

Developing a Thinking Organisation



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Developing a “Thinking Organisation”

With no end in sight to ‘austerity’ and only meagre expectations for growth in consumer demand, the necessity for organisations to be different and to perform better is acute. To borrow loosely from H.G. Wells’s atmospheric introduction to *The War of the Worlds*⁽¹⁾:

No one would have believed that in the early years of this decade, your organisation’s affairs would be being scrutinised from afar as someone with a microscope studies creatures that swarm and multiply in a drop of water. Few even considered the possibility of intelligent life amongst your competitors and yet, in meeting rooms and boardrooms around the world, intellects vast, cool and unsympathetic were regarding your organisation with envious eyes and slowly and surely they were drawing up their plans against you...

Perhaps a rather uncomfortable truth conveyed here is that today’s leaders will be bending their minds to the business of winning with a greater intensity than we’ve seen for a generation. As you square up for this battle of minds, you may become concerned about the advantage they’ll get from the terabytes of ‘Big Data’ they have at their disposal or their army of analysts poised to deliver unique competitor intelligence. But the simple truth is that whatever resources they might have at their disposal, the only factor that will allow their deliberations to be more meaningful and insightful than those of your leadership team is the speed and accuracy of their problem solving and decision making — in short, their ability to think.

In this paper I want to explore how improving the brainpower of your organisation might become the key to your competitive success. I’ll start by looking at why the thinking patterns we, as individuals, use to run the majority of our lives cannot, without modification, be relied upon to shape the thinking within our organisations. I’ll explore how these thinking patterns can be modified to produce superior cerebral performance for both individuals and teams and, finally, I’ll go on to outline how some of these ideas can be introduced in such a way as to create a truly ‘Thinking Organisation.’

What’s wrong with the way we think?

We might expect that the ability to think clearly and effectively is the essential component of leadership and management. After all, how did these good people secure their elevated positions without the ability to appraise complex situations, solve problems, make decisions and manage risks and opportunities? The evidence to support this view, however, is not encouraging:

- Risky trading and high level mismanagement led to Lehman’s \$600 million demise. The financial crisis triggered by this collapse is estimated to have caused indirectly the loss of two million jobs.
- Hoover in the UK offered two free flights for every purchase over \$150. The flights cost more than the products, losing the company a cool \$74 million.
- Famously, Coca-Cola, armed with millions of dollars of marketing studies, launched “New Coke.” After an astonishingly negative public reaction, it was withdrawn after three months and Coca-Cola returned to the old formula.
- IBM hired Microsoft to develop an operating System for their new PC — but let them keep the rights to the software.

- Or one of my particular favourites, Gerald Ratner, at one time the largest jewellery retailer in the UK, announced some of his products were “total crap.” The comment wiped \$750 million off the value of his business.

A list of examples of any length doesn’t prove that poor quality of thinking is endemic across all organisations. What it does show is that one piece of poor thinking can make or break a career and perhaps even an entire organisation. As long ago as 1995, the Yankelovich/ Kepner-Tregoe study “Problem Solving and Decision Making”⁽²⁾ found that senior executives took a dim view of the decision making prowess in large organisations. Of the executives surveyed, 80% felt executives missed achieving their objectives when decision making. When it came to problem solving, only half the executives felt secure in their company’s ability to ask the right questions to find the root cause of a problem. More recently, in April 2012, a One Poll⁽³⁾ study conducted across 500 senior managers for Kepner-Tregoe concluded that in over 50% of cases, improvement initiatives failed because of poorly defined objectives and an inability to think through how to make them work.

The evidence that there’s room for improvement in the way organisations think is pretty compelling and if we are to understand the pathology of this condition, we probably need to start by looking at how we as individuals think — after all, the “thinking organisation” is simply an aggregation of all the individual thinking that’s going on within it. To begin this exploration, I turn first to Daniel Kahneman’s seminal work, *Thinking Fast and Slow*⁽⁴⁾.

