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# Creative Thinking Techniques

## Course Objectives

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|---------------------|---|
| <b>Generally</b>    | There are times when we need to add a little inspiration to our thinking - to get away from everyday tools and techniques and try something new. This one-day course enables you to experiment with a variety of different techniques to get your mind working. |
| <b>Specifically</b> | During this course you will learn:  |
| •                   | To find <b>unusual</b> and <b>different</b> ways of getting round a problem   |
| •                   | To learn to use more of our <b>brain</b>  |
| •                   | To <b>experiment</b> with some structured thinking techniques   |
| •                   | To use some <b>right brain</b> thinking techniques  |

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# Creative Thinking

## Objectives

|                     |  |
|---------------------|--|
| <b>Generally</b>    | To gain a basic introduction to creative thinking, and understanding of how our brain works. |
| <b>Specifically</b> | On completion of this section, you will be able to:  |
| •                   | Explain the meaning of <b>creative thinking</b>  |
| •                   | Understand how your <b>mind</b> works  |

## What is Creative Thinking?

Creative thinking is a term used when we need to expand our ideas and to approach things from a different angle. It refers to a set of ideas that use the right brain as well as the left brain - to release the full capacity of our mind.

### When to use creative thinking

- When you want to try something new
- When you come up with new ideas for approaching old problems
- To boost ideas about a product
- When you have apparently reached a dead end
- When things seem to have got bogged down and you are going round in circles

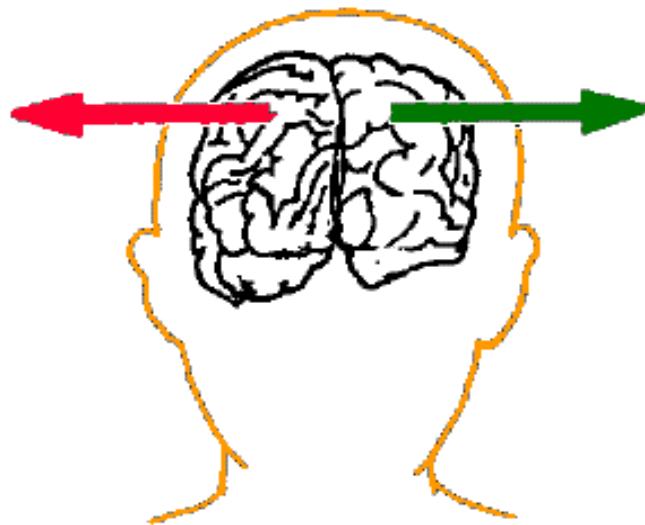
### When to avoid creative thinking

- When gathering facts
- When you are at the implementation stage and things are going well
- When you are already over-burdened with ideas and need to rationalise them
- When preparing an argument

# Your Mind

In Californian laboratories in the late 1960's and early 1970's, Roger Sperry of the California Institute of Technology, a Nobel Prize winner and Robert Ornstein began some research that was to change the history of our appreciation of the human brain, and eventually won them world-wide fame for their work on brain waves and specialisation of function.

What Sperry and Ornstein discovered was that the two sides of your brain, which are linked by a fantastically complex network of nerve fibres called the **Corpus Collosum**, deal with different types of mental activity.



*The two sides of the brain*

## **The left hemisphere of the brain**

The brain consists of two hemispheres. The left hemisphere processes information sequentially and is described as **analytical** because it specialises in recognising parts that make a whole. Although it is most efficient at processing verbal information, language should not be considered as being 'in' the left hemisphere. This hemisphere is able to recognise that one stimulus comes before another and verbal perception and generation depends on the awareness of the sequence in which sounds occur.

The left side of the brain deals with logic, language, reasoning, number, linearity and analysis and so on, the so-called **academic** activities. While the left side of the brain is engaged in these activities, the right side is in the **alpha wave** or resting state.

## The right hemisphere

Whilst the left hemisphere separates out parts that make a whole, the right hemisphere specialises in combining the parts to produce a whole. Unlike the left, the right hemisphere **organises simultaneously**. It specialises in a method that perceives and constructs patterns. It is most efficient at visual and spatial processing and it is thought that non-verbal stimuli are processed primarily in the right hemisphere.

