Black Hat



Members of our group have asked about directions for the use of the Hats. Let's go directly to the descriptions from Dr Edward de Bono from his series, *Six Thinking Hats for Schools*. This series of four booklets gives the best definitions available. Some editing has been done, without permission, to enhance readability and comprehension.

## *The Black Hat*

The Black Hat is for critical thinking. The word critical comes from the Greek word for 'judge': *kritikos*. In many countries, judges in court wear black robes because it is a serious colour. It is totally wrong to view Black Hat thinking as bad or undesirable thinking. Using the Black Hat is 'insurance', a protection from making dangerous or unworkable decisions. With the Black Hat, we find weaknesses and flaws and we predict problems that might arise. The Black Hat is perhaps the most often used and the most valuable of all the Hats. With the Black Hat, the words, *checking*, and *checking out* are very important when explaining its uses. These words convey the essence of critical thinking – and do not carry a negative image. We know the positive uses of checking something...

When a manufacturer produces a new toy, this has to be thoroughly checked to be sure it is not harmful – no sharp edges that might cut, no pieces that might be bitten off and swallowed by the child, nothing toxic in the construction materials...

The Black Hat checks things in the same way. Black Hat thinking helps us avoid making mistakes and doing silly things with undesirable consequences. It also points out difficulties and dangers for further exploration.

### Uses of the Black Hat

The main uses of the Black Hat are these:

*Checking for evidence.*
*Checking for logic.*
*Checking for feasibility.*
*Checking for impact.*
*Checking for fit.*
*Checking for weakness.*

We should check each of these uses one after the other. As we do, note that the purpose of the Black Hat is not to attack but *to examine the idea or situation*.

### Checking for Evidence

One use of the Black Hat is to check the evidence which supports the truth of some statement or claim. Is this true? Is this right? Is this correct? What is the evidence to support this idea?

### Checking for Logic

Another use of the Black Hat is to check the truth or validity of a logical argument: *Does this really follow?* Someone may claim that if we have A and B, then C must follow. Black Hat thinking checks this claim. We might even check the use of the word, 'must'. It is possible that C might follow, but that is not the same as 'must follow'. This is a Black Hat check for logic.

### Checking for Feasibility

With the Black Hat, we may examine a suggestion to see if it is feasible, possible or likely to work as claimed: *Will this invention work? In practice, can this be done? Will this plan succeed?* With questions like these, we may find actual mistakes or gaps or find that something is missing...

### Checking for Impact

Anything we do has consequences. Our actions affect other people and the world around us. So we need to get input on the impact of the change before making a final decision for action. With the Black Hat, we may check to see what negative effects, the risks, a suggestion or idea will have: *What might be the difficulties? What dangers are likely to arise? How will this affect other people? How will this affect the environment?*

The most important part of checking the impact of an idea is the effect it may have on values. Obviously, the idea suits the values of whomever is making the suggestion – what about the values of others?

We need to check the impact of a suggestion very carefully. It may be too late to go back after the idea has been put into use.

### Checking for Fit

With the Black Hat, we can check the fit of what is suggested with what we already know. On a very simple level, we might ask: *Do these clothes fit? Will this fit the box? Does the plug fit the socket?*

We also may check an idea to see if it fits the facts as we know them: *Does this fit our information? Does this idea fit our experience in this field? Does this fit personal or general experience?*

We may also want to know whether an item, policy or plan fits in with a system: *Does this fit the rule, the laws or the regulations? Does this fit the normal procedures? Does this fit our strategies and objectives?*

We can check to see if an idea fits our standards and ethics: *Does this plan, policy or item fit the standards and ethics of our group or society – even if this is not a matter of law? Is this fair? Is this honest?*

As for values, we could ask: *Does this fit our values or the values of our group or society? Here we are not talking about what impact the ideas will have on values, but whether it fits the existing values.*

At the end of this assessment, we could say that something fits, does not fit very well or does not fit at all.

### Checking for Weaknesses

Suppose we are presented with a design for a new chair. We look for the weaknesses in the design: *Is the seat too small? Is the back too straight?...* Our intention may be to reject the design because of these weaknesses.

But our intention may also be to improve the design by pointing out the weaknesses so that they can be overcome. This is a construction function of the Black Hat. We search for and point out weaknesses in an idea in order to overcome them, thereby making the idea stronger. When the Black Hat is used in this way, it is generally followed by the Green Hat search for ways to overcome the weaknesses. This sequence is often called 'constructive criticism'.

In practice, there is a big difference in looking at an idea *in order to attack or reject it* and looking at an idea *in order to improve it*.

Questions we might ask to check for weaknesses include these: *What are the weaknesses here? What are the weak points in the idea?* The word, 'faults', could be used rather than 'weaknesses', but weakness seems a more positive word. A weakness may be minor whereas a fault always seems major and perhaps not correctable.

In summary, the uses of the Black Hat include checking for evidence, logic, feasibility, impact, fit and weakness. Different mental processes go into these various operations. For example, checking for logical truth means applying the rules of logic. Checking for feasibility may mean applying the rules of engineering or experience of human behaviour. Checking for impact involves running something forward in our minds and watching the effects.

## *Purposes for Using the Black Hat*

The two main purposes for using the Black Hat are to:
*Find weaknesses,*
*Make assessments.*

We may use the Black Hat early in our exploration of an idea in order to find the weaknesses. We find these weaknesses in order to overcome them and put them right. When using the Black Hat to find weaknesses, our goal is to improve on the idea.

We may use the Black Hat at the end of an exploration to make an assessment or judgment. When we want to decide on the value of an idea or when we are about to put an idea into action, then we need the Black Hat to be sure we are not making a mistake. In this final assessment, we can also follow the Black Hat with the Red Hat. After our judgment, how do we feel about an idea?

### Overuse

The Black Hat is a valuable Hat–possibly the most valuable of them all–but it can be overused. There are people who only want to use the Black Hat. They only want to criticise ideas. They feel that this is enough.

But it is not. We need critical thinking, but we also need thinking that is creative, generative and productive. Where are the ideas and suggestions going to come from? Criticising ideas may improve them but does not produce new ideas. That is why the teaching of critical thinking by itself is insufficient.

Critical thinking and the Black Hat have a very important role to play in thinking, but by themselves are not enough. This is not meant as a rejection of critical thinking but an observation that other kinds of thinking are also needed for a fuller view. One particular wheel on a car may be a very fine wheel, but one wheel alone is not enough to carry the car.

### *Summary of the Black Hat*

The key words to describe the uses of the Black Hat are checking and checking out. We can check for evidence, logic, feasibility, impact, fit and weaknesses. The two main purposes for using the Black Hat are finding weaknesses and making assessments. The overall question is: *What is wrong with this?*

### *The Yellow Hat*

Yellow can mean sunshine and optimism and looking at the bright side of things... The Yellow Hat is logical; *you must give supporting reasons*. If you are just expressing a general feeling of optimism or just hope that something will work, then that is not Yellow Hat but Red Hat thinking, which covers feelings.

If anyone suggests an idea or proposes a change, then there is usually a reason for this. It is not a random suggestion. There must be benefits for someone in the suggestion. A solution to a problem has the benefit of reducing or removing the problem. Giving food to starving people removes the hunger. Removing a pin upon which you have been sitting removes the pain. So, with the Yellow Hat, two questions can be asked:
*What are the good points here?*
*What are the benefits here?*

Very often the Yellow Hat deals with the future. A suggestion is made, a solution is offered, a plan is put forward. The benefits that are claimed for each of these are going to come about in the future. Because it is the future, we cannot be absolutely sure about anything. But we must have good reasons for claiming that these benefits will come through.

The Yellow Hat can also apply to the past. For instance, we might want to find the benefits of something that happened long ago or just last week.

### *Uses of the Yellow Hat*

The uses of the Yellow Hat can be divided into four areas which overlap quite a bit:

*Good points.*
*Benefits.*
*Reasons why an idea will work.*
*Likelihood.*

The following sections discuss these areas in more detail.

#### Good Points

With the Yellow Hat, we think about the good points in an idea or situation. The good points of a design called be called 'the strong points'.

The good points may not be enough to ensure that something will work or prove to be a good choice. Suppose we see a car that has a wonderful green colour – we think the colour is the good point. But the inside of the car is cramped and the car uses too much petrol. Suddenly the green colour seems irrelevant.

It is important to be able to pick out the good points even when there are very few or there are many more bad or dangerous points. If the good points are of great value, we may decide that it is worth coping with the difficulties or risking the dangers in order to pursue the idea.

#### Benefits

Yellow Hat thinking is a deliberate effort to find benefits–just as a hungry fox makes a great effort to hunt prey or a goat on a rocky mountain side spends all day looking for tufts of grass to eat. This effort is important because the benefits may not be obvious.

Trying to find them may turn up benefits that no one else has noticed. That sort of thinking has been the basis for many a fortune.

There is also a need to look at how the benefits arise and at the nature of the benefits. Do the benefits arise from some special circumstances over which we have no control – for example an anonymous benefactor donates money to buy more books for the library? Also, are the benefits likely to be long-lasting? They may depend on some circumstances that will soon change. But even if the benefits are short-lived, we may still value them.

Another essential question is, who gets the benefits from an idea? It is normal for the person who suggested the idea to benefit. A scientist may enjoy the satisfaction of having developed a new theory or may be involved in the profits of patenting an idea for a new invention. In many cases, it is also usual for the person on the receiving end of the idea to benefit. A politician suggests a new law. This must benefit those who are going to vote for the politician. The politician in turn benefits from increased prestige and also future votes.

In addition to the benefits for the initiator and receiver of the idea, there may also be benefits to third parties. The decision to build a new school in a town will ultimately benefit the children and teachers using the school themselves. But it will also provide more jobs in the construction industry while the school is being built. In addition, having the new school may cause more families to move into the area and improve the real estate market. So it is useful to look not only at the intended benefits but also those that develop even if unintended.

## *Types of Benefits*

There are many types of benefits and it is useful to go over them from time to time. In this way, you can be more sensitive to possible benefits.

### Simplicity

An idea may make something simpler, such as a simpler hypothesis or a simpler way to solve a maths problem. In general, if something can be made simpler, it will benefit us by requiring less effort, being more effective and reducing errors.

### Effectiveness

Some ideas have the benefit of allowing us to achieve what we set out to do in a stronger way. The effect we get is stronger.

### Efficiency

An idea that improves output without increasing input or gives the same output with less input offers a benefit.

### Acceptability

It is a benefit if an idea is one that people are more likely to accept than other ideas. More people will accept the idea with less persuasion.

### Opportunity

If an idea will put us in a position where there are now more opportunities, then that is a benefit.