In his book, Kahneman explains that our minds use two modes of thought: the automatic, instant, intuitive, involuntary responses provided by what he terms our “System 1” thinking; and then the more controlled, effortful, analytical and considered thoughts supplied by our “System 2” minds. To illustrate the difference between these two thinking modes, Kahneman simply asks us to consider the following two mathematical problems:

$$2 + 2$$

and

$$17 \times 24$$

As you looked at the first problem, the number four sprang to mind with (hopefully) no effort. As you went on to consider the second, no immediate answer came to mind. You probably knew you could solve it, but without spending time on it you would not be certain that the answer is 408. These two problems beautifully illustrate the difference between our System 1 and System 2 thinking and also allow us to sense that where possible, we will favour System 1 thinking, as it requires no effort, rather than System 2, which is taxing, difficult and in the case of this example, brings back unpleasant memories of school.

Following this line of reasoning, it becomes plausible to imagine that most leaders and managers within organisations will use ‘System 1’ thinking wherever possible to minimise effort for, as we know, ‘effort’ is hard work and typically in short supply. This would be of little concern if we could trust our System 1 to conduct consistently and reliably the thinking required for high quality problem solving and decision making but as Kahneman argues, such trust would be misplaced. He explains that the really scary part is that we cannot tell when our intuitive

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System 1 responses are based on sound judgment or when our System 1 is simply making things up. Could this be the first clue in our search for the cause of poor quality organisational thinking?

To understand why we have to be careful of the intuitive judgments delivered by System 1, we need to recognise that our intuition is simply and only recognition. This appreciation can help us understand when we can trust System 1 and when it might be a mistake to do so. Faced with a situation that we recognise, our System 1 judgments will have value and in very familiar situations, we might even be said to have developed expert intuition. A production manager may have a rich experience of the foibles of a particular manufacturing system, or a marketer may have a deep understanding of the dynamics of a niche market. In both these situations, the way in which their “expert” System 1 minds instantly resolve related issues can probably be relied upon because they recognise the specific issue and can access pertinent ideas from directly relevant experience.

The challenge comes when the issue that requires thought goes beyond our direct experience.

Psychologists tell us that ideas can be thought of as nodes in a vast network called associative memory in which each idea is linked to many others. When an idea forms, it does not simply trigger one other idea, it instantly activates many ideas which in turn activate many more in an exponential explosion of thought. As only a very few of these activated ideas register in our conscious minds, we cannot be certain of how germane the set of ideas is that System 1 uses to shape the insights we draw or the conclusions we make. Never wanting to be short of something to say, we humans have intuitive opinions and feelings about almost everything that comes our way and these opinions and feelings are influenced by the unconscious ideas activated within our associative memory, whether directly relevant or not. In the immortal words of Arnold H. Glasgow, “The fewer the facts the stronger the opinions.”

To highlight the impact that unconsciously activated ideas can have on the seemingly rational output of our System 1 minds, allow me to use a few of the examples from Kahneman’s book which I personally find illuminating and insightful.

Why our thinking can be unconsciously influenced?

Psychologists suggest that our System 1 can be influenced by what is termed the Priming effect. In other words, recent stimuli may have activated ideas in our associative memory that remain below the radar of our conscious minds. A perfect demonstration of this priming effect was conducted in an office kitchen at a British university⁽⁵⁾. This office had used an ‘Honesty box’ for people to pay for coffee, tea, and milk and a list of suggested prices was clearly displayed. One day a picture appeared just above the price list. The picture changed each week to show either flowers or eyes that appeared to be looking directly at the observer. On the first week eyes stared at the observers and their average contribution was 70p. On the second week the picture changed to flowers and the contributions fell to 15p!*

*The volume of milk consumed was recorded as the best index available of total beverage consumption.