The right side of the brain deals with rhythm, music, images and imagination, colour, parallel processing, daydreaming, face recognition and pattern or map recognition

## Both sides working together

Research into the operation of the right and left hemispheres shows that the effective processing of information requires access to **both** as they complement each other. So for instance both sides will be involved in learning a language: the left side focusing on the structure of the grammar and the rules, the right on the elegance of words and the sounds they make.

When people were encouraged to develop a mental area they had previously considered weak, this development rather than detracting from other areas seemed to produce a synergetic effect in which **all** areas of mental performance improved. Therefore to ensure our brain is fully functional we need to work with both sides of the brain - the right side for broad picture and the left for the tighter analysis.

When we describe ourselves as talented in certain areas and not talented in others, what we are really describing are those areas of our potential that we have successfully developed, and those areas of our potential that still lie dormant, which in reality could, with the right nurturing, flourish.

The best results can be obtained from using both sets of techniques - the right brain for a flow of ideas; the left brain to analyse them and select the most suitable.

## The two sides of the brain

| The Left Side Emphasises | The Right Side Emphasises |
|--------------------------|---------------------------|
| Language                 | Rhyme                     |
| Logic                    | Rhythm                    |
| Numbers                  | Music                     |
| Mathematics              | Pictures                  |
| Sequence                 | Imagination               |
| Words                    | Patterns                  |

Dolphins use all their brains, they can switch one half of their brain off and go to 'sleep' then change round and switch off the other half of their brain and 'go to sleep'. Human beings use only about 10% of their brains. By trying some creative thinking techniques we can get more of our brain working for us at any one point in time.

### Left/right handedness

Generally we access the opposite half of the brain from our "handedness". So right handed people are left-brain dominated; left handed people are right brain dominated. This is not a hard and fast rule but tends to apply in the majority of cases. As over 70% are right-handed, you can see how left-brain activities have come to dominate business thinking and techniques.

Dr. Stanley Coren conducted a sidedness questionnaire to many people and came up with these statistics.

|            | Strongly Left-sided | Strongly Right-sided | Mixed Sided |
|------------|---------------------|----------------------|-------------|
| Handedness | 5%                  | 72%                  | 22%         |
| Footedness | 4%                  | 46%                  | 50%         |
| Eyedness   | 5%                  | 54%                  | 41%         |
| Earedness  | 15%                 | 35%                  | 60%         |

The Greeks encouraged and tried to promote ambidexterity because it was simply logical in sports and battle to be adept with both hands instead of one. By combining the Phoenician style of writing right to left with their own left to right system, the Greeks created a reading and writing system called **boustrophedon**, where the lines ran alternately right-to-left and left-to-right. With alternating sweeps of the eyes back and forth, reading was more swift and efficient.

We can stimulate the brain, and in particular the side of the brain that we use less, by becoming more ambidextrous. Try some simple exercises such as writing with your other hand; crossing your legs a different way; starting to walk with the opposite foot to the one you use normally. Observe the way you fold your arms across your body; now put the other hand "on top". All these simple exercises, if repeated regularly will help to stimulate your brain.

The following pages describe some different creative techniques for you to try. Initially try them with the exercises given; thereafter try them with a particular problem of your own.

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# Preparing for Creative Thinking

## Objectives

|                     |  |
|---------------------|--|
| <b>Generally</b>    | To understand how to prepare yourself for creative thinking. |
| <b>Specifically</b> | On completion of this section, you will be able to:          |
| •                   | Know what equipment is required                              |
| •                   | Know how to prepare yourself and others                      |

## Equipment

To prepare for creative thinking you need the following equipment.

