RELEASING CREATIVITY

By Stephen P. Walsh, Partner, Burge Hughes Walsh Partnership

Creativity is one of the defining characteristics of humanity. Everyone is creative – despite frequent remonstration to the contrary by many people! This article is not so much about how to be creative, but rather what stops our innate creativity from being released and so what practical things can be done to remove the blockers.

There are many tools which will help, from simple brainstorming to visualization techniques. At the end of the day, though, that great idea, that awesome inspiration, that beautiful insight will come from *your* mind.

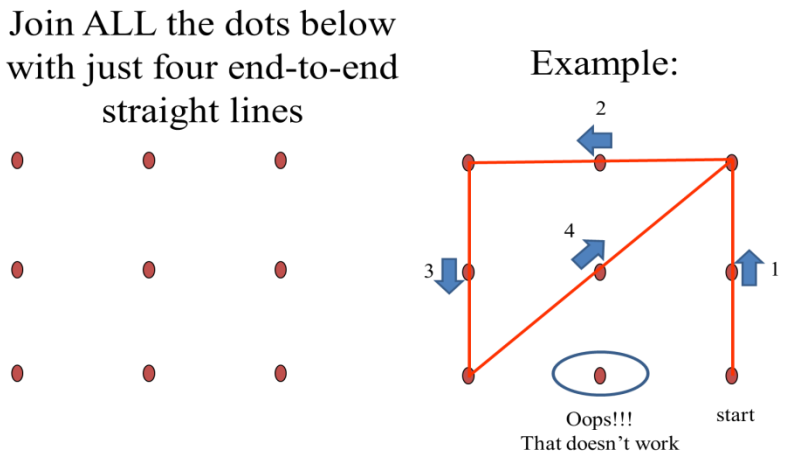
Can creativity be switched on like a light switch? Is it a skill that can be applied according to a timetable? Can organisations manage the generation of ideas? Certainly it can be switched *off*, or rather many managers (and school teachers or any other profession) have become adept at switching off creativity by the many demotivating practices prevalent in many an office and shop floor environment.

For sure too, however, there are many examples of 'creating to a timetable' – from the wartime examples of the development of Radar or Turing's cracking of the allegedly unbreakable Enigma Code to the daily output of marketing literature and TV adverts. Even Mozart, as appointed court musician, had to dance to the tune of a prince.

"I'm not creative"

The demand for both innovation and for problem-solving in all organisations requires the generation of creative thought on a daily basis. So why do so many of us claim to be "not creative"? The issue is one of *mindsets* – our states of mind, our paradigms that blinker us and deny access to original thoughts. These present themselves as 'barriers' or constraints, which we accept without question.

Consider for a moment the following task (do not turn the page until you have given it some thought). You are asked to join all nine dots in the array below, using just four straight lines, where one line starts from the end of the previous…