Amount paid for milk – eyes/flowers influence test

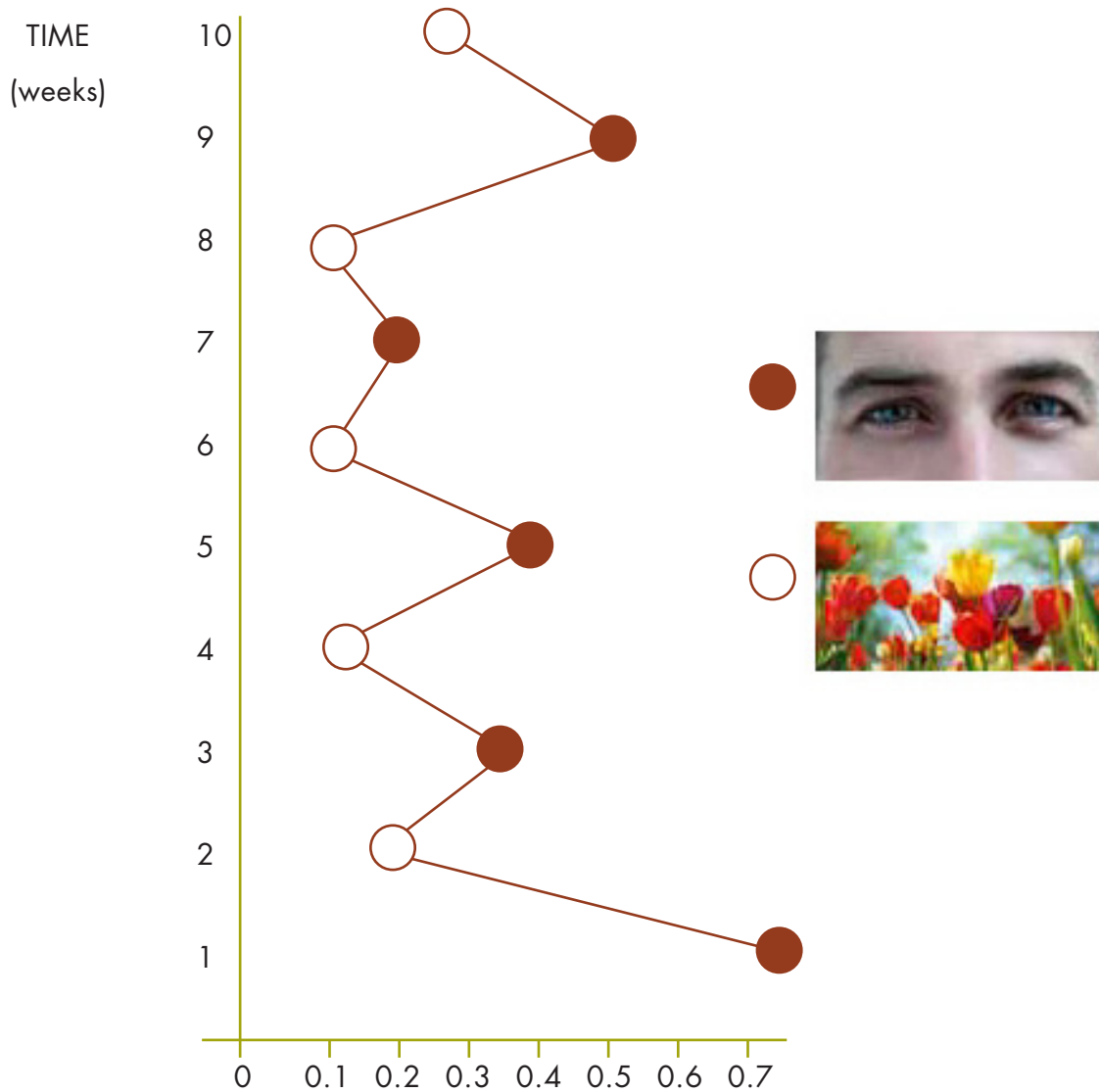


Figure 1. Throughout the period of the study, supplies of tea, coffee and milk were maintained to keep up with demand, and each week, the volume of milk consumed was recorded as the best index available of total beverage consumption.

Now let’s imagine that the first item on your agenda one morning was to agree on the location of your new manufacturing facility. As you drove into work, you were vaguely aware of a story on the radio reporting a minor electoral success for a political party of which you did not approve in one of the countries being considered for the new facility. Whilst you find the story irritating, it should have no bearing on the morning’s deliberations. Your associative machine might easily have made a connection however, and later in the meeting, when the merits of that country are being discussed, your System 1 has been primed by the news story and its outputs have become biased. Without the checks and balances provided by System 2, System 1 might nudge you towards the wrong choice for the wrong reasons!