### Lower Cost

It is a benefit if an idea results in less cost in terms of money, time, effort or hassle.

### Lower Risk

It is a benefit of a new idea reduces danger and uncertainties.

### Increased values

If an idea brings an increase in existing values (more security, peace, better health) or offers something new that we value (new friends, new interests), then this is a benefit.

So there are many types of benefits to search for with the Yellow Hat.

## *Why an Idea Will Work*

This is the answer to the Black Hat criticism: *Will it work?* The Yellow Hat must always set out the full logical reasons why something is expected to work.
*This will work because*... These reasons may be based on any of the following:

### Information

*Statistics show that the average age is...*

### Principles of Physics

Chemistry, nature... *If we curve it there, it will be stronger.*

### Experience

"Whatever prices are about to go up, people have always hurried out to buy more."

### Plain logic

*If this investment is shared, each person pays less.*

The Yellow Hat thinker must be able to meet the objections of the Black Hat thinker. There may still remain a difference based on experience or different information, but there must be an answer to the objections.

As we shall see later, there is a big difference between Green Hat thinking and Yellow Hat thinking. Green Hat thinking puts forward *suggestions* and *possibilities*. There is only a vague hint that they might work (and sometimes not even that). The purpose of the Green Hat is to come up with ideas or to get some proposals on the table. The Yellow Hat then takes each of these proposals and tries to show how it could be made to work. This aspect of Yellow Hat thinking is more constructive than judgmental.

### Likelihood

It is difficult to be certain about the future. It is difficult to prove that a venture will work or that a proposed solution really will solve a problem. Nevertheless, entrepreneurs do have to take initiative and people have to make decisions about problems. We cannot wait for certainty when there can be no certainty about the future.

Sometimes we can be reasonably sure about an idea and when we are, then we can discuss our idea under the category of why the idea will work. At other times, we are not so sure. We can then think in terms of the degree of likelihood that something will work. Yellow Hat thinking is only concerned with a high degree of likelihood – perhaps 70 percent or more. Lesser degrees of likelihood could come under the Green Hat, which deals in possibilities.

The Yellow Hat also seeks to establish the basis of likelihood with questions such as these: *What is the evidence? What are the clues? What are the trends? What are the competing possibilities?*

With likelihood, we are dealing in risks because something may not turn out as we had claimed or wished. There may even be danger, harm, loss or damage involved. If this 'harm risk' is low or absent, we might choose to go ahead with a project even if the success likelihood is lower than usual. If the 'harm risk' is high, then we should want a much higher likelihood of success.

## *Purposes For Using the Yellow Hat*

The three main purposes for using the Yellow Hat are:

*Assessing value.*
*Extracting benefits.*
*Making something work.*

First, we can use the Yellow Hat as part of an assessment and then move to the Black Hat. The Yellow Hat part of the assessment involves listing the good points and the benefits in the proposal or idea. The Black Hat then examines the weak points, difficulties and dangers. Using the Yellow Hat in this way is part of making a judgment.

Second, the Yellow Hat can be used in a deliberate effort to extract some benefit or good points from something which has generally been thought unworkable, unattractive or even a disaster. This Yellow Hat activity is not going to result in an assessment. What is extracted may, however, be of value. It is a sort of "mining" use of the Yellow Hat.

Third, the Yellow Hat can be used in an effort to make something work. This is the constructive use of the Yellow Hat. For example, after the Green Hat has put forward possibilities, the Yellow Hat may seek to give these a solid basis. This is an active process, not just an assessment. The constructive use of the Yellow Hat also seeks to establish likelihood.

### Overuse

It is possible to be overly optimistic and "Pollyanna" in attitude. It is possible to believe that something will work only because you wish it to work. Or it is possible to be too optimistic as to likelihood. Another type of overuse is to focus entirely on the Yellow Hat and to ignore the valuable contribution of the Black Hat.

## *Summary of the Yellow Hat*

The key words to describe the uses of the Yellow Hat are, good points, benefits, workability and likelihood. The overall questions to ask are: *What are the good points?* or, *What are the benefits?*

## *The White Hat*

The White Hat is for finding information. Visualise the white colour of a typed report, a computer printout or a newspaper. The White Hat is for *neutral, objective information*. There are no suggestions, ideas or arguments. Feelings do not come into it. Just information.

Thinking is no substitute for information. If we need to know the air travel time between London and Vilnius, we look up the timetable. Thinking about it is not going to help. If we had perfect information about a matter, then thinking would be unnecessary.

The effort to find the information base – *What information do we have?* and to increase the information base – *What information do we need?* are key parts of thinking. They should be treated as part of thinking and not as something separate.

School is often concerned with reactive thinking; something is put in front of the students and they are often asked to react to the material. In real life, thinking is very often pro-active. This means that the information is not put in front of us but we have to go out and collect it ourselves.

The White Hat provides the thinker with an opportunity to focus directly and exclusively on information. The White Hat also allows a thinker to ask someone else (or others in a group) to focus on information: *Never mind the arguments. What is the information here? Let's have some White Hat thinking.*

However, White Hat thinking is not just a matter of taking facts out of a reference book and putting them on the table. Where does this information come from? Is it relevant? What else do we need? Thinking is involved.

In ordinary thinking, we are using information all the time and we do not need to put on a White Hat to bring some piece of information into our thinking. The purpose of the White Hat is to provide a means for directly focusing on information from time to time. The White Hat also allows us to be clear about the information that we need but do not have.

## *Uses of the White Hat*

The main purposes of the White Hat can be summarised in three questions:

*What information do we have?*
*What information do we need?*
*How do we get the information we need?*

We can visualise ourselves as explorers wearing the White Hat to make a mind-map. We fill in the areas that are known and identify the areas where more information is needed.

### Information We Have

A good place to begin when using the White Hat is to make note of all the information, formal and informal, that is readily available: *What information do we have?* The answer will give us an inventory. Formal kinds of information can include reports, statistics and facts. There are also "informal" kinds of information that arise from personal experience: *Bill told me that he does not like to travel.*

Describing our own feelings on a subject is Red Hat thinking. But reporting how others have said that they feel is White Hat thinking. In such a case, they are reporting what we know – in this case we know what Bill said – and not putting forth our own feelings.

While looking at the information that we have, we could ask the questions:
*What is relevant?*
*What is most important?*
*How valid is this?*

Assessing the relevance and importance of information is not easy to do in the beginning. If certain courses of action or possibilities arise, we may want to go back and look at the information again. New events and new knowledge can change the relevance and importance of information. So an early assessment of these matters is only tentative. The information must be kept available in case this assessment has to change. Otherwise, we shall simply be reinforcing the ideas with which we started out.

As we are gathering information, we may find reason to challenge its validity. If information is not true or correct, it simply should not be used. So, along the way, we should be asking if our information is true or correct.

Challenging the validity of the information is important. However, a full challenge to the validity of information is a matter for Black Hat thinking: checking evidence, checking logic, and so forth. The Black Hat challenge is not carried out during the White Hat thinking. Instead, there are three things that can be done:

*Note the challenge and return to it later with specific Black Hat thinking.*

*Note the disagreement or doubt so that this becomes part of the information.*

*Jot down the original and the differing information so that both versions are available. If the issue becomes important later, both can be checked out...*

In this way, the flow of White Hat thinking continues. If there is a constant switching between White and Black Hats, the process becomes very messy. So, proceed to make the map, but put question marks where needed.

## Information We Need

In Japanese prints and Chinese paintings, the space is as important as the figures. In White Hat thinking we need to focus on the information that is not there. We need to be aware of and define the gaps in information. What is missing?

A gap is not the same as a need. For instance, in a series of annual files, some years may be missing. This would be a gap in information. It may turn out that missing information is not needed. However, we should be in the habit of noting gaps in information. With needs, we are conscious that we do need the information and it is not there: *We don't have enough information to make a decision. We need to know how much Plan B would cost.*

As with the relevance and importance of information, needs are not easy to assess at the beginning. In fact, we can probably assess them only in a general way: *Before starting to think about this matter, we need to know the following things...*

This statement is a a general assessment of information needed. In classic detective stories, White Hat thinking is always featured. The great detective typically defines a crucial piece of information that will solve the case. In the same way, as our thinking about a situation unfolds, we constantly check new ideas against information available. By checking, we may find an information need that was not apparent in the beginning. It suddenly becomes vital to know something.

Needs should always be defined as specifically as possible, even if the need is general. There are two sorts of need: *We need more information in general about a particular area. "We need more information about dolphins."*

We need to check something specific: *How many species of dolphin are there? Is it true that dolphins never sleep?* We need an answer or want to check whether something is true.

## Getting the Information We Need

Having defined the information we need, then we set out to get it. Basically, there are three ways of doing this:

*By asking questions.*

*By interpreting and making inferences.*

*By consulting sources.*

## Asking Questions

Questions have a powerful way of focusing attention and getting information. Choosing and phrasing questions are key skills of any courtroom lawyer. These skills are also needed in using the White Hat.

Two basic types of questions that will help us use the White Hat are *fishing questions* and *shooting questions*.

Fishing questions are used when we need more information. We "fish" when we put down the bait but do not know what we will catch: *Can you describe the scene of the accident? What else do you know about Mr Hudson?*

Shooting questions are aimed at a specific target. After you fire, you know at once whether or not you have hit the target. So the shooting question is quite specific:

*How old are you?*

*How much does this cost?*

Note too that shooting questions very often require

a simple *yes* or *no* answer: *Were you at home on Monday evening? Did she sign the agreement?*

### Interpreting and Making Inferences

With interpretation and inference, we try to extract something more from the information in front of us. This is similar to what detectives and scientists do through deduction: *If this is so, then this must also be so...* By a logical process, we move from the evidence or clues to some new information that is hidden within the available information.

Inference is meant to be based on logical deduction, but interpretation may be a matter of opinion. At some point, interpretation can move into Green Hat thinking in which we offer a possible hypothesis or explanation.

Interpretation also covers 'reading between the lines' and noting points of significance. In the famous Sherlock Holmes case, THE HOUND OF THE BASKERVILLES, the fact that the dog did not bark was the key point. Likewise, if there are four people at a meeting and one of them says nothing, this too may be important. Or, if certain uses of a new plastic are mentioned but a possible common use is not, this may be a significant omission.

By working to interpret and make inferences, we are able to get more information from what is available. There is a skill to doing this and with practice, we can become adept at it.

### Consulting Sources

There was a time when an educated person could know almost all the knowledge there was to know. Today, there is so much information and it is growing so rapidly that there is no way anyone can know it all. We always need to know a certain amount of background information, but beyond that, the most important thing is to know where to go to get information.

