept the logic of humour just as we accept the unusual grammar of poetry.

One day far into the future brain transplants become possible. A manager is arranging a brain transplant for a key executive who has been injured in a car accident. He is offered a choice of several possible brains. One of them is five times as expensive as the others. He asks the reason for this high price. He is told: 'That is a very special brain - you see it has never been used.'

The logic is that an unused car is much more expensive than a used car. On the other hand an unused brain may not be much use. In the usual telling of this joke the unused brain is said to have belonged to a particular person, to a politician or to some ethnic group.

## HINDSIGHT

In lateral thinking we develop deliberate techniques for getting us across to the side track. These techniques will be explained in the next few pages. Once we have got to the side track, then - as in humour - the path back to the starting point is obvious. That is why all valuable creative ideas are logical in hindsight. Because such ideas are logical in hindsight we have insisted that there is no real need for creative thinking, since better logic should be able to reach such ideas. This is simply not true in patterning systems. If it were true, only stupid people would have a sense of humour.



We come now to the specific techniques of lateral thinking. These techniques can be used deliberately by a thinker who needs to generate a new idea.

... 'Po cows can fly.'

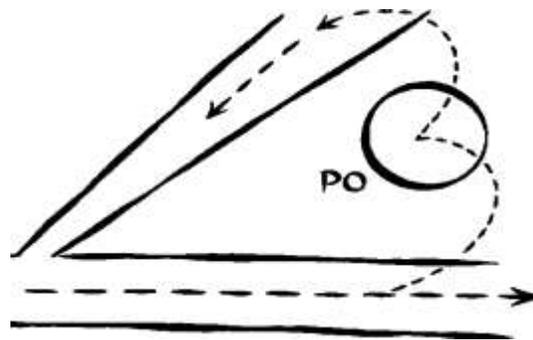
... 'Po cars have square wheels.'

Both the above statements are totally unreasonable. They are contrary to experience and to the truth. Why should we make such absurd statements?

Provocation goes beyond hypothesis and speculation. In hypothesis and speculation we guess that something might be so but we cannot yet prove it. With provocation there is no pretence whatever that something might be true.

Because a provocation is not intended to be true we need some way of signalling to our listeners that a statement is put forward as a provocation - otherwise the listeners might think we have gone mad. We need a specific signal word for a provocation. Ordinary language does not contain such a word. The word 'suppose' and the phrase 'what if ...' are too weak, since they can be used to signal guesses that might be true. So several years ago I invented a new word, 'po'.

The word 'po' means: 'What follows is put forward directly as a provocation.' The letters 'p' and 'o' can be taken to represent 'p'ro-vocative 'o'peration.



## SETTING UP PROVOCATIONS

Where do provocations come from? How do you set up your own provocations?

Received provocations: You hear or read a stupid remark. This remark is not intended as a provocation. It may be intended as a serious idea or as a silly idea (for a laugh). You have a choice. You can dismiss the idea or you can choose to treat the idea as a provocation. Radar was invented this way. Some mad person suggested that a radio beam could be used to shoot down aeroplanes. From this crazy idea (because the power of such a beam was very low) came the useful idea of using the radio beam to 'detect' aeroplanes.

So you can choose to treat any received idea as a provocation.

Reversal: You look at the way things are normally done and then you deliberately go in the opposite direction. We normally try to make wheels as round as possible - so let us make them 'unround' or square. You normally pay to buy goods - so let us have the store 'paying' the purchaser. This might have led to ideas like trading stamps. What is the normal direction? What is the reverse (opposite) direction?

Escape: In this method you look at some feature that we normally take for granted in the situation (it should never be a negative feature) and then we drop that feature or cancel it. For example we take for granted that watch dogs should bark. We drop that feature - escape from it - and so we get: 'Po watch

dogs do not bark'. This leads on to the idea of small highly intelligent watch dogs that do not bark. Instead they quietly slink off into a corner where there is a button they have been trained to press. This button sets off a sophisticated alarm and security system - it could also trigger a tape-recorder playing a recording of many dogs barking.

Wishful thinking: This should not just be a mild desire, like reducing the cost of an object by 10 per cent, but it should be a fantasy. You can say: 'Wouldn't it be nice if ...' Wouldn't it be nice if polluting factories were downstream of themselves on the river? This leads to the practical idea of legislating that inputs from the river must always be downstream of the output - so the factory is the first to sample its own pollution.