Why we are wired to jump to conclusions?

Kahneman argues that as soon as we are faced with a problem, our intuitive System 1 accesses associative memory for something it recognises in a search for possible cause. To minimise effort, System 1 will build the most logical and appealing solution it can, based on your store of experience. Again, you’ll not be aware of the experiences your System 1 is referencing in its search for this coherent solution, nor that any ambiguity has been suppressed as it pushes the answer into your mind.

When you look at these two boxes in the above example, you almost certainly read the box on the left as ABC and the box on the right as 12 13 14 and yet the middle item in both boxes is identical. So why did you arrive at this solution? Your System 1 is referencing a learned pattern, in this case your “ABCs” from school, and using this pattern to provide the answer — for this box, the answer A 13 C is of course equally correct. The shape is ambiguous, but you jump to a conclusion about its identity and do not become aware that System 1 effortlessly and incorrectly in this case, resolved the ambiguity for you. The most important aspect of this is that you made a clear choice but you didn’t know it.



As consultants in the field of problem solving, we often see examples of people ‘jumping to cause’ because of the influence of learned patterns woven into their System 1 minds. We work with a bank that has a substantial branch network. The operating results for all branches are reviewed monthly by the executive committee. Over the months one particular branch showed a steady decline in the volume of transactions, so the executive committee began an investigation. One Vice President pointed out that the decline had started at about the same time as the appointment of a new manager. “It’s always the same pattern” he said, “these people take too long to get to know the local needs and customers.” In this case, the unfortunate manager has moved on, a decision that ignored the fact that two major defence contractors near this branch were laying employees off as a key contract came to an end. This important and available data didn’t fit the simple, powerful and appealing solution constructed by the Vice President’s System 1.

Why what we see is all there is?

It’s understood that an essential design feature of our associative machine is that it represents only activated ideas, information that is not retrieved might as well not exist. System 1 excels at constructing the best possible story that employs currently activated ideas. The amount and quality of data on which the story is based is largely irrelevant, providing the solution feels logical and appealing. Consider the following:

“Will Peter make a good Director of Marketing? He is intelligent and creative.”

Your System 1 delivered the answer quickly and it was probably a yes. If so, you picked the best answer based on the very limited information available and used it to construct a coherent story. It takes your System 2 to ask the question, “What do I need to know before I can form an opinion about who should get the marketing job?” System 2 ‘analysis’ will ensure a more complete set of criteria are considered and may for example, surface the fact that Peter has a track record of being lazy and unproductive. What would be your answer now?

Why we wrestle with what ‘Good’ looks like?

It’s believed that our associative machine is continually drawing on our stored experience to make sense of the world and we only really become surprised, triggering careful System 2 analysis, when something conflicts with our model of what is normal. Ask the question, How many animals of each kind did Moses take into the ark?

Our System 1 checks the question and passes it as legitimate, as the idea of animals going into the ark sets up the biblical context and Moses is to be expected in that biblical context. The number of people whose System 1 points out that Moses didn’t take any animals into the ark — Noah did — is so small as to dub this the ‘Moses illusion’.

The challenge here is that we don’t know what experiences our System 1 has accessed to create the ‘norms’ it uses to test validity in different situations. I was recently talking to the CEO of a dairy company who was delighted that sales in a certain category had grown by 50%. Apparently his last Sales Director, who had been with the firm for many years, had resigned and a replacement had come in with a very different approach. “I thought we were doing a great job in that category” he explained, “I had no idea of the potential.” The CEO’s System 1 had constructed a norm or benchmark for sales in this category, which System 2 never felt the need to challenge until the advent of the new Sales Director.

Why we can be prone to answering the wrong question?

We are often confronted with difficult problems to solve or choices to make and, never wanting to be short of an answer, System 1 will always try to simplify the challenge by substituting a difficult question with an easier one.