Already, many educators realise that teaching students how to get information has become a key function of the education process. This is happening not only at the university level but at primary and secondary levels as well. The framework of the White Hat can be used to reinforce this point: *If the information is not in front of us and if we can't extract the information by questions, inference and interpretation, then we have to go to some source.* Here are a few basic sources:

### Experts

These are people who know a lot about a subject. An expert may give us the required answer or direct us to another expert or some other source.

### Printed matter and Audiovisual Materials

There are standard references and journals in just about every field. Likewise, there are some excellent films, videos or audiocassettes that contain a wealth of information. Many of these sources can be discovered through libraries. Knowing how to use a library, then, can open many doors.

### Computer Databanks

Today much information has been put on computers and can be obtained by entering the right network and asking questions. In the future, this access to information will become more diversified, valuable and convenient.

### *Purposes For Using the White Hat*

The two main purposes for using the White Hat are to:
*Stimulate thinking.*
*Check thinking.*

At the beginning of many thinking tasks, we need information to get started. This information, in turn, will help us develop ideas – Green Hat thinking. At any subsequent point in our thinking, we can go back to the information to stimulate further ideas. This is like the scientist who uses the results from an experiment to form an hypothesis. We need information to start thinking. Without information, there could be no thinking.

Once we have the ideas, however, we need to see whether or not they are workable in the situation. So we go back to look at the available information. For example, a business would do market research to see if there was a market for a new product. An archaeologist who has formed a theory about civilisation X will look around to see if the available information and/or evidence supports the theory. The difference between a wild idea and a practical one is that the practical idea fits the available information; the wild one does not.

### Overuse

It may seem impossible that there could be overuse of the White Hat. How could we have too much infor-

mation? However, there are times when people will refuse to do any thinking. They will just ask for more information in the hope that this information will do the thinking for them. This, of course, is not always practical. For instance, a doctor may need to act as a matter of urgency, such as in the case of suspected meningitis. It is impractical to wait for the test results because it may then be too late to save the patient. In another example, the businessperson may want to move quickly on an idea. If he or she waits until all the information is obvious, then it will also be obvious to the competitors. There are times, then, when the White Hat should be put aside.

### *Summary of the White Hat*

Some key words to keep in mind when considering the White Hat are, information, gaps, needs, questions, interpretation and sources. The two main purposes for using the White Hat are to stimulate thinking and to check thinking. The basic questions to keep in mind when using the White Hat are these three: What information do we have? What information do we need? How do we get the information we need?

### *The Green Hat*

The Green Hat is for creative thinking. We can look at the word, *creative*, in two ways. The first way means 'generating, producing, creating something which is not there'. The second way means, 'having new ideas, fresh ideas and ideas that have not been used before'. The Green Hat covers both aspects.

The colour green, brings to mind nature and vegetation. Green can symbolise productive energy or abundance. Think of shoots and branches and alternatives. Black and Yellow Hat thinking are not enough because they are for "reactive thinking". We use these hats to react to something that is put before us. We judge or assess it. But we need another kind of thinking to generate ideas. We can't judge or assess an idea until someone has generated it.

The Green Hat indicates a creative attitude. This means moving forward to possibilities and new ideas. Contrast this with description, analysis and judgment. All of those are concerned with what is now rather than with what may be next.

The Green Hat deals with possibilities. At the moment we put forward an idea, it is only a possibility. Then we proceed to develop that idea and check it out against the information and against our objectives. We bring in the Yellow Hat and Black Hat thinking to strengthen the idea. Finally we assess the idea and compare it to alternative ideas. The generative Green Hat stage is the possibility stage. This is the stage of suggestions and proposals.

### Green Hat Situations

There are many types of thinking situations that call for the Green Hat.

### Action

We are faced with a problem or we have set ourselves a task. What do we do? With Green Hat thinking we can generate alternative solutions or alternative courses of action. We might do this by analysing the problem or looking at similar problems. Or we might try some creative thinking.

### Explanation

Something has happened. People have behaved in a certain way, there are scientific observations – what is the explanation? With Green Hat thinking, we put forward a possible explanation or hypothesis. Then we seek to check this out. The purpose of the explanation is ultimately to allow us to move forward. We seek to explain an illness in order to see how we might treat, cure and prevent that illness. If we can explain what motivates students to learn, then we might know how to design better strategies for teaching them.

### Forecasting

It is difficult to be certain about the future. So we have to imagine possibilities. We can use Green Hat thinking to create alternative scenarios or future states of the world, community, family or our own lives.

Whenever we make a decision, there are conse-

quences. We need to be able to look at these possible consequences before we act. At this specific point, the Black Hat does some Green Hat thinking. It imagines possible future dangers and difficulties.

### Design

In design and invention, we produce something new to fit a need. Using the Green Hat, we generate possible designs and then examine them in terms of æsthetics, cost, function and ease of manufacture. Designers rarely come up with one design. Many design possibilities are usually considered – Hypothesis, Speculation, Provocation and Lateral Thinking–fundamentals of the Green Hat

When wearing the Green Hat, we use words like *suppose*, *maybe*, *perhaps*, *what if* and *possibility*. All these indicate a possibility and a lack of certainty. We leap ahead of the information and lay out a possible idea. Using the new idea, the mind can view the situation in a new way.

The need to find ways to leap ahead is very important. The mind can only see what it is prepared to see. This is because the mind works as a self-organising information system. Three ways to move ahead of the existing information are by *forming hypotheses*, *speculating* and *making provocative statements*.

An hypothesis is supposed to be the most reasonable explanation. A scientist uses Green Hat thinking to generate a hypothesis. This hypothesis is then checked out by designing experiments to show that the hypothesis is wrong. The more a scientist and colleagues fail to disprove a hypothesis, the stronger it becomes.

A speculation is less reasonable than a hypothesis. It involves more guesswork.
*What if we look at it this way...*
*What if this was not caused by heat but by the increased noise...?*
*Suppose the murderer did not flee as everyone believes. Suppose he or she is still around...?*

A provocation goes even beyond speculation. Provocations help us dislodge our minds from their usual thinking patterns. We use the special term, PO – *provocative operation*, to signal a provocation: PO: CARS SHOULD HAVE SQUARE WHEELS.
With provocation there is no pretence at reasonableness. A PO statement may appear to be complete nonsense.

Lateral Thinking is a term Dr de Bono invented in 1967 to describe the thinking that is used to cut across the patterns of perception formed by the self-organising behaviour of the brain. There are a number of specific lateral thinking techniques which can be used deliberately in order to generate new ideas.

One very simple technique is the use of a random word. We simply take any word, preferably a noun, and put it alongside the subject for which the new idea is needed. For example, we might say "*study* PO *frog*" to get some new ideas about how to teach students better study habits. From this juxtaposition, we get the idea of having students use headings in a chapter to hop through the text, previewing the material they are going to read. There are, of course, other possibilities.

Random words are extremely easy to use. The process works because a random word allows us to enter our patterns of thinking at a new point and so increases the chances of opening up new patterns. If the techniques of lateral thinking are known or available, they can be used as part of Green Hat thinking. However, the techniques are not essential since Green Hat thinking covers all attempts to be creative.

## *Purpose of Green Hat Thinking*

Green Hat thinking is not only concerned with new ideas. If someone comes up with a very old idea to solve a problem, this can still be Green Hat thinking. The main purpose of Green Hat thinking is to be generative, productive and to move thinking forward. Finding completely new ideas is only one means of making progress.

### Uses of the Green Hat

We can look at five main activities of Green Hat thinking:
*Generating reactive ideas.*
*Generating starting ideas.*
*Generating further and better ideas.*
*Generating new ideas.*
*Generating Reactive Ideas*

### Generating Reactive Ideas

When an idea is presented, we can use the Green Hat

in a reactive way. We can ask: *What is interesting about this idea?* The word, 'interesting', indicates a creative exploration to see what the idea suggests or what the idea leads to. We use the given idea as a starting point in order to explore creatively.

We can use the Green Hat reactively to modify or improve an idea that has been presented. We can do this even before the Black Hat has pointed out weaknesses in the idea: *That is a good idea, but it would be even better if we let people choose their own reward.*

### Generating Starting Ideas

On our own or as part of a group, we set out to think about something. We use the White Hat first to collect the information. Then what? We need some starting ideas. Sometimes the starting ideas are easy, obvious and conventional. Sometimes it is difficult to get any ideas at all. These starting ideas do not have to be proven or 'sure things' before they can be put forward. They are only possibilities. Such ideas are then checked against the information and developed with Yellow Hat and Black Hat thinking.

### Generating Further or Better Ideas

There are times when we do have some ideas but they do not seem to be very satisfactory. We may not be able to choose between the obvious alternatives because none of them seems of great value. So, instead of pushing ahead with the existing ideas, we make an effort to see if there are further ideas and further alternatives. We may never find them, but we make the effort: *We seem to be bogged down here. Let's put on our Green Hats and try to find some new approaches.*

Even when there is no obvious need to look for further alternatives, it is a good thinking habit to make some effort to see if there might be other ideas. Quite often an idea seems satisfactory but with a little effort a much better idea can be found. There is no reason at all to suppose that the first satisfactory idea you find is the best solution to the problem.

### Generating New Ideas

There are times when we really do want new ideas. This may be for reasons of competitive advantage; we need new products; we want to set up a new business. It may be because the old ways simply do not work any longer. In either case, we specifically set ourselves the task of generating new ideas. This is where the deliberate techniques of lateral thinking could be used – such as the random word technique.

### Overuse

Creativity and the Green Hat can be overused. To ignore sound conventional ideas and to search only for new and exotic ideas may be an overuse of the Green Hat. To want to work only in the area of possibilities and to refuse to come down to practical realities is also overuse. To continue to look for further ideas when immediate action needs to be taken is overuse. To wait for a magic new idea to solve all problems is also overuse. The Green Hat, like all the other hats, has its role, its place and its use. In general we do not use the Green Hat nearly enough, whereas we tend to overuse the Black Hat.

## *Summary of the Green Hat*

Some key words related to the Green Hat are *creative*, *generative*, *possibilities*, and *alternatives*. Green Hat thinking can help when we need to take an action, provide an explanation, forecast an outcome or design something new to fit a need. Formulating hypotheses, speculating and thinking laterally are three Green Hat thinking tools. We use the Green Hat to generate reactive ideas, starting ideas, further ideas and new ideas. The overall question for Green Hat thinking is: *What ideas do we have?*

## *The Red Hat*

The Red Hat is worn to express the thinker's feelings, emotions, hunches and intuitions. Think of the redness of fire. Think of anger and joy but also of warmth and contentment. The Red Hat includes both intense and more gentle feelings.

When reporting feelings, the thinker may say: *This is what I feel.* No justification or explanation or logical support is required.

