

PERSPECTIVES



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CREATIVITY MEANS BUSINESS

'Creativity is the application of imaginative thought which results in innovative solutions'¹

Organisations need to be increasingly innovative in products, services, processes and strategies to be efficient and competitive in fast changing markets. It's not easy. Even customers themselves may not know what they will want and value in future.

Radical innovations need to come from well-founded creative ideas. Often we need to ask 'How else could we do this? Is there a way around this? How could we improve this?'

The latest CBI survey of innovation in the UK² found that the most innovative cluster of companies (36% of total) all had creative cultures, including staff suggestion schemes and idea generating meetings with customers and suppliers. However, 64% of firms could be much more innovative. Of the 400 respondents to the survey less than 20% gave their staff any training in methods of idea generation or creativity.

Organisations and individuals need to make

Blockers to creativity include^{1,3}:

- **Entrenched mind-set**
- **Fear of failure or change**
- **Lack of skills**
- **Risky in prevailing culture**
- **Too busy**

The time and conditions available to facilitate creative thinking for successful innovation.

In this issue of *Perspectives* we will explore what makes for a successful approach to business-orientated creativity, and review some of the tools available. In the panel below, Dr Edward de Bono, one of the world's foremost thinkers, researchers and publishers on creativity, points out some of the issues. If creative methods are to be selected and used effectively, truly understanding creativity is an essential starting point.

For after all, *'No-one can have a monopoly on creativity—not even Microsoft!'*⁴

Edward de Bono's five common misperceptions about creativity⁵:

Creativity is about being artistic no, not necessarily, in science and business it's about concepts and design
People are naturally creative, but culture and education inhibit no, these have only small effects. The brain is designed to be logical, basing decisions on experience, not creative thinking ... tools are needed
Creativity is about 'right-brain' thinking no, both 'sides' are necessary and creativity can be learned
Creativity is about brainstorming no, its about much more, ... and more practical and powerful techniques
Creativity is unstructured no, to be effective and efficient, systematic tools should be used

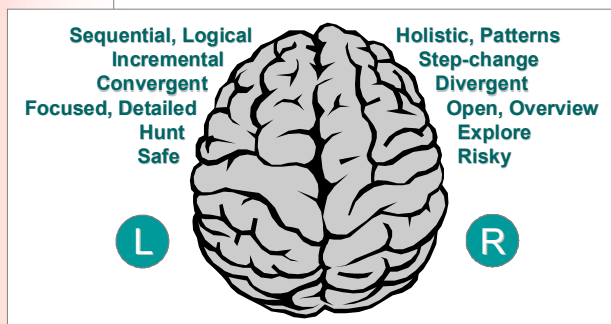
Brain Science

Creativity does not derive from order, but from the attempt to impose order, which does not exist, to make new connections.

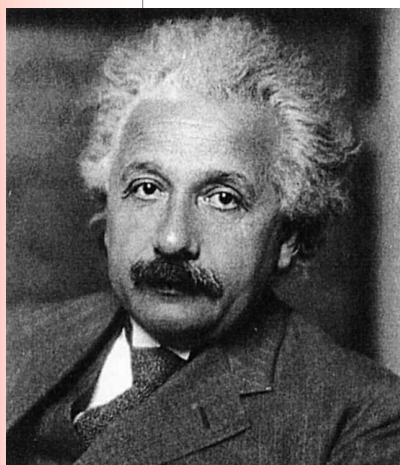
Rosabeth Moss Kanter

The structure of the brain is becoming much better understood. For a good guide to the brain and its functioning, see the Society for Neuroscience's website www.sfn.org.

Over 100 billion cells, or neurons, form a self-organising system for storage and retrieval of information. Signals received by our senses ultimately result in connections being made between neurons. These connections are associated with learning and memory. New signals are filtered to see if they fit existing patterns before new connections are created. This is very important, for otherwise we would 'learn', but never remember.



This system provides an extremely useful template for rapidly assessing a situation and making decisions. Within a particular group of people, having common experiences and resultant culture, it enables the group to operate with a *dominant logic*, tending to dismiss facts and concepts which do not appear to 'fit'.



Albert Einstein

Einstein looked at the problem of how to explain gravity from a new perspective and combined concepts of energy, mass, and the speed of light in the novel concept of space-time.

He explained his theories by drawing analogies with events standing on a platform while a train passes.

Einstein's most famous paper is the one on relativity, but he published 248 others.

For more insights into the working of the brains of creative minds see p.6.

In a business organisation this is positive, eg for agreeing missions and goals. However, when we need to be creative, this *group think* is unproductive and we need to break-out and think different.

Deja vu

Well-known to communications experts is the phenomenon of *cognitive dissonance*. This simply means that we hear what we want to hear, expect to hear, or can easily understand. If new information is inconsistent with our previous experiences, then we are likely to distort it to fit existing beliefs and less likely to understand, believe, remember and take action.