Outrageous: Quite simply this covers anything at all which you want to set up as a provocation. Po cars are made of spaghetti. Po breakfast cereals should grow in their packets. Po everyone votes every day on government decisions. This last provocation could lead to the idea that each day at 10 pm every householder would switch on an electric fire if that householder disagreed with an announced policy. The surge in electricity usage could instantly be measured at the power station - so giving an instant total vote. For a vote of agreement you switch on the fire at another time.

In general people are much too timid about setting up provocations. You are protected by the word 'po'. A provocation is meant to be a provocation. Whether you can use the provocation is not important. If you are setting up good provocations, at first you might only be able to use half of them. As you become more skilled at 'movement' you will be able to use more of them. A weak or timid provocation is very little use. You should say: 'Here is my provocation.' Then you try to make use of it. It is a two-stage operation. Do not think of how you might use the provocation as you are setting it up. Although it seems crazy and directly contrary to normal logic, a provocation is actually a 'logical' operation in a patterning system.

Because of the lack of symmetry in a patterning system we need some method for getting across from the main track of thinking to the side track. In humour the punch-line makes the connection. In lateral thinking we use the provocation. We use a provocation as a stepping stone, as shown in the diagram opposite.

The first step is to set up the provocation. We then move from the main track to the provocation. This gets us out of the main track. We then move from the provocation to the side track. Once we are there, we might see in hindsight that we have a perfectly reasonable new idea. We forget about how we got there.

A lateral-thinking solution is never justified by how we get there (contrary to normal logic) but by the value once we have got there.

If we take a cross-section of the pattern diagram (see the diagram opposite) between points X and Y we get a picture that looks like two river valleys side by side. It is very difficult to escape from the main valley because we keep sliding back. In the same way it is difficult to escape from the main thinking track. We have to go against our natural thinking and experience, against the gradient, in order to escape. That is why provocation is necessary. Once we have got to the top of the 'ridge', we can find ourselves sliding down into the new valley.

It follows that a provocation should be provocative otherwise we might not escape from the main thinking track.

## SUMMARY

In any self-organizing system there is a mathematical and logical need for provocation in order to cut across patterns - and so get around the lack of symmetry. We use the new word 'po' to signal that a provocation is being offered. Five ways of obtaining a provocation are suggested: received

provocations, reversal, escape, wishful thinking and outrageous. Do not be timid: a provocation should be provocative. Once you have the provocation you use 'movement' to move from the provocation to a new idea.

### EXERCISES ON PROVOCATION AND PO

1. Which of the following statements are really provocations? In front of which statements should you put 'po'?

... aeroplanes should land upside down.

... hamburgers could be square.

... five hours is enough sleep.

... more women should be politicians.

... people should pay taxes according to their weight.

2. Set up an 'escape'-type provocation for each of the following items. You pick out some feature you take for granted and then cancel or drop this feature.

bicycle, library, elevator, birthday, house, tennis

3. Set up a 'reversal'-type provocation for each of the following items. You take the normal direction of action and then you reverse this direction.

collecting money for Gharity, choosing a career, friendship, watching television, cutting the grass.

4. Which of the following seem to you to be the most 'provocative' of the provocations? Place them in order with the most provocative first and the least provocative last.

... Po parents should ask their children permission before going out.

... Po each worker decides how long to work each day. ... Po the price of basic foods should be reduced. ... Po stupid people should pay less tax. ... Po cars should have no steering wheel. ... Po all cars should be coloured yellow.

5. Set up a 'wishful-thinking'-type provocation for each of the following. Use the phrase, 'Wouldn't it be nice if...'

school, parents, clothes, sleep, sports

6. Set up three different 'outrageous'-type provocations for the following items. The provocations must be outrageous, telephones, human hair.

### SETTING UP MOVEMENT

Once we have set up the provocation what can we do with it? We 'move' forward to a new idea; The operation of 'movement' is very different from judgement. I shall be explaining this operation of 'movement' in the next section. Provocation and movement always go together.