The Red Hat covers the feelings at this moment in time: *This is what I feel right now*. It may be that in a few minutes the feelings will be different as a result of further information or a perceptual change.

Feelings, emotions, hunches and intuitions are all very real, but they are not based on visible logical deduction. They are often based on experience and familiarity with a subject, just as we recognise a friend's face from the total picture. At times it is not even possible to explain the feeling: *I have a strong feeling about this project – but I cannot tell you why*.

If we are not permitted to put forward our feelings, we simply disguise them as logic and create a rationalisation for them. We are then committed to supporting that rationalisation. The Red Hat helps prevent this kind of deception. Feelings are an important part of thinking. Outside of mathematics and similar "game systems", most thinking involves feelings. Even an objective scientist will have a feeling about the elegance of a theory or a hunch about the inadequacy of evidence, in addition to the fiercer emotions directed towards a rival's work.

We cannot put feelings to one side and pretend that thinking should always be objective and free of feeling. Without feelings, values would have little power and without values thinking would be inhuman. It would also be impossible to make choices.

Used in the right place, feelings are what decides the value of the thinking for ourselves or for society as a whole. Used at the wrong point, though, feelings can wreck thinking. Strong feelings at the beginning of the thinking – jealousy, fear, anger – so limit perception that thinking can only be used to support these feelings. The value of the Red Hat is that it recognises feelings, emotions, hunches and intuitions as a valid part of thinking and at the same time labels them for what they are.

## *Shades of Red Hat Thinking*

The spectrum of feelings included under the Red Hat ranges from *emotions* to *intuitions*.

### Emotions

Here we have normal emotions such as joy, anger, fear, jealousy and sorrow. Under the influence of these powerful emotions, our perception selects only what supports the emotion. A jealous person will see reasons for jealousy. An angry person will see reasons for anger.

### Feelings

This is a general term and covers a much wider range of emotions. There may be feelings of unease or uncertainty. There may be feelings of anxiety. There may be a feeling of potential or of interest. Aesthetics is a feeling. So is the camaraderie that develops when a group works together. The term feeling is so broad that it even covers matters like admiration and respect.

### Hunches

A hunch lies somewhere between a feeling and an intuition. It takes the form of a strong feeling or decision in favour of or against something. No valid explanation of this decision is available to the person with the hunch. A hunch is something like the vision of the prophet. The hunch seems very real to the person with the hunch and he or she feels the need to tell others.

### Intuitions

There is a claim that intuition is indeed a logical process but that we are not consciously aware of this process. There may be merit to this claim. Intuition may also be the result of complex experiences in the field. It may not be possible to make conscious all the aspects of this experience.

Intuition is often right, but it can also be disastrously wrong. For example, intuitions about probability are notoriously wrong. How many people have lost money gambling when their intuition tells them that they are bound to win on the next throw?

### Validation of Feelings

The value of the Red Hat is that it recognises emotions, feelings, hunches and intuitions as a valid part of thinking, provided they are signalled as what they are. We can accept an intuition if it is offered as an intuition and not as a logical deduction. We can accept a feeling if it is put forward as such.

Because the device of the Red Hat makes feelings legitimate, there is no need to apologise for the fact that it is only a feeling. The feeling or intuition now has a validity in its own right: *In spite of all that argument and Black Hat thinking, I still like the idea.*

### Focus

Feelings can be focused. A thinker can express a feeling about the total situation or only one part of it: *I like your agenda for the planning session but I am not happy about having it on 5 May.*

A thinker may have positive feelings about one aspect of the situation and negative feelings about another. Both these can be put forward provided the focus is given.

### Range

It is possible to express a wide range of feelings that vary from the crude to the very subtle. We can like or dislike an idea. We might find an idea attractive or appealing or the opposite. We may be happy with an idea or unhappy.

There is also a range of feelings which express unease, uncertainty and disquiet. These are not as strong as disliking an idea, but we are moving in that direction. We need to be reassured.

We may find an idea boring. This is not to say that it is a bad idea or that it will not work – but just that we find it boring. It is important with the Red Hat to realise that feelings must always be subjective. The idea itself is not boring, but we find it boring.

The opposite of boring is exciting, interesting or stimulating. These feelings imply that the idea has potential. It is not just the present form of the idea that is being considered, but all the possibilities opened up by the idea. The idea may not be workable in its present form, but it still can be interesting.

In the end we can probably narrow all these different things down to four:
*I like the idea.*
*I don't like the idea.*
*I am uncertain about the idea.*
*I find the idea interesting.*

### Mixed Feelings

It is legitimate for us to say we have mixed feelings if this is the case. However, to say that we have mixed feelings as a way of avoiding making our feelings public is not legitimate. Most listeners will recognise the escape. In some circles the term mixed feelings very clearly indicates that the speaker does not like the idea at all and is politely expressing disapproval.

At times we may simply have no feelings about a matter. If so, we can just report that we do not have any Red Hat thinking to offer.

## *Uses of the Red Hat*

There are three main uses of the Red Hat:
*Making feelings known.*
*Making assessments and choices.*
*Making Feelings Known*

At any moment we may signal that we are putting on the Red Hat: *Putting on my Red Hat, I am unhappy about the demands the community is placing on our schools.* We could have put forward the same feelings without the Red Hat. It is precisely the formality of labelling the feelings with the Red Hat, however, that makes the feelings more acceptable.

If there are likely to be strong existing feelings about a matter, then it is helpful to begin discussions of the matter with the Red Hat. Someone may ask for three minutes of Red Hat thinking all around. This way, background feelings are brought out quickly into the open.

What happens if someone is dishonest about his or her feelings? There is no objective way of checking on feelings. The listener or listeners may, however, express doubt: *I doubt whether those are your true feelings.*

Very occasionally we may be permitted to wear the Red Hat on behalf of someone else. This means that we spell out what we believe the other person's feelings to be: *I am going to put on the Red Hat for you and to stand in your shoes. I don't think I would like this proposal at all.* On the other hand, if we are just reporting feelings previously expressed by others, that is not Red but White Hat thinking: *Tony told me he is worried about his test results.*

The Red Hat label can be useful in helping people become aware of what they are doing and insisting that they change their behaviour: *That is your Red Hat thinking – now can we switch to some other Hat?*
Keep in mind, however, that the Red Hat is not intend-

ed to be just accusatory, but also exploratory: *What are your Red Hat feelings about this suggestion?*

In general the Red Hat must be seen as an opportunity to make feelings and intuitions known and not a demand that these be shared.

### Making Assessments and Choices

Before we put an idea into action, we have to use the Black Hat to be sure that we are not making a mistake. The Black Hat checks out the idea. After this Black Hat thinking, we then use the Red Hat: *What do I now feel about the idea?* If the Black Hat shows that the idea is dangerous or unworkable, we would normally begin to dislike the idea.

There are times, however, when the Black Hat shows that an idea is dangerous or unworkable, but that we like it anyway. In such cases, instead of dismissing the idea completely, we may set out to make the idea more workable. Or, we may decide to accept the risks. In choices and decisions, there is an assessment of each alternative with both Yellow and Black Hats. When this has been done and the full picture is available, then it is up to the Red Hat to make the final choice. What alternative do we like better? In practice we may want to recheck with the Black Hat: *This is the alternative I like–let me check to see whether anything terrible would happen if I went ahead.*

### Overuse

There is overuse of the Red Hat when we use only Red Hat thinking on all occasions and never do any other sort of thinking. There is overuse of the Red Hat when we take a Red Hat position and then refuse to look at the information or listen to arguments.

The most common overuse is when we use the Red Hat too frequently in the course of a discussion. The main value of the Red Hat is at the beginning (to make feelings known) and at the end (assessment and choice). Frequent Red Hat interruptions can interfere with the thinking process. Any feelings which have not changed during the course of a discussion can be put forward at the end. There is no point at all in reacting to every comment and suggestion with immediate Red Hat response.

## *Summary of the Red Hat*

Some key words to describe Red Hat thinking are emotions, feelings, hunches, and intuition. The two main uses of the Red Hat are to disclose feelings and to make assessments and choices. The overall question to ask is: *What do I feel about this?*

## *The Blue Hat*

The Blue Hat is different from all the other hats. The other hats are concerned with thinking about a particular problem, subject or difficulty. The Blue Hat is for thinking about the thinking that is being used.

We can associate the Blue Hat with the blue sky which is above everything. When we are up in the sky, we can look down and see what is happening on the ground below. With the Blue Hat, we try to rise above the thinking that is taking place and to get an overview of this thinking.

With the Blue Hat we try to take charge of our thinking in order to organise what is going on. The Blue Hat is like the conductor of the orchestra who organises what the instruments are playing at any moment. There is a technical term for this kind of thinking about thinking: *metacognition*.

Using the Blue Hat at the beginning, in the middle and at the end of thinking can help us make sure that the process is comprehensive and complete. In the beginning, the Blue Hat is used to define the focus and purpose of the task. The Blue Hat may also be used to put forward an agenda of thinking steps. In the middle, the Blue Hat restates the objectives, redefines the problem, provides a summary and then insists on a conclusion or outcome. If, for example, a summary lists five alternatives that were proposed, the conclusion will note the one that has been selected.

Intelligent people can sometimes be poor thinkers. This is not because they cannot think but because the

order in which they carry out their thinking steps is inefficient. It is like driving a powerful car, but driving it badly. There is nothing wrong with the car, but the driver is not making the most of the car's potential.

Consider two thinkers faced with a similar situation. Here is the process each uses to manage the thinking:

Thinker A

*This is what I think about this matter.*
*Now I am prove to you that I am right.*

Thinker B

*I want to explore the matter.*
*Here are some alternative views that are possible*.
This is the view I prefer.
*Now let me explain how I reached that conclusion.*

With Thinker A, the conclusion comes first and the thinking is just a defence of that conclusion. With Thinker B, there is an exploration of the subject leading to a conclusion which is then explained.

With the Blue Hat, we can learn to think about our thinking and to plan for better results.

## *Uses of the Blue Hat*

The Blue Hat is most often used at the beginning, in the middle and at the end of a thinking session. The five main uses include:

*Defining focus and purpose.*
*Setting out a thinking agenda.*
*Making observations and comments.*
*Deciding the next step.*
*Defining outcomes and summarising.*

### Defining Focus and Purpose

*What are we thinking about?*
*What are we trying to do?*
*What is the desired outcome?*

If we are going somewhere, it is useful to know where we are trying to go. So the Blue Hat has a very important role to play at the beginning of the thinking. The Blue Hat defines the problem or the task and the purpose of the thinking. The Blue Hat lays out the situation. This initial definition of the thinking task need not be done by a single person. The group can decide the definition with all the members of the group wearing the Blue Hat. It is usually helpful to try out several alternative definitions of the task or problem.