When we are faced with tough questions such as, “How should our primary source of competitive advantage evolve over time?” our System 1 taps our associative memory for something related but a bit less challenging, such as, “What did that customer I was talking to last week say about why he liked us?” Such substitute questions may help but, of course, will sometimes lead to serious errors.

System 1 will generate quick answers to difficult questions without imposing much work on our lazy System 2. An easier question is likely to be evoked and very easily answered, providing an off-the-shelf solution to each difficult question.

This substitution is an automatic process for System 1. System 2 will, of course, endorse the answer provided by System 1, or perhaps choose to modify it slightly. However, lazy System 2 often follows the path of least effort and endorses the alternative answer without much scrutiny — you will not be at a loss for an answer, you will not have to work very hard and you may not even notice that you didn’t really answer the question you were asked.

The five examples I have taken to illustrate the inner workings of our System 1 minds provide a little understanding of the power and complexity of our intuitive intelligence. Our System 1 minds have evolved in such a way as to prioritise speed over accuracy when faced with problems and decisions. Making an almost instantaneous call on whether it should be fight, flight or freeze in a given situation, rather than taking the time to think through the real nature of the threat and calculate the precise probability of the likely outcome has after all, allowed our species to survive and thrive, but can intuitive System 1 be relied upon to ensure the future success of the complex organisations for which we work in the same way that it has our species?

If we accept that as individuals we will favour the ease and simplicity of System 1 thinking, it follows that without conscious effort to do things differently, our organisations will “Think” in a similarly flawed way. As we struggle to win in highly competitive markets, is it really okay for our strategic choices to be informed by largely irrelevant emotional ‘Priming’ or ‘what you see is all there is’ thinking? Should problems be addressed within the context of a ‘norm’ of poor performance, by ‘jumping to conclusions’ or by taking at face value the probable cause of vaguely similar deviations we have encountered in the past? Should we really allow some of the most difficult questions we face as organisations to be ‘substituted’ for questions that are easier to answer?

The art of balancing System 1 and System 2

On the surface it might seem that the answer is simply to get people to engage in more controlled, effortful, analytical System 2 thinking. Well no, and besides it’s not that easy. The notion of everyone constantly questioning their own thinking would be tedious, to say the least. In reality our System 2 minds are much too slow to act as a substitute for System 1 in routine decision making and anyway, as our thinking, whether System 1 or 2, is largely invisible, how can we be certain our people’s System 2 thinking is completed with the right degree of rigour? Each of us will have developed our own idiosyncratic approach to System 2 ‘analysis’ and some of us will have developed better approaches than others.

To optimise our organisation’s thinking, our people will need to know how to use their System 2 minds, when to use them and, crucially, when to use them together. In the same way as we would give the members of a sports team routines and techniques that will help them coordinate their individual strengths to win the game, we need to give our people guidelines and procedures for gathering, sorting, sharing and using the information needed to feed their System 2 minds and together, produce the highest possible quality solutions.

Over 50 years ago, social scientists Chuck Kepner and Ben Tregoe developed an understanding of how our analytical minds work and their ideas can help us understand how we might approach improving the quality of thinking across an organisation. Their insight was to see that our System 2 minds were based on four distinct thinking patterns and, whilst people think in all sorts of different ways, every productive activity that takes place within an organisation is related to one of these four thinking patterns⁽⁶⁾.

The four basic thinking patterns are reflected in the four kinds of questions we hear asked as an individual ‘changes gear’ into System 2 thinking:

What’s going on? Begging for clarification, it asks for a sorting out and a breaking down, a key to the map of current events, a means of achieving and maintaining control. It reflects the pattern of System 2 thinking that enables us to impose order where all has been disorder, uncertainty or confusion. It enables us to establish priorities and decide when and how to take actions that make good sense and produce good results.

Why did this happen? Indicating the need for cause and effect thinking, this is the second basic thinking pattern. It is a pattern that enables us to move from observing the effect of a problem to understanding its cause so that we can take appropriate actions to correct the problem or lessen the effects.

Which course of action should we take? Implying that some choice must be made, the third basic pattern of thinking enables us to decide on the course of action most likely to accomplish a particular goal.