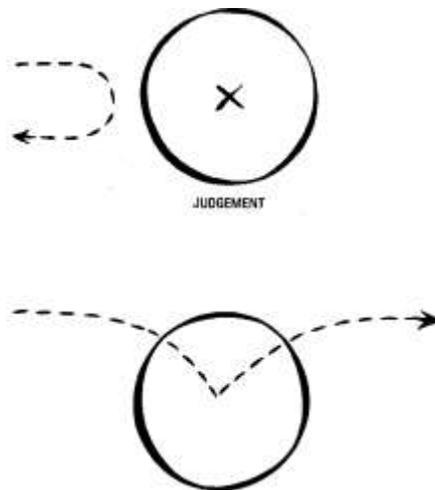
What could we get from the provocation 'Po cows can fly'? In our imagination we visualize cows flying around. What would happen? What would they be doing? Perhaps they would be roosting up in trees? It is at this point that we start to get an idea. A cow roosting in a tree could start to nibble the leaves. Perhaps we could feed cows on leaves from trees. Grass grows only in two dimensions, trees and leaves grow in three dimensions. Perhaps we could find quick-growing trees with leaves that are good for cows to eat (preferably directly, possibly after treatment). Leaves are full of protein. If space is limited we might get more 'leaf-grazing' per acre than grass-grazing. It may not work, but there is a new idea.

What could we get from the provocation 'Po cars have square wheels'? We imagine the car rolling forward. A wheel rises up on to its corner. We would get a very bumpy ride. But this rising is regular and we know exactly how high the car is going to rise. So if the suspension got 'shorter' this would compensate for the rise and we might get a smooth ride. This leads to the idea of a car designed to go over rough ground. For example a small wheel ahead signals back the buiiipiness of the ground. The suspension then raises or lowers the axle to compensate for the bumps. The result is a smooth ride, as the car now 'flows' over the ground instead of 'bumping' over the ground. This is an idea I suggested as far back as 1975. Several car companies are now working on 'intelligent' suspension which does exactly this.

A provocation is useless if we cannot do anything with it. We use 'movement' to move from the provocation to a new idea. Provocation and movement go together as a combined process.

The most important thing to keep in mind is that 'movement' is different from judgement. Many traditional approaches to creative thinking talk about 'delaying judgement' or 'suspending judgement' but this is much too weak.

Just refusing to 'judge' does not indicate what the thinker should do instead. 'Movement' is an active operation that we can use deliberately. As we practise the operation of 'movement' we become more skilled at this operation. Eventually we can become so skilled that we are able to get 'movement' from almost any provocation.



The diagram illustrates the difference between judgement and movement. With judgement (black-hat thinking) we compare what is before us with what we know. If what is before us is wrong, we reject it. With 'movement' we are operating outside the judgement/truth system. With movement we look at what is before us (usually a provocation) and we see how we can 'move' forward from this to a useful new idea.

In normal life the only places we use 'movement' are in poetry and metaphor. In both these cases we do not stop to say: 'Is this really correct?' Instead we move forward to see where the metaphor or image gets us.

Someone teaches you to play poker. You become good at poker. Then someone teaches you another card game, perhaps contract bridge. You also become good at that game. But when you are playing poker you use the rules of poker. When you are playing contract bridge you use the rules of bridge. You do not get the rules of the two games mixed up - you keep them separate. You are skilled at poker. You are skilled at contract bridge.

It is exactly the same with 'judgement' and with 'movement'. They are two separate games. When you are using judgement, you use skilled judgement (black hat). When you are using movement, you use skilled movement (under green hat). If you try to use something that is a mixture of both you will have a mess. When a carpenter is using the hammer he or she uses the hammer. When the carpenter is using the saw, he or she uses the saw.

## WAYS OF GETTING MOVEMENT

There are a number of ways of moving forward from a provocation. Some of these ways are given here. These ways can be practised until skill in the operation of movement has been built up. Without such skill lateral thinking is not effective. It is not too difficult to set up provocations - the skill lies in getting movement from these provocations.

**Attitude:** There is the general attitude of 'movement'. We make a general effort to go forward from the provocation. What does this lead to? What does this suggest? Where does this take me? What is of interest here?

**Moment-to-moment:** This may be the most powerful way of getting movement. We visualize the provocation in action - no matter how absurd this seems. So we visualize cows flying. We visualize a car bumping along on square wheels. We visualize a plane landing upside down. As we visualize these things we watch for what happens moment-to-moment. This is totally different from seeing what happens 'in the end'. In the end the car with square wheels would shake to pieces. In the end the plane landing upside down would crash. It is this moment-to-moment observation of the provocation in action that can lead to new ideas.