The thinking of a group may stray away from the purpose of the thinking, or the purpose may change as the thinking unfolds. At such times, someone can put on the Blue Hat to restate or to redefine what the group is trying to do.

Restating means simply repeating the original thinking task to keep the thinkers on track: "May I put on my Blue Hat to remind you that we are trying to think of all the creatures that might live in or near a dam."

Redefining indicates a change in the task: *Putting on my Blue Hat, I would like to note that we have decided to stop thinking about where to have the class picnic until Julie checks out our transportation. Right now we are going to think instead about what food we should like to serve.*

### Setting Out a Thinking Plan or Agenda

Another Blue Hat function is to set up an agenda of thinking steps which are to be followed one after the other. An agenda of subjects is common enough at meetings. So the idea of an agenda of thinking steps is not a difficult transition.

A simple agenda might be a plan for using the thinking hats in a particular sequence. But, a thinking agenda is by no means confined to the use of the Six Thinking Hats. It may cover any thinking process whatever.

### Making Observations and Comments

Once thinking has begun, we may put on the Blue Hat to stand back from the thinking in order to comment upon it. The comment may be upon the thinking of another person, the group or the thinker's own thinking.

*Putting on my Blue Hat, I feel that we have just been telling what is wrong with this idea and we should now think about how to improve it.*

*My Blue Hat Thinking is that we are trying to think about two different things at once. Let's take one at a time.*
*I'm putting on my Blue Hat to say that we have just had a great deal of Red Hat thinking.*

The purpose of the Blue Hat comment is to be constructive. If we know what we are doing is wrong, then we try to put it right. It may be that the thinking has just concentrated on one part of the problem. It may be that the group has bogged down in an argument between two people.

The Blue Hat provides a mirror in which the thinkers can see their own thinking.

### Deciding the Next Step

*What shall we do next?*
*What is the next step?*

It is surprising how much thinking just drifts from one point to another. What someone says triggers an idea in someone else's mind and that in turn leads to another comment. So it continues. As long as there is no silence or a gap, then everyone believes useful thinking is being done.

The Blue Hat can stop this drift by making the "next step" a conscious decision. The Blue Hat can be used to propose a next thinking step that can be taken because it is useful – not just because it follows from random conversation. *Putting on my Blue Hat, I feel we must have some White Hat thinking here. My Blue Hat thinking is that we list our alternatives first then examine each one of them.*

The next step may involve the use of one of the hats, but it can involve any other thinking step at all. It could even include making a decision to stop thinking for a while and take a break.

### Defining Outcomes and Summarising

*What conclusions have we reached?*
*What is the outcome?*

At the end of the thinking session, we can use the Blue Hat to *insist* on an outcome. This outcome can take the form of a solution, conclusion, choice or decision, design, plan or something else definite–like a promise or a contract.

Where the outcome is not so definite, then the Blue Hat tries to assess what has been achieved. Perhaps the thinkers have defined a new problem or discovered an obstacle that needs to be confronted. Or the need for some vital information has been identified. Perhaps what has been achieved is a better understanding of the matter. Or possible alternatives have been generated–even if no choice is made. There is always an outcome of some sort, even if it is not the exact one we sought. In the end, the Blue Hat seeks to define this outcome, whatever it may be. The Blue Hat can also be used to ask for a summary at any stage of the thinking. *I would like to put on my Blue Hat and to see what we have done so far. It seems to me that we have made three decisions.* The thinker can offer his or her own summary or can ask someone else for a summary.

*What have we got so far?*
*Where are we now?*

This request for a summary may also serve to show that very little has been achieved. The summary can then identify problems, obstacles and information gaps.

## *Purposes for Using the Blue Hat*

The Blue hat is usually put on by the person who is suggesting its use. Unlike the other hats, we rarely ask someone else to put on the Blue Hat. It is possible, however, to suggest that the whole group pause and put on a Blue Hat to examine the thinking that is taking place or that needs to take place.

The Blue Hat tends to be announced and used less frequently than the other hats. People often carry out Blue Hat functions without feeling a need to say so. But it is worthwhile to get into the habit of using the Blue Hat deliberately and explicitly in order to make easier the shift to the metacognitive level.

### Overuse

It is possible to belabour thinking by requiring by requiring a detailed agenda for every minor task. It is possible to make so many Blue Hat interruptions during a thinking task that the main purpose of the thinking is forgotten. It is possible to wear the Blue Hat to "correct" people and to tell them that they are doing something wrong. All of these are overuses of the Blue Hat.

## *Summary of the Blue Hat*

The Blue Hat is most often used at the beginning, in the middle and at the end of a thinking session. Some key words to describe the use of the Blue Hat are focus, purpose, agenda, observations, next step, outcome and

summary. Three questions to ask with the Blue Hat are: *What thinking step is needed? What is the next step?" "What thinking has been done?*

## Six Hat Thinking: Simple Sequences

The Hat definitions refer to sequences, one hat being used for a specific purpose then followed by another. For example, the most recent reference is to Blue Hat thinking being followed by the White Hat. This interactivity covers a spectrum of possibilities from simple sequences to more complex combinations. Dr de Bono refers to the multiple combinations as 'Full Sequences'. This section of the guide reviews the most commonly recommended sequences and describes the rationale for their use. These sequences are not a complete list. They provide a foundation that answers the question teachers often ask after initial training: *How do we use the Hats?*

When we choose to 'wear' the Red Hat, we say: *Putting on my Red Hat, I will tell you my feelings.* Or, we choose the White Hat when we suggest: *I'm wearing my White Hat to think about the information we have, the information we need and where we might find that information*. This 'single use' is valuable and effective in the primary sense that each Hat directs attention at one thing at a time. In primary schools, where training in Six Hat use can take six months or longer, using one Hat at a time is sufficient. As students mature and gain more experience, an interest develops in sequences. Teachers should never consider themselves outside this interest. Dr de Bono's New Thinking methods are of equal value for you as for your students.

When the 1993 curriculum was published in New Zealand, I was instructed to find a way to introduce a new element in the curriculum, *Health Education*. This proposal was unpopular for some and a threat for the majority. I led a group of Social Science teachers who claimed their role was to promote love of subject in the fields of Geography, History and Classical Studies, not Health Education. In fact, all teachers in the Social Sciences department has been involved in health Education whenever they were assigned to teach Social Studies, one of the core curriculum subjects for students aged 13 and 14. The new curriculum placed a new focus on examination subjects and examination success. Any 'add-on' in the junior school that was perceived to be 'outside' the senior Social Science subject was a threat. Despite these serious reservations, the school management was required to integrate health education into the core curriculum and a group of subject areas were selected, including Social Studies.

During a meeting to explore possibilities, I chaired the gathering. Knowing the antagonism towards the proposal, I decided to manage the debate, using Six Hats, without explaining that procedure to my colleagues. As a trainer in the method, I felt confident this approach would deal with the frustration and suggest a path for implementation of the new programme. Because feelings were strong, I began by asking my colleagues the question: *Let's hear your feelings about this directive from management that we integrate Health Education into the junior curriculum*.
I added that nobody needed to explain or justify their feelings. I was asking those who chose to make their feelings known to put on the Red Hat without 'knowing' they were using this thinking method. After most had made their feelings known, I then said: *We have the Ministry of Education Health Education Guidelines. We have a guarantee of funding for the new programme. We already have resources from previous experience that can fit the new programme. What other information do we need?*

Over forty minutes, the matter of integrating Health Education into the core subject, Social Studies, was discussed, openly, fully and systematically, Hat by Hat without mention of Six Hat Thinking. My colleagues agreed to develop the programme having felt their feelings had been vented – *Red Hat* – and resources available had been explored – *White Hat*. The amount of *Black Hat Thinking* – cautions and risks – was minimal because most had previous experience in the field. Some saw real possibilities in sharing resources and contacting community experts who could contribute to the programme – *Yellow and Green Hat Thinking*. *Blue Hat Thinking* was used to suggest next steps – should we 'revisit' various aspects of our discussion or should we think about what needs to be done to get the process underway?

This is an example of the Hats being used simply and effectively. For students in particular, this approach is desirable yet, many choose combinations or sequences after they gain confidence.

## Simple Sequences

Sequences provide tools for carrying out more complex thinking operations. Not all thinking operations are complex. We may use a Hat to focus on one thing; feelings, the thinking being done, risks... Just as CoRT 1 is about the broadening of the overview, a widening or perceptions, simple sequences are the next step in the same process. Both CoRT and Six Hat Thinking have their thinking 'arena'; neither is superior to the other.

The descriptions have the structure:

1. A brief introduction.
2. An explanatory diagram.
3. A suggested activity.

## First Ideas

*First ideas* is the beginning stage of all thinking. First, the Blue Hat describes the thinking task very clearly. Next, the White Hat collects the available information. The Green Hat seeks to put forward some possible ideas or suggestions. These do not need to be new ideas. Conventional and obvious ideas are also put forward at this stage.

*First ideas* involves generative thinking while most other sequences are reactive: *Here is a situation. How should we react to it?* This *First Ideas* sequence deserves to be given first priority. It is a simple operation but it makes a big difference in thinking.

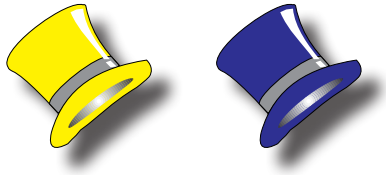
The generative thinking stage is usually followed by an assessment: *What idea will we develop further?*

- The Blue Hat asks: *What is the thinking task?*
- The White Hat asks: *What do we know about the situation?*
- The Green Hat asks: *What ideas can we think of?*

### *Activity*

A neighbour has bought a new dog. At night, when outside in its kennel, it barks long and loudly. Your relationship with the neighbours has been good but the barking is straining the relationship.

Use the *First Ideas* sequence to begin dealing with this problem.



## Quick Assessment

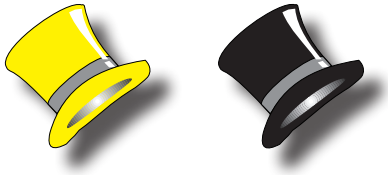
If there are no benefits at all in an idea or suggestion, then there is no point in pursing the matter further. The matter can be ignored or dismissed – if that choice is available. There is no point in testing feasibility because if an idea has no benefits, it does not matter whether the idea would work or not. The Yellow Hat gives deliberate attention to looking for benefits. The Blue Hat summarises the benefits, if there are any.