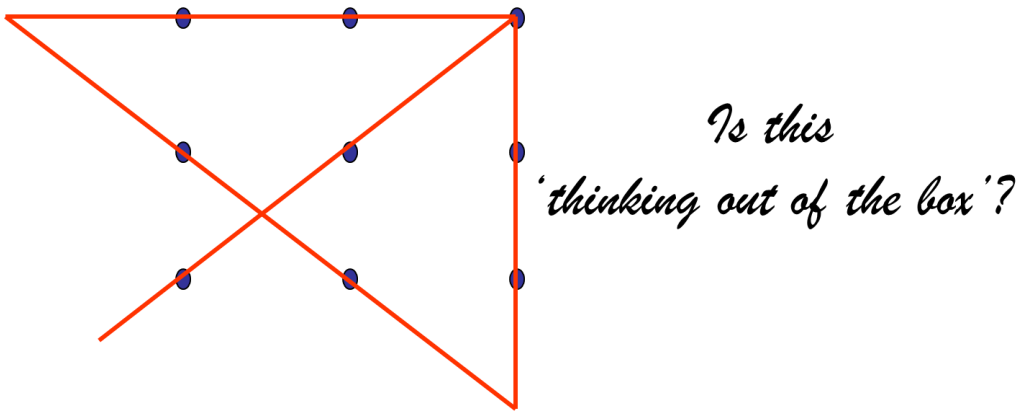


With five lines this would be easy and that is a common response when people are given a task to do with seemingly insufficient resource – 'we need more equipment; we need more staff' is a typical outcry to failing to get something done. But in actual fact, the task is do-able if one thinks differently about the way in which one applies the existing resource by challenging the preconceptions of the constraints. The question 'why not' is as powerful as the question 'why'!

In the task of the nine dots, most people when encountering this problem for the first time will restrict themselves to a perceived 'box' around the array and do not stray beyond this self-imagined boundary (why not?!). No box was mentioned (though in presenting the example, I did condition the reader to think that way – beware of conditioning!) no conditions were given about the length or width of the lines, only that they be straight and joined end-to-end.

Challenge constraints! Push the boundaries by asking 'why not' – if the constraints are real, they will push back, but otherwise they will dissolve like candyfloss in your mouth.

Here is one solution to the problem, perhaps the origin of the phrase *thinking out of the box*:



Common constraints to creative thinking

There are many barriers to creativity and they can be categorised as:

- Not making the time
- Not having the space (the environment)
- Attitudes of others
- Premature analytical thinking

Let us examine these and illustrate ways in which they might be taken down.

Overcoming the barriers of Time and Space

Albert Einstein released his creativity often through his famous thought experiments. The day he chose to ride a light beam in his mind's eye was the day our understanding of time, space and the universe changed!

Many other thinkers have attributed their inspiration to a walk in the woods or along a piece of rugged coastline – effectively giving themselves the space and time to *think*. Allegedly, Newton sat in his mother's Lincolnshire garden when struck by the idea of falling apples and Archimedes lounged in a hot tub when he had the original *eureka* moment. Einstein's imagineering took his thinking off the conventional mind-paths we normally take, allowing new routes to be explored and hitherto unseen doors to be opened.

In our daily work, we too need to break the mould of our surroundings. Thinking at the desk is fraught with distractions. Furthermore, our creative output and ability to solve problems can be multiplied greatly if we work as a team – the adage 'two heads are better than one' can be improved to 'six heads are better than two'.

Providing the time and space for teams to meet and address a situation with a view to finding a resolution goes beyond 'let's have a meeting to discuss it'.

Now a classic approach to generating change, the *Kaizen Blitz* methodology has become a staple of shop-floor and office improvement. Also known as a Rapid Improvement Event (or Workshop), the idea behind a short duration workshop is that a group of people can focus on an issue over just a few days to generate a change plan (or indeed changes). These are 'spinning one plate' workshops, as opposed to the traditional way of addressing an issue over many weeks of conventional meetings and they allow the participants to focus on one agenda item (the issue), without being distracted by the daily noise of operations.

Rapid Improvement Events are a great way of getting the relevant stakeholders together to share their perspectives, knowledge and experiences and consequently produce a better quality of ideas for improvement and change. Participants are encouraged to view it as an opportunity to be consulted and involved in making change happen and typically a facilitator will build an environment of open-mindedness, and positive thinking.

This type of event is necessarily fluid and flexible, though there is an overall process/methodology to follow and it is the responsibility of the facilitator to ensure that the defined outcomes are met. Note *outcome* is different to *output*: the former will be defined in terms of benefits sought, usually captured as a statement describing the purpose and aims of the workshop, whereas the latter will be the actual actions and results delivered by the participants by the end of the workshop, which should in turn lead to the intended *outcome*.

The resulting quantity and quality of work done in a workshop does truly suggest the existence of the TARDIS – workshops appear bigger on the inside than the outside!