- ◆ Time
- ◆ No interruptions
- ◆ Variety of coloured pens
- ◆ Dictionary
- ◆ Post-it pads
- ◆ Flip chart paper - or A3 at minimum
- ◆ Blutac
- ◆ Music in the background if possible - this is best if it's Baroque but any gentle music will do

## Yourself (and Others)

- ◆ Set aside a specific time for creative thinking
- ◆ Minimise disruptions
- ◆ Switch off your critical mind - this comes into play after you've been creative
- ◆ Stand up and have a good shake
- ◆ Stretch your arms, then your legs, then your face (smile then frown then smile)
- ◆ Yawn
- ◆ Drink a glass of water

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# Exercise One

## *Preparing for Creative Thinking*

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- Which hand do you use to write with?
- Which hand do you use to cut bread/spread butter/work a screwdriver?
- Which foot do you use to kick a football?
- Can you write with your other hand?
- Can you swap between hands for other manual tasks?
- Can you kick well with both feet?
- From the following list, tick those areas that you believe that you are good at.
  - Reading a map
  - Logical reasoning
  - Finding patterns
  - Creating colour schemes
  - Reading a music score
  - Doing crossword puzzles
  - Calculating change
  - Dreaming
  - Coming up with new ideas
  - Playing a musical instrument
  - Playing by ear
  - Following set dance steps
- List all the purple things can you think of
- Write the word PURPLE
- Now write the word PURPLE with the other hand
- Write your telephone number backwards

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# The Techniques

## Objectives

|                  |  |
|------------------|--|
| <b>Generally</b> | To gain a basic introduction to the techniques involved when practising creative thinking. |
|------------------|--|

|                     |   |
|---------------------|---|
| <b>Specifically</b> | On completion of this section, you will be able to: |
|---------------------|---|

- |   |
|---|
| <ul style="list-style-type: none"><li>• Understand the <b>techniques funnel</b></li><li>• Understand <b>individual</b> techniques in a funnel</li></ul> |
|---|

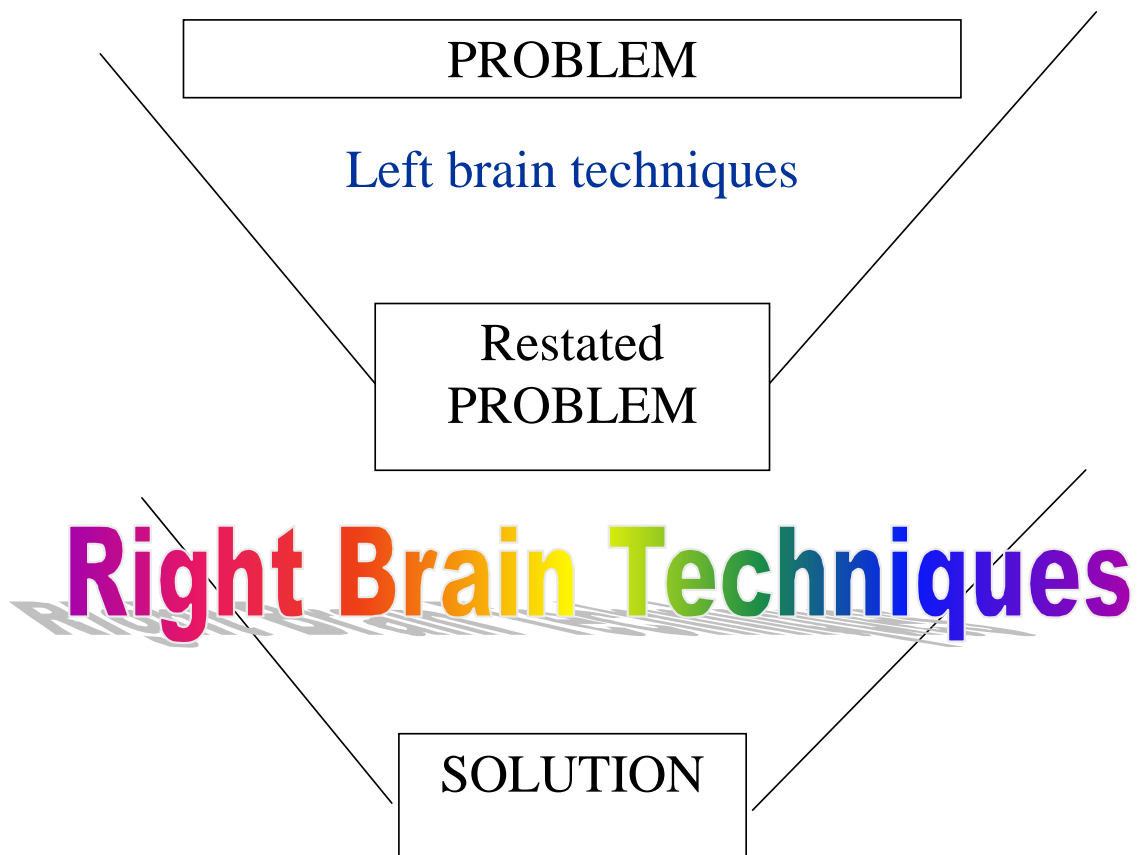
Now you are ready to think creatively. Remember these techniques are to help widen the options - to expand the issues and to take a different perspective on the issue; you will need to go into other thinking techniques when you are deciding how to solve the problem.