Left, Right

It has been known for sometime that the left and right hemispheres of the brain are associated with functions in the opposite side of the body and that they hold centres which process information in contrasting ways. The left brain is associated with sequentially processing 'bits' of information – in a logical way. The right brain deals with 'whole' information, in a more random fashion.

These physical and physiological differences have given rise to descriptions of contrasting types of thinking, which are perhaps more metaphorical than physiological, but nonetheless useful concepts (see panel).

Thinking Styles

I need we to be fully I

Carl Jung

To learn to think effectively, just as we need to know how the brain processes information (p.2), we must remember that everyone is different, of course.

Vive la différence

There are a number of systems for categorising an individual's preferences for communicating, learning and thinking, which all have a bearing on how individuals need to work together in teams, and to communicate with each other most effectively.

Learning Styles (Honey & Mumford's)

1. Activists ... just do it
2. Reflectors ... think first
3. Theorists ... conceptualise
4. Pragmatists ... try things

Thinking Preferences (Herrmann's)

1. Holistic... imaginative, experimenting, spontaneous
2. Empathetic ... sensitive, emotional
3. Organising ... planning, completing, proactive
4. Analysing ... logical, detailed, realistic

Communication Preferences

1. Visual ... show me
2. Hearing ... tell me
3. Kinaesthetic ... give me a sense of (feeling, smelling, tasting)

And more types ...

Research has shown that 80% of people are predominantly Operational Thinkers, focused on what things do; 18% are Strategic Thinkers, interested in options and how things can be used; and 2% of people are Conceptual Thinkers who see things as a whole, the relationships between items and how they relate to the rest of the world⁶.

It's not a question of one being better than another. An operational thinker might pick up a pencil and start experimenting with it to see how it writes. A strategic thinker would start exploring how many different ways the pencil could be used. A conceptual thinker would reflect on how something as simple as a piece of wood filled with graphite could be used to advance mankind through written language and numbers!

East is East ...

However, there is also a cultural influence. Research at the University of Michigan has shown that the cultures of East and West produce differences in the tendencies of people to see patterns or make associations, and the emphases they put on scenes they observe⁷.

For instance, take the words Monkey, Apple, Banana. Americans were more likely to categorise these into animal and fruit, Chinese, however, tended to make an association between Monkey and Banana. Also, when shown a complex picture, Americans were focused on the detail of key objects, whereas Chinese took a broader overview, remembering background items and noting the associations between objects. People from bilateral cultures, eg Hong Kong, tend to be intermediate in style.



A world of difference. Courtesy NASA

Tools

Thinking tools need to cater for these preferences of individuals, whether people are working alone, or particularly when they are interacting in groups. Although individuals may prefer one style of approach over others, the best results will come from utilising many or all of these various slants on thinking, communicating and learning, and truly synergising contributions.

The Creativity Paradox

*If you always do what
you've always done,
you'll always get what
you've always got*

American saying

Creativity is hard because of entrenchment (mindset, group think) and fear of change³. Negative criticism often appears smarter than having something positive to say about another person's ideas or proposals. Reflection or 'thinking time' is part of the natural learning cycle and needs to be provided for. Difficult in a busy organisation.

Understanding the nature of the brain (see p.2), it becomes obvious that we need structure in which to think clearly, especially when all the forces of everyday life are working against being creative.

The creativity paradox is that the left brain is needed for right brain thinking. We need to be rational and serious about creativity!

In selecting tools to help creativity, it's important to know how far the existing paradigm is to be changed. Are we looking for improvements, something unusual, or something radically different?

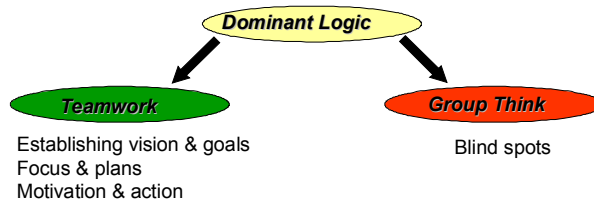
Apart from the creativity, *per se*, tools such as Edward de Bono's *Six Thinking Hats*® are invaluable in making the whole thinking process efficient and effective.