To apply this approach, attention to the time and space dimensions is an important factor in producing the afore-mentioned environment of open-mindedness and positive thinking. There are of course other factors, such as the orchestration of the event by a facilitator, the careful preparation beforehand to clarify aims and objectives and the application of appropriate tools.

Recent research by scientists at the University of California, Santa Barbara, published in the journal Psychological Science in 2012 suggested a strong link between daydreaming and creative thinking. An increasing number of companies have created a literal space for their creative thinking.

Examples that the author has encountered include the technology company E2V, in which there is a specially prepared room where teams go to *think*, called '*The Lightbulb'*. Royal Mail designed their *iLab – Innovation Lab* – paying careful attention to the colour and even shape of the walls (curved not flat surfaces), the seating and the lighting. They provided playful objects such as guitars and Lego bricks – not so much to distract, but to offer creative rest between creative work. Companies House set aside a valuable meetings room and created a special room for creativity.

Even hiring a hotel conference space for a few days will enable 'spinning of one plate' for a group of people, as has been witnessed by the author facilitating many a workshop with local authorities on themes as varied as supplying computers to new starters to services for old people.

The key aspects of managing time and space are:

- **T**imetable the event and clear participants' diaries for the period of the event;
- **I**nvite participants with plenty of notice;
- **M**anage…
- **E**xpectations – make sure people are aware of the purpose of the event;
  &
- **S**et up the work area to allow group work – plenty of wall space, natural light, room to move;
- **P**lan the process but do not predefine the output and design the room layout to suit;
- **A**pply facilitation tools in the appropriate place (include in your planning of the process);
- **C**lear your diary of other commitments and distractions;
- **E**nsure others who are not involved in the event do not disturb you and your participants.

Overcoming the barriers of 'attitude' and premature analytical thinking

Attitudes exhibit themselves as behaviours or habits and habits can be changed. Certainly there is a good proportion of people whose attitude is described as 'negative' or 'cynical' and such behaviours would appear to be counter-productive to creativity.

Perhaps they are a consequence of past experiences and failures that reinforce the critical pessimism that so often greets any effort to be creative.

The other day, whilst shovelling a tonne of manure into my wheelbarrow to transfer it from the front garden where it had been unceremoniously delivered to the rose garden at the back of the house, I came up with an idea for a new design of a wheelbarrow. Here is the sketch I made of it – take a few seconds to look at it - what do think of my design?

On first seeing this sketch, the majority of people say "*the wheel's in the wrong place*", or even "*the tub's too* big"; a few offer neutral observations about the use of the barrow, such as "*you would have to push it down to move it*" and a very small number fail to see how it differs from a traditional wheelbarrow (with the wheel(s) at the front and leg(s) at the back). Hardly anyone - often no-one - comments on the potential benefits of the design, namely that it would be more manoeuvrable, steady when tipped forward and pushing down on the handles to move the heavy-laden barrow would be more advantageous for people with short legs!

Into which camp did you fall? In this exercise, negative comments invariably far outweigh any other comment and of course this is a typical first response for many of us – the Abominable 'No' Men (and women) abound. It is a habit. Consider frequently-used phrases such as '*I hear what you are saying, but…*' and '*with respect…*'. It is easier to destroy an idea (and with it the originator's motivation and enthusiasm) than to think about possibilities. A positive outlook will require further thinking on our part, whilst a negative statement ends debate or starts an argument, which equally makes no progress.

Negative attitudes are self-fulfilling prophecies – that new way of doing something or that new design never gets off the ground because people did not put their effort into making it work and they did not *make* the effort because they 'knew' it would not work!

One common behaviour, perceived by some as a strength, rather than as a barrier to creativity, is premature evaluation – the logical left-brain thinkers can be a bit too keen to pass early judgement on an idea or proposed problem solution.

Analytical thinking is of course important. It is, however, a later step in the process of innovation. If applied too soon, too little creative thought is expressed.