These techniques are a combination of widening and focussing techniques: funnelling some original thinking into a problem solution.

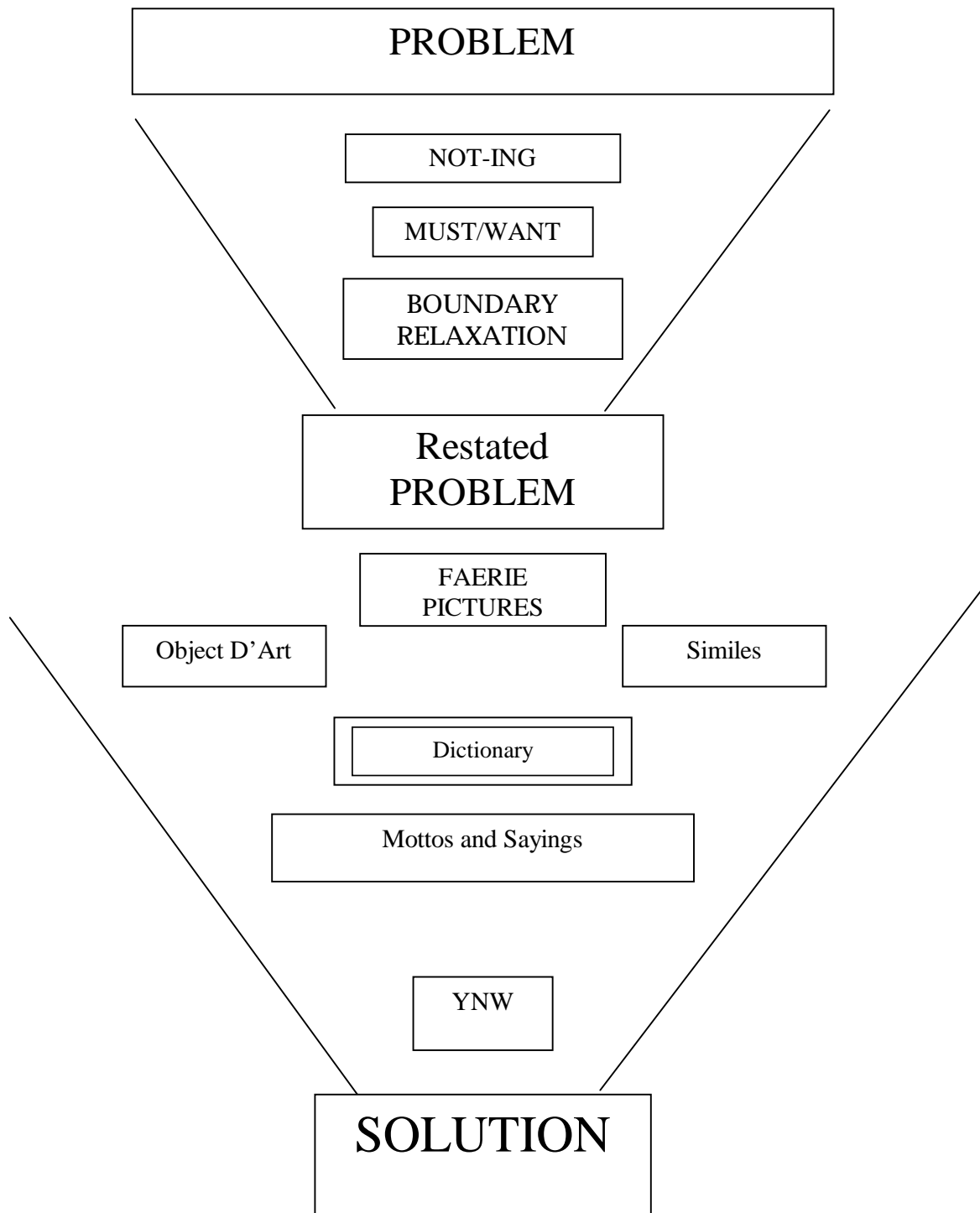
- **Not-ing, Must/Want** and **Boundary Relaxation** help to redefine the problem into a manageable whole
- **Dictionary, Object d'art, Smiles, Faerie Pictures,** and **Mottos and Sayings** help to come up with creative ideas
- **YNW** helps to sift through the ideas to come to a final solution