- The Yellow Hat asks: *What are the good points?*
- The Blue Hat asks: *Can we summarise the good points?*

### *Activity*

Your father has been introduced to video-conferencing at work. Rather than make a telephone call, the new approach is to have a video chat and see the person to whom you are talking. He suggests the same communication style should be used at home.

Use the *Quick Assessment* sequence to make a quick assessment of your father's suggestion. Restrict your thinking to *three* minutes.



## *Evaluation*

This sequence can be used when something is put forward and we judge its value.

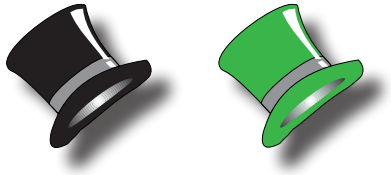
When evaluating, it is always best to use the Yellow Hat before the Black Hat because it is difficult to be positive after we have seen all the difficulties. Using the Yellow Hat first may result in a positive bias but that is desirable. Because the Black Hat is so powerful, a positive bias can help prevent us from overlooking worthwhile ideas.

- The Yellow Hat asks: *What are the good points?*
- The Black Hat asks: *What are he difficulties and dangers?*

### *Activity*

Some teachers are better teachers than others. They may be more patient, better prepared, have a better sense of humour... The government is suggesting that the best teachers should be paid more.

Use the *Evaluation* sequence to explore this suggestion.



## *Improvement*

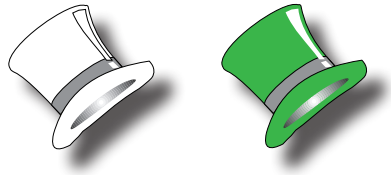
This sequence puts the Black hat to constructive use. The Black Hat points out the weaknesses in a design or idea so that the idea can be improved. The Green Hat suggests how the improvements might be made. This particular use of the Black hat requires a constructive attitude.

- The Black Hat asks: *What are the weaknesses?*
- The Green Hat asks: *How can we overcome them?*

### *Activity*

Your family is about to buy a colour printer. You have the choice of going to a shop, talking to an agent and viewing a selection of machines. The other option is to buy a printer from an on-line store which is cheaper but you do not have the opportunity to compare models with an assistant.

Use the *Improvement* sequence to explore this situation, identify the weaknesses and think about how they can be improved or overcome.



## *Explanation*

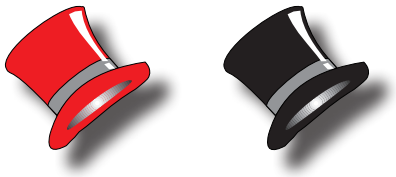
Something has happened and an explanation is required. The White Hat spells out exactly what has happened. The Green Hat introduces possible explanations for why it has happened. One of these possibilities may fit so well that it becomes the likely explanation.

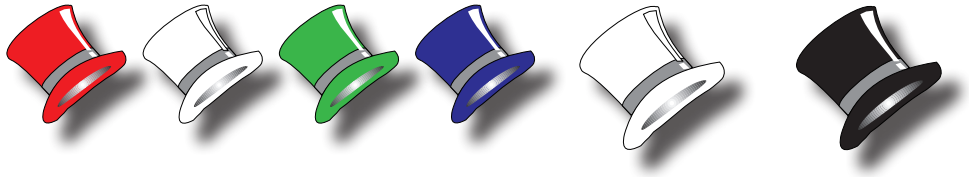
Explanation introduces the matter of individual perception and a chance to resolve related issues.

- The White Hat asks: *What do we know about the situation?*
- The Green Hat asks: *What are the possible explanations?*

### *Activity*

After scoring top marks in most assessments, a girl in your class begins to score badly. What are the possible explanations for this change?





## *Direct Action*

This sequence helps when an emotional response produces an impulsive desire to take immediate action. Before taking the action – arguing vigorously for example – the Black Hat is introduced for a quick assessment. This helps us make sure that the action anticipated will not lead to disaster

- The Red Hat asks: *What do we feel like doing?*
- The Black Hat asks: *What are the difficulties and dangers?*

### *Activity*

A radio report suggests a large rise in the price of petrol is imminent. Your parents suggest it would be a good idea to fill the tank in the family car. The last time there was a similar threat, the price rose only a small amount. Use *Direct Action* to find a solution.

## *Emotions*

We can use this sequence when a situation arouses a strong emotional response. First, we identify our feelings. Then we look at the facts about the situation. The Green Hat generates possible courses of action. Then, the Blue Hat draws a conclusion.

The conclusion may be that no action is required. But, if a course of action is decided on, then that course of action needs to be assessed. This can be done with just the Black Hat or with a Yellow-Black combination

- The Red Hat asks: *How do we feel?*
- The White Hat asks: *What do we know about the situation?*
- The Green Hat asks: *What are the alternatives?*
- The Blue Hat asks: *What is the conclusion?*

### *Activity*

A father is a heavy smoker. He has been warned previously about the relationship between cigarette smoking and heart disease. He continues smoking and suffers a major heart attack. His family reminds him of the risks of smoking. He replies that he cannot give up the habit. Use the sequence to explore the problem.

## *Caution*

When caution is needed, we look at a situation specifically for potential risks and dangers. This is not a full assessment of the situation but a danger-avoiding assessment.

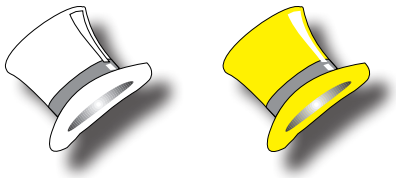
- The White Hat asks: *What do we know about the situation?*
- The Black Hat asks: *What are the risks and dangers?*

### *Activity*

When people buy a motorcycle for the first time, they are restricted to a machine of a certain power; in many countries this is 250 cc.

Some suggest, if the new rider is responsible, he or she should be able to buy a machine of any power.

Use the *Caution* sequence to explore this suggestion.



## *Opportunity*

This sequence is used to ingrain the habit of checking to see whether or not there is any value in a suggestion, idea or situation. First, we lay out the facts. Then we use the Yellow Hat to pick out points of potential benefit. This is the opposite of caution. It is useful in the operational sense to place these two sequences, side by side.

- The White Hat asks: *What do we know about the situation?*
- The Yellow Hat asks: *What are he good points?*

### *Activity*

Someone in education suggests that Photography should be taught as a subject in schools. She maintains that, when young people have a camera in their hand, they 'see the world' quite differently.

Use the *Opportunity* sequence to review this suggestion from the education official.

## *Design*

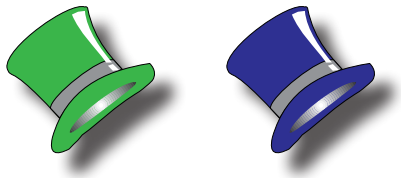
This sequence can be followed for creating new designs. First, the Blue Hat is used to make clear the purpose of the design – needs, constraints... The Green Hat introduces some preliminary designs or 'sketches'. The Red Hat then looks at each of these and asks: *Does this feel right?*

Here, the Red hat thinking is based on intuitions rather than emotions. The designs will need to be checked out with the Black Hat later, but the first assessment tool for the designer is the Red Hat.

- The Blue Hat asks: *What is the design task?*
- The Green hat asks: *What are the possible signs?*
- The Red Hat asks: *What do we feel about each possible design?*

### *Activity*

You have been asked to design a new pencil. The new design should take the best of current mechanical pencil – the 'clutch' pencil design.
Use the *Design* sequence to develop your ideas and evaluate them before action on your plan.



## *Possibilities*

The Green Hat thinks of all manner of possibilities. Then the Blue Hat tries to pull together all these possibilities to group them or put them in some order.

This is the basic sequence in an idea-generating session when the background information is known and the ideas are not going to be assessed immediately. The task is to generate the ideas and assess them.

- The Green hat asks: *What are the possibilities?*
- The Blue Hat asks: *Can we summarise the possibilities.*

### *Activity*

Students do not like being group leader during team work. They prefer to give the responsibilities to someone else. Dr de Bono expects that group work is managed by a leader, nominated by the group. He also requires that everyone has the chance to become a group leader and enjoy that responsibility.

Use the *Possibilities* sequence to explore ways to make the role of Team Leader more attractive.

## *Usable Alternatives*

A possibility is only a possibility. In order to turn a possibility into a usable alternative, we need to do some further thinking. We use the Yellow Hat to strengthen the possibility and build it up. Then we use the Black Hat to point out the weaknesses.

After noting the weaknesses, we then seek to correct them. This could mean the use of the Green Hat again, but this is not strictly necessary sine the use of the Black Hat in this context is automatically followed by an attempt to put right the weakness.

- The Green Hat asks: *What are he possibilities?*
- The Yellow Hat asks: *Why will they work?*
- The Black Hat asks: *What are the weak points?*

### *Activity*

In some countries where Winters are cold, fur lined boots with thick, non-slip soles are available. The boot design is identical for men and for women.

A shoe manufacturer suggests that more effort should be given to designing 'unisex' shoes as an alternative to 'shoes for men' and 'shoes for women'.

Explore this possibility by using the *Usable Alternatives* sequence.

## *Choice*

When we have alternatives, we must choose among them. This sequence is for making choices and decisions. Yellow Hat thinking is used to find the good points and also to strengthen the alternatives. Black Hat thinking is used to find the weak points so they can be corrected and then to point out the remaining difficulties and dangers.

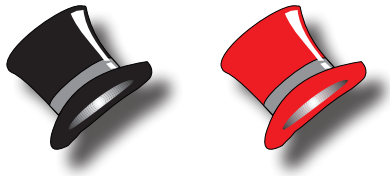
After Yellow Hat and Black Hat thinking are completed, we have the fully examined alternatives before us. The final choice depends on our feelings, which means the application of our values. If a choice cannot be made, then there is a need to find further alternatives.

- The Yellow Hat asks: *What are the good points?*
- The Black Hat asks: *What are the difficulties and dangers?*
- The Red Hat asks: *Now, how do we feel about this?*

### *Activity*

An employer is suggesting that his employees should have a salary payment choice. They can choose the conventional payment system or choose to have twenty percent of their salary invested for five years. Those who make the latter choice can then have a year's leave to do what they wish using the invested salary to live on.

Use the *Choice* sequence to explore this employers suggestion.



## *Final Assessment*

Before any idea is put into action, we must apply the Black Hat. This way, we can avoid mistakes, become aware of potential dangers and realise the difficulties. Even if the Black Hat has already been used in choosing an alternative, it is used again in the final assessment. Those who are afraid that the Six Hats might encourage thinking that is too optimistic should be reassured by this final Black Hat assessment.