What lies ahead? Looking to the future, the fourth basic thinking pattern enables us to assess problems that might happen — the decision that might be necessary next month, next year, or in five years time.

Kepner and Tregoe’s contribution has been to document carefully the thought patterns of some of the best, clearest thinkers as they engaged their System 2 minds in each of these four thinking areas; bringing their methods into the open and converting them into systematic thinking processes — termed ‘Rational Processes’ — that can be made visible and shared with others.

Kepner and Tregoe found that where organisations learned and mastered these ‘Rational Processes’, a common language could be introduced for shared System 2 thinking. The processes provide freedom to use System 1 where justified and ensure the introduction of System 2 thinking at the right time; first to challenge and check the veracity of System 1 responses and, where necessary, trigger shared, visible, high quality System 2 thinking.

Building a ‘Thinking Organisation’

We have learned that left to its own devices, System 1 can lead us astray. Indeed we might argue that poor quality, unchallenged System 1 thinking might account for the majority of poor problem solving and decision making we see in organisations today. We understand that through the use of Rational Processes we can harness and control our remarkable System 1 minds whilst at the same time, provide the opportunity for improving our System 2 thinking both individually and collectively.

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As we now start to think about how we might turn our enterprises into ‘Thinking Organisations’ through the judicious use of Rational Processes, we are confronted with two pivotal questions:

Where and when should we employ balanced System 1, System 2 thinking through the introduction of Rational Process thinking?

and

How can we ensure this new approach to thinking will deliver the step change in business performance that we require?

The problem solving and decision making that is going on in your organisation will, broadly speaking, happen in three places: in the heads of individuals as they wrestle with thorny issues; in informal conversations with others and during business meetings. As it would be unrealistic to believe we can create an immediate step change in the quality of thinking across all three of these spaces, we need to consider where to start sowing the seeds of improved organisational thinking so that they might germinate, grow and spread.

Experience suggests that a useful incubator for the growth of better thinking is in the relatively controlled environment of business meetings. By shaping the thinking that takes place here, not only will we have the opportunity to influence the quality of the most significant strategic and operational thinking, but through their participation in meetings, individuals will be exposed to a rational process approach that will improve the thinking associated with their day to day conversations and ultimately, to the way they balance their individual System 1 and System 2 minds. With this in mind, the first of our five steps to creating a ‘Thinking Organisation’ is to identify the meetings that matter.

1. The meetings that matter.

Some years ago we did some work with a major soft drink company in the UK to improve the effectiveness of their meetings. One of our studies explored the Byzantine system of meetings that took place across their organisation and we came to the rather unglamorous conclusion that Pareto was alive and well and that 80% of the strategic and operational problem solving and decision making that actually mattered to them took place in only 20% of their meetings. So as we look at improving the quality of thinking in meetings, the lesson from this experience is that we might as well start by looking at those meetings that matter.

We find a relatively brief survey of how your senior leadership group chooses to run their part of the organisation will soon surface the collection of meetings that shape an organisation’s nature, direction and progress. From this collection, one can identify those meetings that matter by testing published meeting outcomes against a set of questions that might include:

- Is there evidence that significant strategic and/or operational problems are being addressed?
- Is there evidence that decisions are being made about the deployment of significant amounts of resources?
- Is there evidence that risks and/or opportunities are being explored that could materially affect the nature and direction of the business?

Having conducted this analysis, you might be surprised how few of your meetings really matter!

2. Ensure you leverage genuine expert intuition.

The next step in creating a thinking organisation is to ensure that you have the right people involved in the ‘meetings that matter’. Whilst many factors should shape who gets invited to a meeting, such as for example, the need to secure a particular individual’s commitment to an outcome; from the perspective of ensuring high quality thinking, our objective must be to ensure we have the right experience in the room. The notion that our intuition is based only on recollection and that in the absence of directly relevant information, our System 1 will simply make things up, should help us understand that the more direct experience attendees have of the issue at hand the more likely we are to produce a high quality outcome. As Kenneth Blanchard points out, “...remember, all the brains are not in the top of an organisation.”