## Techniques Funnel



# Individual Techniques in the Funnel



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# Left Brain Techniques

## Objectives

|                     |  |
|---------------------|--|
| <b>Generally</b>    | To gain a basic introduction to the left brain techniques involved in creative thinking. |
| <b>Specifically</b> | On completion of this section, you will be able to:                                      |
| •                   | Apply creative thinking using the <b>Not-ing</b> technique                               |
| •                   | Apply creative thinking using the <b>Musts</b> and <b>Wants</b> technique                |
| •                   | Apply creative thinking using the <b>Boundary Relaxation</b> technique                   |

## Not-ing

This technique helps to reduce the size of the problem - for some issues the scope seems so vast that it needs reducing to a manageable layer. Not-ing is a useful technique for this, and helps to keep a discussion on track. This technique also helps to refine the problem to avoid any inconsistencies and ambiguities in its phrasing.

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# Exercise Two

## *Not-ing*

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- State the problem

"How can we reduce traffic congestion in towns?"

- Take each significant term in a problem statement and define it more clearly by saying what it is **not**

For example:

| Terms      | Not   |
|------------|---|
| How        | Why, when, whether, who, where                            |
| Can we     | They, the council, the government, the EEC, anyone else   |
| Reduce     | Eliminate, smooth, destroy, replace, increase, get rid of |
| Traffic    | Pedestrians, people, birds, animals                       |
| Congestion | Smooth flow, rush, moving, hurrying                       |
| In towns   | Countryside, cities, UK, Europe, world                    |

- Now redefine the problem by saying what is within the problem and what is without the problem - in other words, what is the hidden imperative behind the words

| Terms      | Hidden Imperative  |
|------------|--|
| How        | It has to be done - this is not a philosophical question   |
| Can we     | It's our problem - we take responsibility for it, no-one else  |
| Reduce     | Can we set some % that will signify reduction and be obtainable?   |
| Traffic    | Can we re-define this? Do we mean tariff at certain times? Certain types of traffic? Does the problem need redefining? |
| Congestion | What is the definition? How many seconds stopped?  |
| In towns   | Do we have a definition of what constitutes a town? Do we mean <i>all</i> towns or specific ones?                      |

- As you proceed to discuss the redefined problem and come across other inconsistencies, then bear not-ing in mind
- Avoid criticism
- Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start generating creative options for the problem

# Musts and Wants

A useful checklist distinction is between **musts** and **wants**.

**Musts** (and must nots) are go/no-go conditions that must be satisfied before the project can succeed. Often they are basic requirements that are not related to the problem-solver's main goals. Your advertising has to be 'legal, honest and decent' whether you are selling beans or underwear.

**Wants** (and want to avoids) are conditions related to the problem-solver's main goals, and are usually of a 'more or less' or 'better or worse than' nature rather than 'go/no-go'. For example, you may want sales to be 'better than last year', and expensive waste 'less than 5 per cent'.

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# Exercise Three

## *Musts and Wants*

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- State the problem

"How can we reduce traffic congestion in towns?"