The final Black Hat is followed by the Red Hat. Usually if Black Hat thinking has uncovered many difficulties, Red Hat thinking will reject the idea. But

occasionally we might still like an idea even if it is unworkable or difficult. This means that further thinking will be done to make the idea workable. Or we will take the risk in spite of full knowledge of the difficulties and dangers.

- The Black Hat asks: *What are the difficulties and the dangers?*
- The Red Hat asks: *Now, how do we feel about it?*

### *Activity*

The employer who asked his workers to choose the alternative salary payment system – have twenty percent of salary paid into an investment account – discovered that 80 percent wanted that choice. If the offer was to be implemented immediately, that would mean only 20 percent of workers would be available in five years time. Or would it?

Use the *Final Assessment* sequence to explore the consequences of the employers offer and how he could respond to the loss of 80 percent of his staff in five years.

## *Using the Simple Sequences*

One of the purposes of this manual is to have the Simple Sequences, and later the Full Sequences, 'on-hand' for quick reference. This is of value for teachers who choose to use this book.

For student use, my suggestion is again based on teaching experience. I used two approaches. There are certain to be others that serve the purpose as well or better.

### *Option One*

Students can be invited to draw coloured hats that fit the sequences, mount these on paper or card and display them on the classroom wall. The Hat design should be consistent. Students can design the layout themselves – the 'poster' design, size...

Each poster should have the title of the sequence. There is no real need for the descriptive role of the Hat if students are sufficiently confident to remind themselves about the role of each Hat. The teacher can decide if the posters have a description or none.

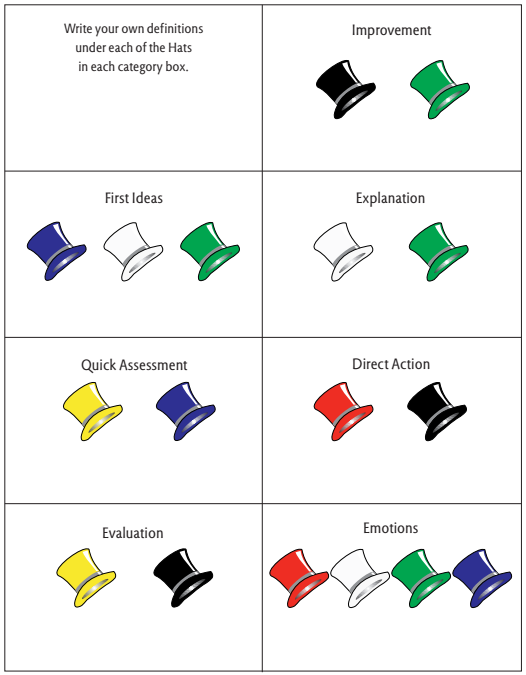
The posters should be displayed side by side and preferably alongside the Full Sequences.

### *Option Two*

The teacher can provide copies of the sequences on A4 paper. It is preferable to print these in colour. On occasions, I used an equally useful alternative; the sequences were printed as Hat outlines. Each Hat was named – Red, Yellow... then students coloured them. These reminders were stored in the de Bono Thinking Portfolio each student brought with them to class.

During teacher training I am often asked: *Don't these posters take up a lot of room on the classroom wall?* or, *My classroom has no space for these because space is taken up with student artwork.* The first priority is to provide a reminder of the sequences for students. I have placed a simple sequence file I designed for students in this column. This was printed on the school's colour printer. The A4 format made for easy portfolio storage. As suggested, when colour printing is not an option, it is a simple task to ask students to colour the Hat outlines. One of my colleagues took my colour

**Six Thinking Hats: Simple Sequences**



originals and copied them onto acetate for display on an overhead projector... Dr de Bono's methods encourage 'possibility thinking'. Here is an opportunity to apply that foundational principle and find your best solution or, preferably, do the operation in association with your students.



## *The Full Sequences*

These are longer but not philosophically more complex than the Simple Sequences. The Full Sequences provide an agenda of thinking steps. This is a Blue Hat thinking operation. The Full Sequences can be overpowering for the new user. The value of these sequences is based on an understanding about when to use them and how often. These are certainly not guides to 'the best sort of thinking' or 'thinking as it should be done'. Rather, they are a collection of thinking tools that serve a valuable purpose and should be used, when the need arises. If overused, students become irritated by complexity.

### *Recommended Uses of Full Sequences*

- A full sequence can be used when there is a need to think 'in depth' about an issue. Some use the term, 'to think seriously' about an issue but this may give the impression that the Simple Sequences are to used in 'less than serious situations'. This is incorrect.
- Because each of the Hats directs attention deliberately; feelings – Red, possibilities – Green, and so on, a seemingly complicated set of Hats to cover suggests a lengthy operational timescale. Again, this is not the case; a single Hat can be covered adequately in a sentence if time is limited.
- A full sequence can be used to give structure to a verbal or written report. Each Hat can provide a specific focus, a heading, a paragraph in that report.
- The de Bono Thinking principal of collaborative, mutual thinking without debate and argument is enhanced when a Full Sequence is used. I recollect a student who came to me after class and said: *Mr Allan. My parents are close to divorce. We have built another level on our house. Dad wants the rooms to be for one purpose and Mum wants them for another. Every day, they argue over the dinner table and I get sick of it. I'm sure they will soon explode and break up!*
  I suggested he choose the Emotional Situations Sequence the next time his parents argued.
  The next day I received a telephone call from my student's Mother: *Mr Allan. You have saved our marriage. My husband and I have been arguing for months about the additions to our house. Our boy gave us that list of Hats to use last night and we solved our problem in twenty minutes. Thank you!*
- A full sequence can be used in conflict or dispute situations where each side tends only to attack and defend, while little exploration of the matter gets done.
- A full sequence can be used in class discussions or meetings which often bog down in argument or trivia.
- A full sequence can be used when there is a real need for a resolution or outcome to result from a class discussion or meeting.
- A full sequence can be used by an individual who needs to decide or solve a problem. A full sequence suggests a thinking path. The sequences described are not the 'be-all, end-all' of Six Hat sequences. You are invited to design a new combinations that fits your needs.

### *Guidelines for Use*

- Each of the Hats may be used a number of times in a sequence. For example, the Black Hat may be used to strengthen an alternative, by pointing out weaknesses, to assess an alternative – difficulties and dangers, and again, for a final assessment – before action.
- When the use of a Hat is obvious, there may be no need to specify the Hat each time. For example, after the Black Hat is used to show the weaknesses in an idea, the Green Hat may be used to attempt to overcome these weaknesses. It is not necessary to specify that Green Hat.
- When the Yellow and Black Hat are to be used together – for evaluation – it is usually best to put

the Yellow Hat first.

- The Black Hat can be used to point out weaknesses in an effort to overcome them or as an assessment. It may be worthwhile to indicate the type of Black Hat use.
- The Blue Hat is used to define the task and focus. It is also used to summarise and force a conclusion and outcome. All Full Sequence agendas start and end with the Blue Hat. Sometimes this is taken for granted.
- The final assessment before action is always the role of the Black Hat, no matter how often it has already been used. This final Black Hat is always followed by the Red Hat to voice feelings about the result of the final assessment.

## But, this is too complicated!

Let's look at the matter of complexity for a moment. When training teachers to use the Full Sequences, there are usually two responses:

- *This is too complicated!*
- *This takes too long to do!*

### *This is too complicated!*

Because most of our thinking is automatic – we don't step onto the road until we look for traffic – it is initially strange to train ourselves to *deliberately focus our attention on one thing at a time*. Teachers rarely complain about the Simple Sequences. 'Complexity' is a perception but fear of complexity, actual or imagined, must be addressed and can be answered. As Dr de Bono suggests, the Full Sequences should not be used as often as the Simple Sequences. There is no inference that the Simple Sequences should not be used at least as often as a single Hat. There are three apparent options:

- *Option One*
  Use one Hat at a time.
- *Option Two*
  Use one or more Simple Sequences.
- *Option Three*
  Use a Full Sequence or more than one Full Sequence.

In reality, the experienced user may choose to skip from a single Hat, straight to a Full Sequence and then to a Simple Sequence. This becomes second nature after the technique is embedded. Embedding – the establishment of that thinking patterns in the brain – comes with time and patience. Exactly the same situation prevails when training teachers and students to use CoRT. Until the new user gains confidence, it is probably best to identify a single CoRT lesson that applies to a situation and use it. Later, the value of interactive use of a number of CoRT lessons becomes apparent. In my experience, interactivity 'happens' about six months after training. The more actively students and teachers use the CoRT Thinking Tools, the earlier interactivity happens. The same situation prevails when learning to use the Six Hats.

Dr de Bono's New Thinking methods are associated with a number of key words including *deliberate attention* and *attention directing*. Another is *simplicity*. In both the CoRT and Six Hats New Thinking method, simplicity is the foundation: *Here is a situation. This Hat or this sequence of Hats directs attention at the situation.*

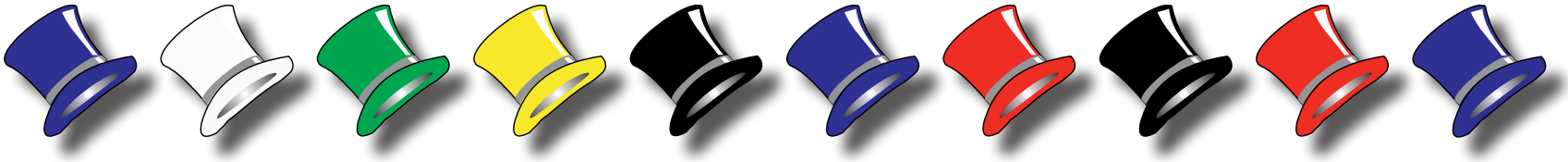
### *This takes too long!*

Again, the length of time taken on any idea or situation is a perception. Often, 'time' is a factor when there is no outcome or a confusing outcome. This method guarantees an outcome, whether a 'solution' or 'action'. That reality justifies the time expended, if the thinker feels 'time' is an issue. Dr de Bono suggests we spend too little time thinking; we tend to think too fast. This does not mean that we should spend longer on thinking when 'quick solutions' are often the primary requisite. Instead, the sequences add an 'effectiveness component' to our thinking. In my experience, sequences actually accelerate thinking because they direct attention rather than drifting around a topic in the usual manner.

## Full Sequences

There are four Full sequences:

- Neutral Situations.
- Emotional Situations.
- Reactive Situations.
- Creative Situations.



Dr de Bono maintains these cover the majority of situations. Because the fullest of the Full Sequences includes 10 Hats – more can be used if warranted – this, the Neutral Situations sequence and all others are presented in a row. Following the pattern already established, the descriptors begin in the next row.