Whether the purpose of the meeting is to engage with divergent thinking about a universe of future possibilities or with the convergent thinking associated with making a specific choice, the question that must be asked is, how much direct, actual and real experience is there in the minds of proposed participants?

3. Create the container.

Next, you need to ensure that you create the right physical, mental, and emotional space for the meeting.

At the heart of any meeting is a conversation. The ability of people to converse easily is essential if their thoughts are to be combined and leveraged effectively.

An irony of the human condition is that although we spend much of our life talking, a recent survey carried out by Courage Beer⁽⁷⁾ revealed that whilst the typical British adult spends a rather staggering four and a half hours talking, truly open and honest conversations are rare. Interactions that may be self revealing, mildly confrontational or minimally unpleasant tend to be avoided. If the quality of our conversations could be improved, perhaps more partnerships could be forged, more deals agreed and the need for difficult change be better understood. Clear, shared problem solving and decision making requires the highest quality conversations.

Research carried out by Marcial Losada and Emily Heaphy⁽⁸⁾ showed that high performing teams meet and converse differently. In teams associated with greatest profitability, greatest customer satisfaction and highest evaluations by colleagues, team members had developed the capacity to talk to each other in clearly observable ways. Specifically, three capabilities were noted:

- They asked questions as often as they asserted their own opinions (1:1 ratio between advocacy and enquiry)
- They showed as much interest in others as they did in themselves (1:1 ratio between focus on self and focus on others)
- They made more positive than negative comments so enthusiasm and encouragement far outweighed criticism and cynicism (3:1 of positive to negative)

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Sarah Rozenhuler in her book *Life Changing Conversations*⁽⁹⁾ describes the importance of creating what she terms a “container” if you want to improve the quality of conversations. She explains that this container should be thought of as having two dimensions. First, the container should be woven out of a set of behavioural rules that encourage open, shared thinking and are agreed by all meeting participants. If carefully crafted and honestly adhered to, these rules can promote the right balance between advocacy and enquiry, the right focus on self versus focus on others and the maintenance of positive rather than negative energy. The reality is that most meeting participants will experience a degree of discomfort as these behavioural rules are introduced but, if unhelpful behaviours are consciously surfaced and managed, gradually, this more self-aware approach will become institutionalised.

The second dimension of the “container” is physical. The notion of ‘Priming’, discussed earlier, allows us to understand that the environment in which the conversation is contained will have some bearing on the quality of the thinking. Is the environment ‘neutral’ for all the team members? What is their experience of the chosen environment? Have prompts that might bias good, clear thinking been removed? As we explore, it’s surprising what can trigger and prime your associative memory.

4. Connect with respect.

Next we need to ensure a harmonious melding of all participants at a meeting that matters and this can mean building an awareness of how people communicate and think. For example, the Myers-Briggs personality type indicators⁽¹⁰⁾, with which most will be familiar, help provide an understanding that what might seem like random variation in the thinking and behaviour of others is actually quite orderly and consistent — whether they prefer to focus on the outer world or on their own inner world (Extraversion or Introversion); whether they prefer to focus on the basic information provided or add interpretation and meaning (Sensing or Intuition). When making decisions, whether people prefer to first look at logic and consistency or first look at the people and special circumstances (Thinking or Feeling) and whether they prefer to get things decided or stay open to new information and options (Judging or Perceiving).

By investing in understanding and actively using knowledge of a participant’s different thinking and communication styles, our own communication can be moderated to accommodate how information lands with others whilst also allowing it to become easier for us to understand the nature of communication and thinking offered by our colleagues. This ability to “connect with respect” will help refine the quality of inputs and outputs of our System 2 deliberations. As, for example, extraverts may become able to resist the desire to just pump information out without filtering it first, Sensors may realise they will sometimes have to deal with the abstract, Feelers will understand that the first port of call for Thinkers is always logic and that Perceivers will try to understand that sometimes closure will be required.