- Write **MUST** on one piece of flipchart paper and **WANT** on another. Make both available to view
- Everyone in the group thinks in silence for 2 minutes about what the solution **must** contain
- All the thoughts will be captured on the **MUST** flipchart - without comment or discussion

Examples:

- Be fair to all road users
  - Be possible for emergency vehicles to have access
  - Allow people to come into towns
  - Be legal
  - Simple to understand
  - Easy to introduce
- Everyone in the group thinks in silence for 2 minutes about what they **want** the solution to contain
  - All the thoughts will be captured on the **WANT** flipchart - without comment or discussion

Examples:

- Distinguish between HGV and private care use
- Enable public transport to move easily
- Be simple to understand
- Difficult to violate

- Now compare the two and keep challenging the MUST list

The more you can reduce a MUST list the easier the solution will be (as you can see in this example "be simple to understand" is in both lists - it might be easier if it were only in the WANT list).

- Avoid criticism
- Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start generating creative options for the problem



# Boundary Relaxation

This method of problem redefinition works on a similar principle to one of the standard muscle relaxation techniques. In muscle relaxation, you go through each major muscle group, first tightening it, so that your attention is focused on it and you can feel what is happening to it, and then relaxing it. It is easier to relax this way because the tightening brings the muscle group into conscious awareness.

Boundary relaxation also works by first bringing each boundary component into awareness, so that you can then consciously try to loosen it.

## **Bringing boundaries into awareness**

A problem boundary is the imaginary line between what a problem is, must be, should be, or could be, and what it isn't, mustn't be, shouldn't be, or couldn't be. There are two major difficulties with most problem boundaries.

- ◆ Even in a very detailed problem statement, much of the boundary will be assumed (often unconsciously) or implied rather than stated. Often it is only when the problem-solver unwittingly tries to cross one of these "unmarked" parts of the boundary and people suddenly begin to complain that the assumed limit becomes visible.
- ◆ Although some parts of the boundary may be real (for example, legal limits), much of it may be made up of unnecessary restrictions arising out of habit, caution, politics, anxiety and so on. These restrictions may even have created the problem.

## **Tightening boundaries**

Tightening a boundary is to take it to the extreme. It enables us to question the role and purpose of the boundary - is the fence there to mark territory or to keep something in or something out?

What does it do when we tighten a boundary? Is this really the result needed from the boundary?

We often find that boundaries in work are more imaginary than real - they have grown up from the past and inherited from others without much true questioning.

### **Loosening the boundary**

Loosening a boundary - to full relaxation if possible allows us to consider the problem from a different angle - is the boundary really necessary? Are the conditions that applied in the past still present now?

A good example of boundary loosening is Arthur Anderson Consulting who have now said that there is no formal requirement to wear suits in the office. When questioned the reason for insisting on wearing suits had gone, so why keep the regulation?

It may be easier to get temporary leeway around a boundary by discreetly "bending" it and making sure nothing goes wrong, than by trying to get formal permission to alter it. *"It is usually easier to ask forgiveness than to get permission."*

By tightening and then Loosening boundaries we get to a better picture of what is possible, rather than restricting ourselves. Each boundary is addressed then removed or eased until you get a picture of the **true** boundaries of the problem.

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# Exercise Four

## *Boundary Relaxation*

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- State the problem

"How can we reduce traffic congestion in towns?"
- Find out the facts
- What authorisation do we have? (Legislation, Local Regulations, Departmental)
- What resources do we have? (Money, People, Skills, Equipment)
- What prior investments are involved? (Established Structures, Plant, Suppliers, Markets, Image)
- What are the public acceptability levels? (Tolerable Levels of Intrusion, Change, Spread of Information)
- How much involvement needs there be of people? (Staff, Customers, Public)
- Think in silence for 2 minutes silence about tightening up the boundaries
- Ask what would happen if there was no authorisation? No resources? No public acceptability levels? No need to involve others?
- Describe what things would be like at the worst - with the most restrictions possible - in this case there would be chaos and congestion - but how long would it take?
- Now go to the other extreme, think for another 2 minutes in silence then describe what it would be like with all boundaries off - with unlimited resources, and so on. What would happen here? Would you get the ideal solution?
- Now challenge any boundary restrictions that seem inappropriate - why do we need to have roads through towns? Who for? How can we charge them appropriate rates?