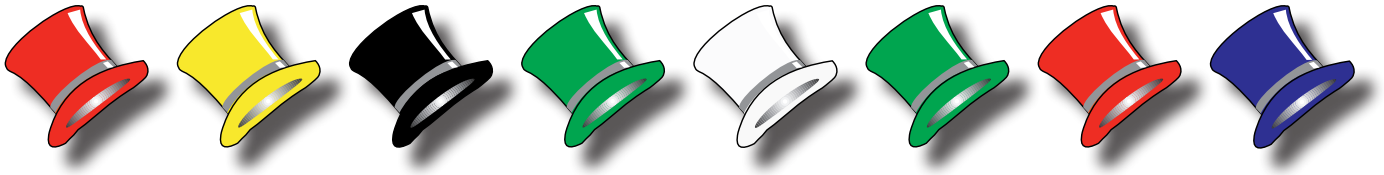
No attempt has been made about teaching the Full sequences are after giving the descriptors. The first priority is to embed the principle of the full sequence, the process. Simple practical examples can be designed but the primary aim is to come to terms with the Full Sequence process. Later, individual Full Sequences can be used to deal with real-world situations.

Each new sequence is shown on the top of a new page. There may be an overlap of descriptors.

## *Neutral Situations*

These are thinking situations where there are no strong emotions or feelings at the beginning of the exploration. In such cases, this sequence may be used:

- *Blue Hat*
  Use the Blue Hat to define the thinking task, the problem, the need or the goal.
  The Blue Hat may also be used to state the context of the thinking and what is to be done with the output.
- *White Hat*
  The White Hat can bring in all the available information, extract information with questions and inferences, define needed or missing information, and determine how to get this information.
- *Green Hat*
  The Green Hat can be used to generate a number of possible alternatives and actions. The Green hat should be used to explore, not only obvious and conventional ideas but also original, creative and tentative ideas. The intention is to spread broadly and to have as many ideas as possible.
- *Yellow Hat*
  At this point, each alternative is treated with the Yellow Hat. The Yellow Hat looks first at benefits, then feasibility and then at likelihood. The Yellow Hat seeks to strengthen an alternative by showing how it can be done or modifying it to make it more practical and beneficial.
- *Black Hat*
  Now the Black hat is used on each alternative to point out the weaknesses. Then there is an effort to overcome these weaknesses. This may require some Green Hat thinking, which can be introduced as a subroutine. Following this Black-Green improvement stage, the Black Hat is again used as an assessment to check the validity of the alternative and to show the difficulties and the dangers.
- *Blue Hat*
  With the Blue Hat, the alternatives – with the Yellow and the Black Hat evaluation of each of them – are summarised. The number of alternatives that can be considered in this way will depend on the time available. If there are many alternatives, this number could be reduced by doing a quick scan of Yellow Hat benefits and Black Hat feasibility. The Blue Hat gives the final picture.
- *Red Hat*
  The red Hat now looks at the alternatives and applies feelings, values and priorities. At this



point, one alternative may feel right and can be chosen. If no choice is possible, then there is a need for Green Hat thinking in order to generate more alternatives or to change the ones already generated.

- *Black Hat*
  The selected alternative is subjected to a final Black Hat assessment. What are the dangers and difficulties?
- *Red Hat*
  The Red Hat is used to state final feelings about the outcome, Do the feelings follow the Black hat final assessment? If not, then further work can be done of the idea. Or the thinker may simply choose to accept the risks that have been spelled out.
- *Blue Hat*
  Finally, the Blue Hat is used to define the conclusion or the outcome.

### *Summary*

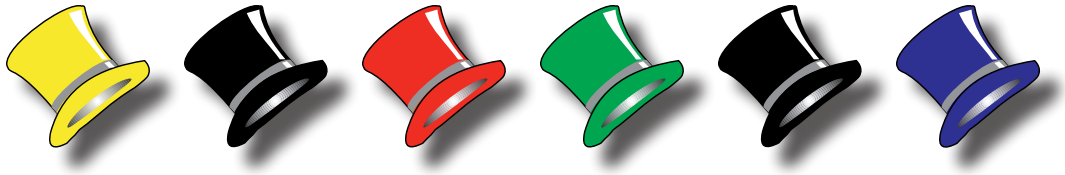
There are three phases in this sequence:

1. The *Generative Phase*.
2. The *Evaluative Phase* – evaluation of alternatives generated.
3. The *Choice and Conclusion Phase.*

### *Emotional Situations*

There are situations in which feelings or emotions already exist. It is worthwhile to get these out into the open, at the beginning of the discussion then move forward.

- *Red Hat*
  The Red Hat is used to get feelings out into the open. If one side is unwilling to put forward their feelings, then there may be some speculation from the other side: *It seems to me that your feelings on this matter could be...*
  The feelings should always be put forward in terms of what the person or side feels. It is not a matter of insulting the other side or accusing them of wrongdoing. Neither should the Red Hat be used to justify or put forward reasons for the feelings.
- *The Yellow Hat*
  The Yellow Hat is used next if the feelings are negative. But, if the feelings have been positive, then the Black Hat can be worn. This is a rare case when the Black Hat can come before the Yellow. If the opposite sides have feelings, both sides should use the Yellow Hat first. The Yellow Hat seeks to take a constructive view of the situation. What are the good points for each side? What are the benefits?
- *The Black Hat*
  The Black Hat now checks each side's positions. Are they valid or true? The Black Hat is also used to layout the difficulties and dangers, problems and grievances. All this must be done on a logical basis. The effort is to lay out the points, not to argue them through. It is an effort in mapmaking.
- *The Green Hat*
  The Green hat is used to see if there are any fresh ideas and to see if the existing ideas can be made more acceptable. The Green Hat may be used to introduce new perceptions as well: *If you look at it this way, you will get a different*





*picture...*
The Green Hat can also bring in new values, design proposals that satisfy both sides and reconcile contradictions.

- *The White Hat*
  At this point, check any new Green Hat ideas against White Hat information. The information may also be looked at with new perceptions as suggested by the Green Hat.
- *The Green Hat*
  The green hat is used again to see if any ideas have been triggered by looking at information/
- *The Red Hat*
  Feelings are applied to the new ideas. Has there been any change in feeling? Are any of the ideas promising?
- *Blue Hat*
  What is the outcome? New interesting ideas can be reviewed in a new thinking session.

## *Reactive Situations*

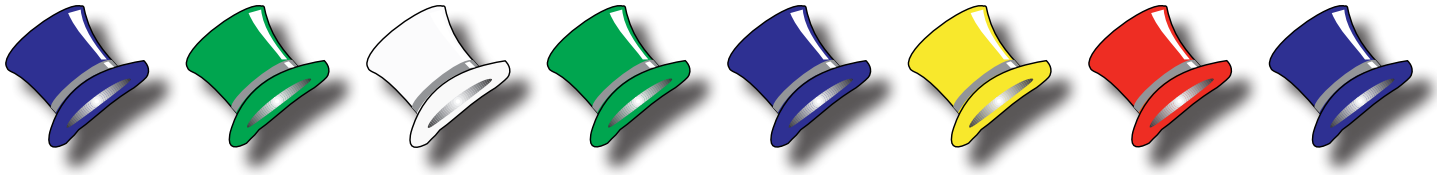
There are situations in which you may be asked to react to something that has been put in front of you. In such cases, the following sequence of Hats could be used to structure discussion.

- *The Yellow Hat*
  Use the Yellow Hat to look for the benefits, good points and opportunities.
- *The Black Hat*
  The Black Hat checks the idea for truth and feasibility and points out difficulties and dangers.
- *The Red Hat*
  After having evaluated the idea, what do we feel about it? The Red Hat applies values and priorities. It also applies intuitions and hunches.
- *The Green Hat*
  Can the idea be modified, improved or changed to make it more acceptable? The Green hat offers suggestions and possibilities.
- *The Black Hat*
  If the idea is going to be rejected, then the Black Hat puts together the reasons or logic for the rejection. This can also include Red Hat feelings. If the idea is going to be accepted, then the Black Hat assesses risk, difficulties and dangers so that acceptance is made with full knowledge of weaknesses. If the idea is going to be put into action, then the Black Hat is the usual assessment before action.

- *Blue Hat*
  The Blue Hat gives the outcome or conclusion: acceptance or rejection. The decision also may be made to reject the idea in its present form but to suggest modifications with the Green Hat.

## *Time for a Pause...*

Each of the Full Sequences is a formal grouping of Hats to deal with a situation that fits the four groupings Dr de Bono identified. In my teaching and training experience, the Full Sequences have real value when they is used as thinking models. The settings



for their use are infinite. Generally, an idea that works gains a place in our mind as having value when we encounter a similar situation. As a middle manager in my school, there were constant emotional situations that had to be confronted. Because the educational arena is often a maelstrom, emotional situations prevail. When teachers feel under assault from government directives, they often gain solace in 'mutual rumblings' which may make them feel better but do absolutely nothing to deal effectively with the issues as they arise. Currently, teachers in New Zealand are coming to terms with a government directive introducing educational standards for primary and intermediate – pre-secondary – students. The arguments against the requirement are numerous focusing on the time involved in systematic testing, the dismissal of the process by UK and USA schools, the submission that, "...we do this already anyway..." and so on.

Most professional groups must comply with work standards, doctors, the police, lawyers... Teachers at any level in the system are not immune from similar demands. As Dr de Bono suggests on many occasions, education is a "locked-in system" where change of any sort is difficult. In this sort of situation, the Emotional Situation Sequence was always useful. When using it, or any of the others, I designed a grid of four columns. On the left, the sequence; in the other columns, modifications of the original when and if required.

## *Creative Situations*

These are situations in which there is real need for some new ideas. The sequence of Hats listed below may be effective.

- *Blue Hat*
  The Blue Hat clearly defines the task and the need.
- *Green Hat*
  With the Green Hat, you can generate initial possibilities and ideas. Use some of the lateral thinking techniques for generating ideas – random word, Po...
- *White Hat*
  Bring in White Hat information with a view to stimulating new ideas rather than checking out existing ideas.
- *Green Hat*
  With the Green Hat, generate additional new ideas.
- *Blue Hat*
  Collect, summarise and list possible new ideas with the Blue Hat.
- *Yellow Hat*
  Scan the new ideas with a view to finding benefits in them. The Yellow Hat is then used to strengthen or make more feasible the ideas that show any benefit.
- *Red Hat*
  *What do we feel about these new ideas?*
  *Which ones are promising?*
  *Which ones are interesting?*
  *Which ones have the most potential?*
  This is the æsthetic judgement which introduces experience and intuition.
- *Blue Hat*
  Summarise and state the outcome of the Blue Hat. Promising ideas are listed. If an idea is to be examined further, then that becomes the subject of another thinking session – of the reactive type.