For example, in brainstorming one of the key guidelines is given as 'no idea is a bad idea' and people recognise that they should not criticise someone's suggestion. This behaviour not only demotivates the individual, but it stops the flow of further ideas as people focus on the demerits of the first one to surface.

Similarly, though, positive discussion of someone's idea also stops the flow of further ideas. The aim in this early stage is to proliferate and freewheel, so both negative and positive discussion should be dissuaded (for now). The time for discussion – analysis – comes later.

What, then, can be done about negative attitudes, preconceptions and premature analysis? There are three stages of a planned activity, in which attention to certain aspects will minimise the negative impact and turn that negative energy into positive support and contribution.

- Stage 1: preparation
- Stage 2: managing the flow – a meta-approach
- Stage 3: follow-up

Stage 1: Preparation

They say that people do not like change, but is that strictly true? If people were averse to change they would not move house, apply for another job or have babies! What does upset people is having change done *at* them - not being consulted about or involved in something that affects them directly.

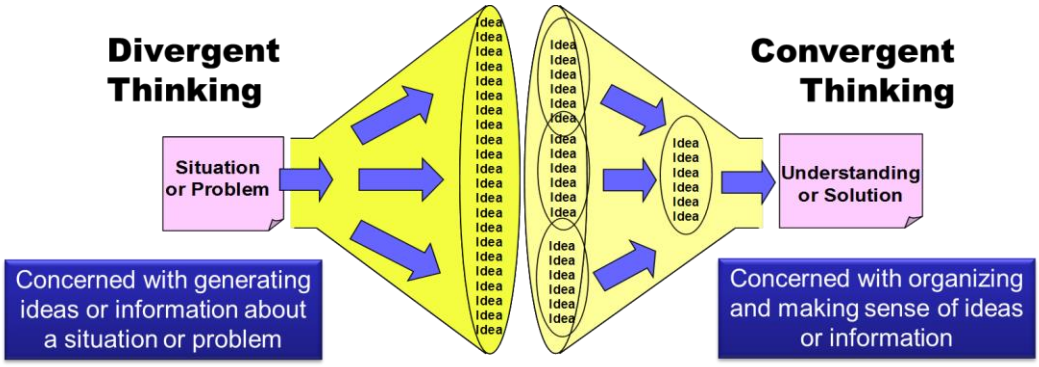
An important part of preparation for an event is therefore engaging the identified stakeholders in the planning – setting the scene, describing the background and context, consulting about the purpose of a change event (often referred to in the public sector as an *outcomes-based* approach) and establishing the WIIFM factor – the 'what's in it for me'.

Through discussions with the stakeholders, some of whom will be involved in the upcoming creative event, fears will be voiced and perhaps allayed, expectations will be managed and above all *clarity* of purpose will be established.

Many negative attitudes will be dealt with by this pre-workshop preparation.

Stage 2: Managing the flow during an event – a meta-approach

An event may be a short meeting, a one-day workshop or a full-blown three- to five-day Rapid Improvement Event. In all of these cases, the overall approach is the same, what is known as a *meta-approach*, that is to say, the approach of approaches.



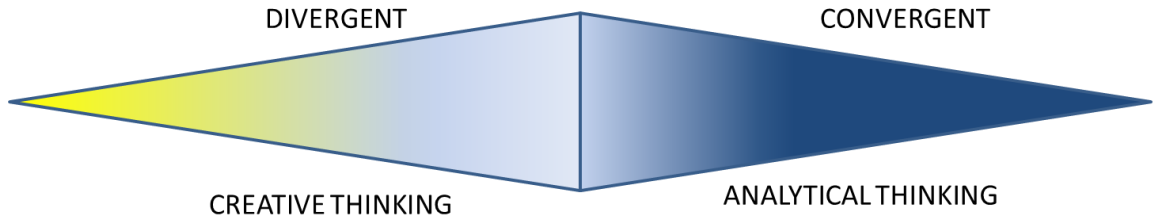
This meta-approach is equally applicable for problem solving or decision making and at high-level for a project or workshop, say, or at a tools level (the affinity diagram is a good example of this, where brainstorming onto stickies is followed by arranging the stickies into affinity groups with common aspects).