Ask the questions:

- "Would it make the problem any easier to solve if this part of the boundary could be altered in some way?"
- "If so, under what circumstances could it be altered or ignored?"
- Avoid criticism. Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start generating creative options for the problem

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# Right Brain Techniques

## Objectives

|                     |   |
|---------------------|---|
| <b>Generally</b>    | To gain a basic introduction to the right brain techniques involved in creative thinking. |
| <b>Specifically</b> | On completion of this section, you will be able to:                                       |
| •                   | Apply creative thinking using the <b>Faerie Pictures</b> technique                        |
| •                   | Apply creative thinking using the <b>Objet D'art</b> technique                            |
| •                   | Apply creative thinking using the <b>Similes</b> technique                                |
| •                   | Apply creative thinking using the <b>Dictionary</b> technique                             |
| •                   | Apply creative thinking using the <b>Mottos</b> and <b>Sayings</b> technique              |

## Faerie Pictures

Faerie pictures allow for expression from the right brain via drawings. We can all capture something via a picture even if only a few of us are Picasso.

## Objet d'art

This is similar to the Dictionary technique (see below). Objet d'art takes an object and asks how that can give some insight into the problem or its possible solutions.

## Similes

A simile is a comparison introduced by the words "like" or "as". It is used widely in literature "*as flies to wanton boys are we to th' gods They kill us for their sport*" (Shakespeare, King Lear, IV,I) and *politics "like being savaged by a dead sheep"* - Denis Healey about Geoffrey Howe's attack on his budget proposals. Its use in creative techniques is to take the problem away from its present description and into other realms from where a solution might be found.

## Dictionary

This technique asks you to apply a random word, chosen from the dictionary as inspiration for some ideas and different approaches to a problem.

For this technique you need a dictionary as well as the other equipment.

## Mottos and Sayings

A motto is a saying that tends to be a rule of conduct. They are short sayings that sum up ways of behaviour. The use of mottos for creative thinking is to see what everyday beliefs and rules we can apply to a problem.

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# Exercise Five

## *Faerie Pictures*

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- State the problem

"How can we reduce traffic congestion in towns?"
- Draw a picture of the problem (15 minutes)
- Pass your picture to the person who is second on your left
- Imagine that you are a magic spirit - a faerie. You have the power to solve the problem you have in front of you with your magic spells
- Think in silence for 2 minutes of some spells
- Draw the solution onto the drawing in front of you - preferably using different colours (10 minutes)
- Hold up your picture and explain how you saw the problem and how as a faerie you solved the problem
- Avoid criticism and state which ideas you liked (The trainer will capture these on the flip chart)
- Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start logically examining the problem - try YNW

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# Exercise Six

## *Objet d'art*

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- State the problem

"How can we reduce traffic congestion in towns?"

- Pick an unusual object in the room or that you can see from the window, for example **Washing Line**
- Write the word in big letters on the flip chart
- Think in silence for 2 minutes how WASHING LINE could apply to the problem
  - Washing line has separate items all in a row
  - Remove items as they get dry
  - Need more pegs for larger items of washing
  - Need to keep eye on weather to check it doesn't rain - defeats the object
  - Line is line rope - needs to be flexible to take account of weather and wetness of clothes; Is the line a road?
- Now state your thoughts and write these down on the flip chart
- What would be the pegs? - some form of pricing heavier vehicles?
- Different loading when it's "dry" than "wet" outside - demand focused pricing?
- Skilled individual can get a lot of clothes onto a line - some form of interference in queuing, not left up to individual vehicles? (like loading onto cross channel ferry?)
- Avoid criticism
- Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start logically examining the problem



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# Exercise Seven

## *Similes*

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- State the problem

"How can we reduce traffic congestion in towns?"