Mindset

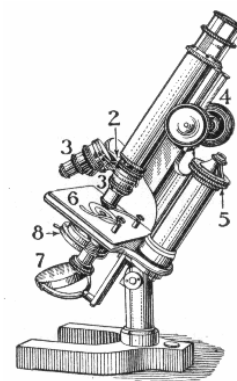
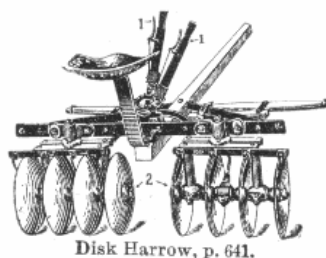
Limited by rules & values ... set by information from

- ☐ Situations
- ☐ Perception
- ☐ Self

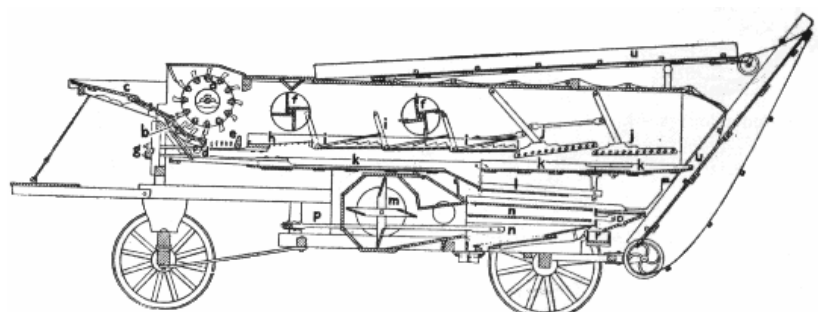
Useful template for quick judgement based on experience, but caution!



Tools for creativity



Watch Cultivate & Grow Harvest & Use



Threshing Machine, p. 2149.

How To Think More Creatively

Creative people often show similar characteristics⁸.

- They are observant, looking at things from many different perspectives.
- They are collectors of diverse information who push the envelope, then explore.
- They are emotional and intuitive, having many ideas. Even bad ideas may trigger good ones.
- Driven by the satisfaction of achievement rather than extrinsic rewards, they persevere under criticism or scepticism.
- And, not being afraid to break the rules, they thrive on challenge, change and risk.

- Encouraging diversity
- Using metaphors
- Using creative thinking methods
- Thinking past, present and future
- Memory exercises

Coming-up with creative ideas, to solve problems or look for opportunities, should follow a pattern of activities:

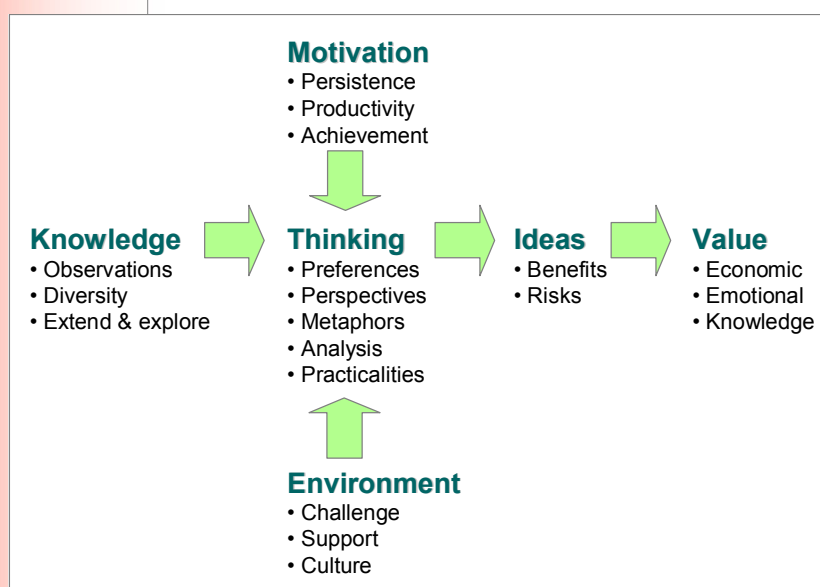
1. Define the problem ... specifically and deeply, *ie* recognising all the knock-on effects
2. Research all the facts
3. Generate a wide range of ideas, without any evaluation
4. Reflect and evaluate the ideas to generate options

This closely follows Kolb's learning cycle of Plan, Act, Reflect, Conclude. Incidentally, it's not at all unlike the traditional scientific method ... Observation, Problem, Hypothesis, Experiment, Theory.

Broadband Thinking

Jim Cathcart⁶ has proposed ways of widening what he calls our 'intellectual bandwidth'. This can be done by:

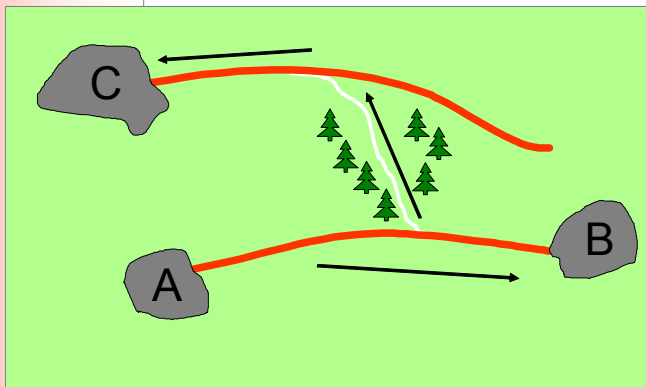
- Having rich experiences
- Careful observation



Creating value by thinking

Lateral Thinking & Parallel Thinking

The term '*lateral thinking*' is used in everyday language. It is generally understood to mean thinking from a different or new perspective, often hard to find. But why '*lateral*'?