The point of the meta-approach is to uphold a process where action is preceded by analysis and analysis is preceded by idea generation. In other words, it discourages people jumping to conclusions, acting on preconceptions or 'doing what we have always done'.

The approach encourages creativity, the exploration of alternatives, the engagement of stakeholders and eventually the selection of the best solution (the output of this process) to give the required outcome, with the added bonus of achieving consensus agreement and buy-in.

With a decent facilitator, the approach gives everyone an opportunity to contribute and will quash the objections of the nay-sayers. The author has witnessed complete turnaround of negativity with this approach. The approach structures the debate and gives no airing of pre-conceptions. Conclusions are reached through the process of 'build' and does not allow ready-made solutions to be presented at the outset.

Here is a breakdown of the generic steps in the meta-approach –



SET CONTEXT	EXPLORE ISSUES	GENERATE IDEAS/OPTIONS	DESIGN CONCEPTS	SELECT CONCEPT	PLAN EXECUTION
Introductions; Purpose; Background; Outcomes; Ice breaker.	Introduce collected data; Discuss and explore interpretations; Gather more data/facts if necessary.	Creative thinking – Apply tools to assist 'out of box' thinking; Generate many ideas.	Build on ideas; Explore the features and benefits of each.	Select the best one/two/three concepts that will deliver the desired outcome; Use decision-making tools to assist with selection.	Check consensus agreement; Develop an action plan (what, who, when); Develop a communication plan to keep stakeholders informed

How the approach was able to overcome the barrier of blame was demonstrated in one Kaizen Blitz workshop, where a team of shop floor operators were grappling with quality issues in their machine shop. They made high precision fasteners for the aero industry and had narrowed their issues to three characteristics of a bolt – straightness, concentricity and surface finish.

In their deliberations, they realised that they needed to involve operators from a pre-form stage prior to machining, namely people from the in-house foundry who supplied the raw cast bolt.

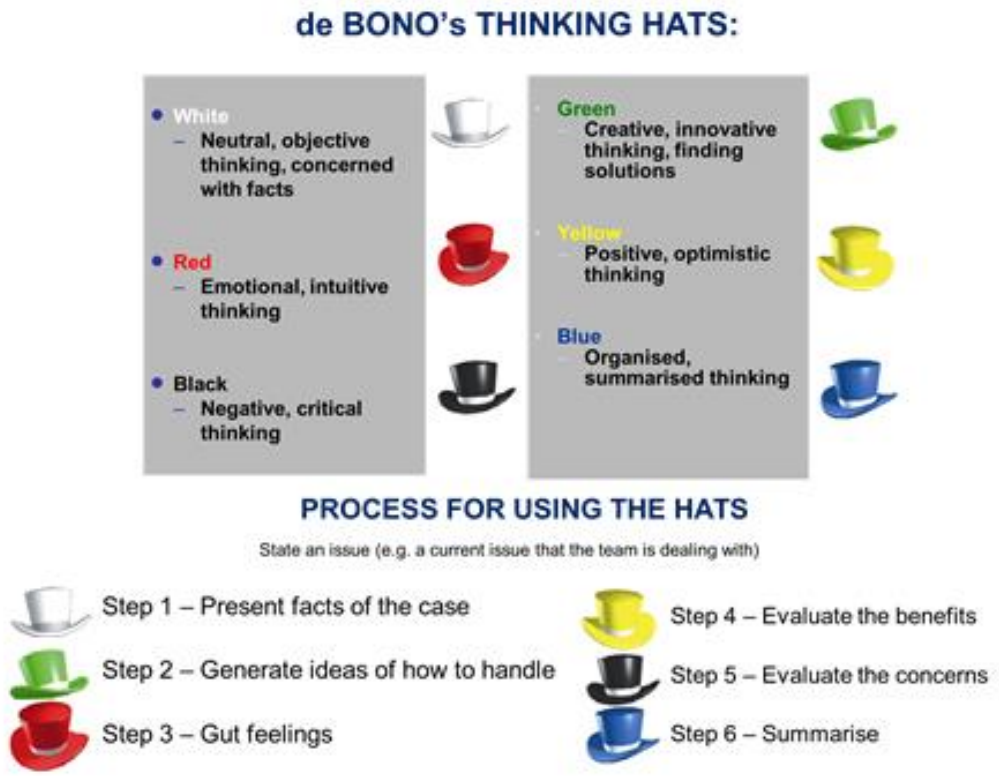
Imagine the tension in the air when three members of the foundry were invited into the workshop that very afternoon! The potential for a verbal punch-up was high, but the facilitator (this author) introduced the group to a simple fishbone diagram technique to capture all the variables for each of the bolt attributes and they generated three fishbones, one for each characteristic. By simply asking the group to consider the question 'what aspects of the bolt affect the straightness?', the 'concentricity' and then 'surface finish', all minds turned positively to brain dumping what they understood about the process and arguments about whose fault it was that such-and-such occurred were circumnavigated.