- What is traffic congestion in towns like? Remind yourself that as well as thinking of practical things you can also think of some stories or fairy tales that might tell a similar story (2 minutes)
- Write the problem on a piece of flipchart paper and the words IS LIKE... and capture all group's suggestions
  - Rubbish caught in a drain
  - Leaves caught in a stream
  - Supermarket queues
  - Runners bunching at the start of a marathon
- Suggestions can feed on from others
- Take each simile in turn and consider how this problem is dealt with. Capture all these on flipchart
- Return to the main problem and see if any of the solutions could be applied to the main question
- Avoid criticism, encourage thoughts flowing from other's ideas and stop when all the ideas have run out
- Take a break - then start logically examining the problem - try YNW

**Tip** You can also run similes by asking a series of questions about the problem such as, what animal is the problem like? What city? What TV programme? What tree?

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# Exercise Eight

## *Dictionary*

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- State the problem

"How can we reduce traffic congestion in towns?"

- Close your eyes, open the dictionary and pick a word, for example **Luxurious**
- Write the word in big letters on the flip chart
- Think of how LUXURIOUS could apply to the problem (2 minutes)
  - How could congestion be luxurious?
  - What is the pleasure in being close together?
  - How can we travel in luxury - fly; train; tram; chauffeur; balloon
  - When was travel luxury - Victorian age? What was special there? Fewer cars on the road? People travelling by foot/horse/carriage?
- Now get everyone to state their thoughts and write these down on the flip chart
  - Order your own chauffeur - don't take your car
  - Pay for the privilege of coming into town by car
  - Make the queues fun - entertainment? Food? Information?
- Avoid criticism
- Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start logically examining the problem - try YNW

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# Exercise Nine

## *Mottos and Sayings*

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- State the problem
  - "How can we reduce traffic congestion in towns?"
- Think of mottos and sayings (2 minutes)
- Write down two mottos on two separate Post-Its, for example
  - Look before you leap
  - If at first you don't succeed, try again
  - An hour before seven is worth two after eleven
- Paste everyone's mottos onto a piece of flipchart paper
- Take the most popular mottos and then ask "How can this be applied to our problem?"
  - Is there a way of broadcasting traffic conditions before committing to a journey?
  - Re-route people through bypasses
  - Change routes at different times of the day
  - Stop traffic at certain hours of the day
- Continue to do this until you have worked through all the mottos
- Avoid criticism
- Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out
- Take a break - then start logically examining the problem - try YNW

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# Sorting Technique

## Objectives

|                     |   |
|---------------------|---|
| <b>Generally</b>    | To gain a basic introduction to the sorting techniques involved in creative thinking. |
| <b>Specifically</b> | On completion of this section, you will be able to:                                   |
| •                   | Understand how to apply the <b>YNW</b> method of evaluations                          |

## YNW

**YNW** stands for **YES**, **NO** and **WEIRD**. It is a method for evaluating ideas, of reacting to some suggestions without immediately naming judgements. It allows everyone time to think and to consider all aspects. This technique follows on from some of the creative techniques designed to stimulate ideas by assessing these ideas.

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# Exercise Ten

## *Yes, No and Weird*

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- Head up three separate sheets of flipchart

**YES**  
**NO**  
**WEIRD**

- State the problem

"How can we reduce traffic congestion in towns?"

- State the proposed solution

"Pay for the privilege of coming into town by car"

- Think of all the YES points about the solution. What arguments would you put in favour of this idea? (2 minutes)
- Give TWO of your points for the flipchart, for example
  - Stop casual visits
  - The rich would pay
- Think of all the NO points about the solution. What arguments would you put against this idea? (2 minutes)
- Give TWO of your points for the flipchart, for example
  - May prevent the poor but needy from coming into town by vehicle
  - There would be congestion at the pay points

- Think of all the WEIRD points about the solution. What's weird or wacky about it? (2 minutes)
- Give TWO of your points for the flipchart, for example
  - Is coming to town to work a privilege?
  - May encourage working from home!
- Check if there are any other Yes, No or Weird points not covered
- Given the full weight of the views, then consider the magnitude of the comments - do the Yes points outweigh the No ones? Are there any showstoppers? Can we develop the Weird points further?
- Avoid criticism. Encourage thoughts flowing from other's ideas
- Stop when all the ideas have run out take a break

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