Edward de Bono was first to coin the term '*lateral thinking*' (in the book, *The use of lateral thinking* published in 1967 by Johnathon Cape). He described how the networks established between neurons in the brain as we sense, learn and remember, are like main roads. These have side roads which are difficult to see and so we tend to travel along familiar routes. However, if we can

get to the side tracks and find a new route, in hindsight this becomes obvious. This is the basis of both humour and creativity.

'*Parallel Thinking*' was also introduced by Edward de Bono in his book of the same name (published by Viking & Penguin).

Often, discussions are adversarial in nature, with each party making, or trying to score, points from their own favoured point of view. Conflicts and tangents are common.

In Parallel Thinking, all parties to a discussion take the same positions at the same time to debate, and then move on to other positions together as the topic is explored. *Six Thinking Hats®* is a method of parallel thinking used around the world. Dr de Bono's methods of creative thinking and communication are used by global corporations such as IBM, DuPont, BA, NTT, Ericsson and Siemens.

Ahaa! Creative Genius at Work

Michael Michalko has found common trends in the thinking of famous creative people⁹.

Preparation. Alexander Fleming was not the first to notice that mould formed on exposed cultures, but noted it as 'interesting' and explored its potential, leading to penicillin. Edison was inspired to make carbon filaments by twisting them while mindlessly toying with a piece of putty, turning and twisting it like rope.

Perspective. Einstein looked at the problem of how to explain gravity and combined concepts of energy, mass, and the speed of light in the novel concept of space-time. Mendel combined mathematics and biology in his studies on heredity to found the new science of genetics.

Metaphors. Kekule realised the shape of benzene molecules after dreaming of a snake biting its tail. Samuel Morse watched horses being exchanged at a relay station and forced a connection with boosting telegraphic signal strength. Einstein explained his theories by drawing analogies with events standing on a platform while a train passes.

Visualise. Creativity is often closely associated with recording and conveying knowledge in drawings, graphs, and diagrams, as in the renowned diagrams of da Vinci and Galileo.

Productivity. Edison held 1,093 patents. He set targets of one minor invention every 10 days and a major invention every six months. Einstein's most famous paper is the one on relativity, but he published 248 others.

*Geniuses think productively
– not reproductively, based
on past experience*

J. P. Guildford

The Power of Slogans, Metaphors & Analogies



In 1978, Honda embarked on a project to develop a new concept car aimed at changing their image by using the skills of a new generation of designers¹⁰.

Senior executives primed the imagination of the project team by using 'Let's Gamble!' as a slogan

In the early design stages the team adopted the term '*The Theory of Automobile Evolution*'. Later, '*Man-Maximum, Machine-Minimum*' was the phrase that expressed the aim of not sacrificing comfort for design.

Later, when easy parking became a key objective, it became '*Tall Boy*'. The Honda City was launched in Bangkok in 1996.

This use of figurative language focuses the understanding of people with different experiences. Metaphors are complex images which can be held by many people and communicated without any distortion. The very ambiguity of metaphors allows the richness of concepts to be developed and any conflicts to be surfaced, explored and, ultimately, reconciled.

Beyond metaphors are analogies. Canon were inspired to develop photocopiers with disposable photosensitive copying drums by musing on the shape and manufacturing of beer cans¹⁰. Models and prototypes can then be produced as contradictions are resolved and concepts transferred.

Managing Creatively

When innovation is an imperative, organisations should not only be creative, but must manage creatively.

This means using systems that:

- Empower & encourage commitment
- Reduce the time for discussion & making decisions
- Facilitate solving problems, seeking new opportunities & implementing actions.

When it comes to creativity *per se*, best results are achieved using frameworks which:

- Overcome natural tendencies to follow existing ways of thinking
- Balance criticism with positive views
- Find effective uses of time to create the space to be creative.

Edward de Bono ...

- Invented 'Lateral Thinking' & 'Parallel Thinking'
- Is a qualified doctor, psychologist & neuroscientist
- Has worked at universities of Oxford, Cambridge, London & Harvard
- His teaching spans 7 yr olds in many countries to coaching senior execs in global corporations
- Has worked with governments, leading business schools & the UN
- Has his own 'new thinking' institute in Melbourne
- His methods were used to revive the profitability of the Olympics in LA in 1984
- Has a planet named after him ...
... DE73 is now Edebono!



Edward de Bono's method of Parallel Thinking, *Six Thinking Hats*®, provides this framework. Nuvistix is accredited to teach this system. Please contact us for further details.

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*If you never change your
mind, why have one?*

Edward de Bono

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