The three fishbones were amalgamated into a matrix of output characteristics versus variables (known as a Y2X matrix) and major contenders for investigation were identified. A collaborative plan was then drawn up to conduct data collection and analysis of the major potential causes of issues with straightness, concentricity and surface finish and a study conducted. No fights, no ill will, no problem!

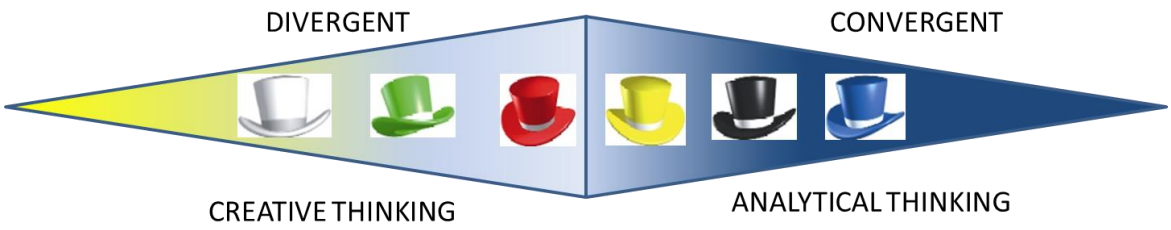
The approach, using the tools of fishbone diagrams (divergent thinking) and the Y2X matrix (convergent thinking) demonstrated very well how negative attitudes, domineering personalities and jumping to conclusions based on preconceived ideas could be avoided. The author later discovered that this particular issue and feud had been going on for several years!

This meta-approach can be seen in many established improvement methodologies, for example in the Ford 8D problem solving process or the Six Sigma DMAICT methodology.

It can also be seen in de Bono's *Six Thinking Hats*:



Note again how the meta-approach can be overlaid onto the de Bono process:



Walt Disney, too, engaged the meta-process for his (and his team's) generation of innovative, practical ideas. It is said that he had three rooms, each containing an armchair in which he sat, one after the other (witness again the importance of making *time* and *space* for idea generation).

In the first he allowed himself to *dream* – allowing his mind to wander freely with no boundaries or restraints; in the second – his *realist* chair – he would organise the ideas he dreamt of: what would be needed to make them real? How could it be done? He would consider practical plans to convert the dreams into reality. Finally, his third chair represented the *critic*. Here he would look for the difficulties and unintended consequences, asking 'What could go wrong? What's missing?' and then evaluate the plans, turning them into action.