**Extract a principle:** Could we pick out or extract some principle from this provocation and then make use of this principle in a practical idea? In looking for a new advertising medium we might say: 'Po we should bring back the town crier.' In the operation of the town crier we find an interesting principle: you cannot 'switch off the town crier. We take this principle and look around for a medium we would be unable to switch off. We think of advertising telephones. If you did not want to pay for a call you press a special button and get a free call - but at intervals advertising messages come on the line and interrupt your conversation. In addition to extracting a principle we can also extract a key feature or a specific aspect of the provocation. This becomes a sort of 'seed' that we take to plant in order to grow a new idea.

**Focus on the difference:** How is this different from what we normally do? What are the points of difference? By focusing on these points of difference we seek to move on to a new idea. The difference between a plane landing upside down and the right way up is that in the upside-down position the wings would give downward thrust. This leads on to the idea of 'positive' landings. From this we can actually get to some useful ideas - such as cancelling a negative bias to get instant extra lift in an emergency.

**Focusing on the difference** is extremely important when a thinker is faced with that most powerful killer of new ideas, the phrase: 'This is the same as ...' You suggest a new idea and this is dismissed by someone using that phrase. The phrase is so powerful because it does not attack the idea but simply indicates that it is not worthy of any attention since it is already known or being used. The only way to counter this phrase is to say: 'It may seem the same as (something) but let us focus on the difference ...' You then proceed to list the points of difference.

**Search for value:** Is there any value at all in this provocation? Are there any directly positive aspects? Are there any special circumstances under which the provocation would have a direct value? The provocation 'Po ambitious employees should wear a yellow shirt or blouse' leads to several interesting

ideas. For example, in a service business a customer would always try to choose a service assistant wearing a yellow shirt or blouse.

The more our minds become sensitive to value the more able we become to sense value in almost everything - including provocations. Once we have detected the value, we strengthen it, build upon it and try to make it practical. A dog detects a faint scent. The dog pursues that scent. The scent gets stronger. Finally the dog has tracked down its quarry. In the same way we can 'scent' value and can pursue that scent until we find value strong enough to be the basis of a new idea.

Interesting: What is 'interesting' about this provocation? The term 'interesting' covers many of the other ways of getting movement. There may be an interesting point of difference. There may be an interesting principle. 'Interesting' forms the third part of the PMI attention-directing tool that was described earlier in this book. A creative person notices and seeks out what is interesting. You may have to make the effort to find out something interesting.

## SUMMARY

'Movement' is a deliberate, active operation that is distinct from judgement. We use movement to move forward from a provocation in order to find a new idea. Movement and provocation go together as a method of cutting across patterns and opening up new ideas. The ways of getting 'movement' include: attitude; moment-to-moment; extract a principle; focus on the difference; search for value; and 'interesting'. The first step is to set up the provocation. The second step is to use the provocation for its 'movement value'.

## EXERCISES ON MOVEMENT

Use the 'moment-to-moment' method for getting movement from the following provocation:

1. Po each person decides how long he or she wants to work each day.
2. Use the 'extract a principle' method for getting movement from the following provocation:
3. Po all TV sets have a number in the corner of the screen which tells how many hours that set has been in use during that week (starts again at Sunday midnight).
4. Use the 'focus on the difference' method to get movement from the following provocation:
5. Po instead of tidying your own room, each person is responsible for tidying someone else's room.
6. Use the 'search for value' method for getting movement from the following provocation:
7. Po everyone celebrates two birthdays each year: your real birthday and an 'official birthday' on a date you choose.
4. You want some new ideas on restaurants. Set up a provocation
8. (using the escape method) and then get movement from this (using the 'interesting' method).
9. You are involved in a national campaign to encourage people to take more exercise. You need ideas for the advertising messages. Use the 'reversal' method to set up a provocation and then use the 'extract a principle' method to move to a new idea.
10. Use all the methods of movement, one after the other, to try to get the maximum movement from the following provocation.
11. Po at any time the age of the person driving the car must be shown on the back of that car.
12. to use the fourth tool, then the fifth tool is still fully usable. It is like having several arrows in a quiver. Each one has a value on its own.