Stage 3: follow-up

The third stage is not about creativity, but is essential if the creative thinking generated in an event is to be harnessed practically as a solution to a problem or as an action that produces results. The follow-up has to be planned (begun during the event) and managed. This stage is one for the completer-finishers of the group – the 'i' dotters and 't' crossers, but everyone is involved to turn *dreams* into *reality* (to refer back to Disney's creativity strategy).

Concept designs (for a process or a piece of hardware) need to become detailed designs, costed, refined and built; Decisions need to be communicated, promoted and executed. Resulting changes need to be documented, monitored and reported.

Helping the creative thinking process

Attention to the aspects of time and space and using the divergent-convergent meta-approach to plan and structure an event will enable creative thinking to be released. Two other factors will help smooth the flow, namely the appropriate selection and application of so-called creativity tools and the use of a facilitator.

The role of a facilitator

A facilitator's role is to manage the flow of an event in order to achieve the stated outcome. He or she should be impartial and objective and therefore what the *outputs* are is less important to them as that there *are* outputs delivered that are satisfactory, that is to say that they will deliver the *outcome.* This is a purest view and some divergence from this is sometimes accommodated.

To manage the flow, the facilitator will most normally be part of the preparation stage described above, including the planning of the event. Part of that will be deciding what tools to use and so the facilitator typically has a kitbag of tools, upon which he or she can call.

The other aspect of managing the flow is monitoring progress towards the achievement of the objectives and recognising any impedance, such as any lack of understanding, confusion or misbehaviour. A good facilitator will know how to evade these things before they are problematic by using techniques of scene-setting, regular reviews, interpersonal skills and the timely use of divergent-convergent tools.

The outcome of that facilitation is an environment in which the knowledge and experience of the participants can be shared and their engagement and creativity can flourish.

The role of creativity tools

Tools help to smooth the flow of the process in the preparation stage and in the divergent and the convergent phases of an event. Indeed, the tools described in this literature can be mapped onto the chronology of an event and this represents a key part of planning the event itself. Some tools are naturally applicable to the divergent phase (for example, brainstorming), whilst others are suited to convergent, analytical thinking (any of the decision-making tools). Some tools comprise both elements – the Affinity Diagram is one such tool, as mentioned earlier.

The creativity tools are described in other literature and so their description will be omitted here. Enough to say that there are generic categories for the tools:

- Brainstorming derivatives
- Association techniques
- Benchmarking

Brainstorming derivatives include reverse brainstorming, brainwriting, synectics, affinity diagrams and fishbone diagrams to name a few.

Even mind mapping, as popularised by the great memory man *Tony Buzan*, can be regarded as a personal brainstorm (a group mind map is sometimes called a spray diagram).

They all operate on the principle of a thought cascade, where one thought will catalyse another and another, each thought spraying out more thoughts until there is a veritable cascade of ideas released, rather like a nuclear chain reaction releasing energy into the surroundings in abundance. That is why some proposed the renaming of 'brainstorm' to 'thought shower'.

To be proliferate, the cascade has to be unimpeded by analysis, discussion or criticism with the focus on getting a maximum number of ideas in a short space of time. Hence the usual rules of brainstorming apply and anything goes.

Association techniques work on the principle of 'out-of-box' thinking and encourage the participants to discover avenues of thought they may not have considered without a little inspiring dreaming.

One of the barriers of the human mind is mind grooving. We have a tendency to routinize our approaches to tasks – after all, this simplifies our lives, makes us efficient at the task and so allows us to complete the task as quickly as possible. We develop a mindset - which is no bad thing until we need to change that mindset.

For example, recall for a moment your early days of learning to drive a car (or a bicycle, if you are a non-driver). Much of your mind was occupied thinking about the mechanics of making the machine move, steering and braking and less so about sharing the road with other users. Years later, driving or cycling has become a subconscious competence and – presumably – your attention can be given to the important task of driving safely with others.

But what happens when you hire a car where the traffic drives on the opposite side of the road? How long is it before you stop bruising your elbow on the door panel or looking in the wrong place for the rear-view mirror? (The same principle applies to cyclists – some bicycles brake by reverse-pedalling – a fact the author discovered rather late whilst negotiating a busy roundabout – which had a contrary flow, to boot).

Our mind grooves become established paths, which we frequent and reinforce and like the little creature that finds a safe and quick route to the waterhole, we wear a path that becomes difficult to change.

The trouble is, we are not aware that we are riding in a groove and this limits our capacity to think laterally.

Association tools work on the principle of encouraging us to take our mind on a path that seemingly has nothing to do with the issue on the table. You may be asked, for example, to imagine and verbalise a walk up a mountain, or to take a literal walk in the grounds and bring back five objects you find.

Comparisons are then made between the issue and the story or objects, the aim being to open up doors in the mind that were hitherto invisible. In essence, association techniques boost the mind out of its groove.

Common and well-documented association tools include:

- Heroes and Villains: *what would Batman do in this situation? Or Genghis Khan?*
- Similarities and Differences: *comparing an item from nature, say, with the issue (compare a natural process/system with a designed process/system or a natural 'thing' with a designed 'thing')*
- Story telling: *the 'walk up the mountain'*
- SCAMPER: *a substitution approach*

Benchmarking is a methodology in itself and has countless literature written about it. The premise is one of learning from others by comparing one's own performance or product with that of another organisation (or department in large organisations). This can be a source of inspiration and when witnessing how some other organisation achieves a common outcome it can be a positive challenge to one's own mindset, resulting in some creative ideas.

Many think of benchmarking as an activity of comparing oneself with their competition, but it is with any organisation (though usually with someone who can demonstrate outstanding performance). Focus is important, so selecting a specific area is more fruitful than what some call *industrial tourism*.

The process of benchmarking is to:

- first understand the drivers – what do you need to achieve, where are you failing?
- then understand your process (or product) relating to the drivers
- select a partner, with whom to benchmark (and remember it is a sharing exercise)
- conduct the study
- examine the collected data/evidence
- consider changes to your own process (adopt/adapt the learning – be creative)
- make the change and monitor the result

Note again the allusion to the meta-process of divergence-convergence.

Conclusion

Creativity is in us all. There are however many barriers that cause that creative spark to dim. This article has proposed ways in which the barriers of time, space, attitude and preconceptions can be overcome.

A few, straightforward guidelines have been suggested to deal with them – understanding what you are trying to achieve, preparation of the environment and the expectations of participants and managing the flow of a creativity event through good facilitation and appropriate use of tools against the backdrop of a divergent-convergent meta-process have been described.

The author's own experience has demonstrated that all groups can share and combine their knowledge and experience to produce something that is more than the sum of the parts:

Something new has been created.

About the Author: Stephen Walsh, BSc MSc

Stephen Walsh is a founding Partner of BHW, a successful consultancy, formed in 2000, which has helped a considerable number of businesses improve their performance. He is an experienced trainer and consultant in the field of process improvement, including Lean, Six Sigma, Continuous Improvement and Systems Thinking. The continuous improvement approaches developed by Stephen are based upon a systems perspective, where the need to understand purpose and context underpin successful implementation.

He specialises in transferring the skills of process improvement (or 'customer satisfaction improvement', as he prefers to call it) to client personnel by combining technical training with train-the-trainer and facilitation skills programmes. Examples of his work include the roll out Rapid Improvement Workshops at the Office for National Statistics; embedding Continuous Improvement in the daily activity of staff at Aberdeenshire Council, Companies House and the General Register Office; the development of Yellow, Green and Black Belts at Lisi-aerospace and the building of problem-solving skills in a large power generation company. He has recently been facilitating workshops in Stirling Council, Aberdeen City Council and East Lothian Council, often dealing with very sensitive issues with Service Users.