5. Structure your thinking.

By ensuring that you have the right knowledge and expertise available for the ‘meetings that matter’, by creating a ‘container’ in which participants can do their best thinking and by ensuring they have the capability to ‘connect with respect’, the foundations are laid for the delivery of some high quality thought. The final piece of the puzzle is to utilise a set of rational processes that can help structure your deliberations in such a way to ensure you use speedy System 1 when you can be sure of the veracity of the results produced and switch the conversation to analytical System 2 when more rigour is required.

The rational thinking processes in question are Situation Appraisal, Problem Analysis, Decision Analysis, and Potential Problem and Potential Opportunity Analysis. Each reflects one of the four, core System 2 thinking patterns outlined earlier in this paper. They are used to optimise the flow of thinking and the conversation within any meeting. Each rational process will be used at different times and in different ways during a meeting that matters, depending on the nature of the issues being resolved and the need to manage our impulsive System 1 thoughts. Any well structured meeting will, however, typically start in the same place with the requirement to make sense of the situation and bring order to what can often seem like unmanageable chaos.

For this purpose, we use Situation Appraisal to identify concerns, state them clearly and specifically and develop a prioritised list of issues requiring action. This process helps our System 1 minds ‘unload’ all the hot topics from our associative memory and moves us toward the appropriate engagement of our System 2 by asking four critical questions about each issue:

- Is there a positive or negative deviation for which we don’t know cause and need to find it?
- Does a choice need to be made or an alternative evaluated?
- Are we going to take an action that needs to be protected or enhanced?
- Can we rely on our collective System 1s for the optimal resolution?

Where the full engagement of our collective System 2 is required, the answers to these questions will direct the meeting towards one of the other rational processes; Problem Analysis, Decision Analysis, or Potential Problem or Potential Opportunity Analysis.

Problem Analysis will provide meeting participants with the tools they need to fix root cause of deviations quickly and inexpensively. In this process, System 2 thinking will predominate as the focus is on analysis and data. The approach requires participants to clearly define the limits and characteristics of the deviation and compare these data with other situations that are problem free. This comparison triggers broad activation of our associative memory in the search for relevant distinctions and possible causes and prevents our System 1 from using narrow, learned patterns to jump to the wrong conclusions. Engaged properly by the Problem Analysis process, our collective System 2 thinking will ensure no time is wasted on hit and miss actions and that no costly ineffective fixes are applied.

Decision Analysis is the thought process we use when we are faced with a choice. In decision making, the tendency to think that what you see is all there is can be avoided by having a structured, visible process. By making people slow down and by making sure they know what they want before looking for it, Decision Analysis will keep people focused and ensure the influence of irrelevant System 1 priming does not take the discussion off track. The development of a list of specific measurable objectives for the decision will help free our thinking from the usual performance norms we associate with possible alternatives and give us something concrete to evaluate these alternatives against. Finally, when all the information on our objectives, alternatives, and risks are clear and visible, System 1 can be allowed back out to decide what is best for us and the organisation.



A Process for Rational Thinking

Potential Problem and Potential Opportunity Analysis is the future orientated thinking process that has saved many organisations from disaster and made many others into overnight successes. Whilst even the most intuitive people can't know the future, intuition is, remember, only recognition. Many will have experience of the threats and opportunities associated with very similar endeavours. A structured process is needed to collect these insights from associative memory and then apply our collective System 2s to think through the most likely causes of future events, planning actions to prevent or promote those events to provide a much needed advantage in today's highly competitive environment.

On first acquaintance, these processes may seem like powerful tools capable of improving the quality of your collective thinking — and they are. The idea of structuring all your meetings in this way may feel like a pretty tough challenge, but remember the first time you tried to drive a car? Your System 2 went into overload, whereas today your ability to drive no longer takes effort because the skills required have become intuitive and now reside peacefully in your System 1. Similarly, with practice, the use of these rational processes will become intuitive and transform the quality of thinking; first in your meetings that matter and then more broadly as you become a Thinking Organisation.

At its heart, the thinking organisation is one in which, individually and collectively, System 1 and System 2 thinking is balanced and leveraged through the ability to have high quality, structured conversations. Crucially, people within a thinking organisation will be continuously vigilant of the more wayward impulses of their System 1. If I may leave you with one final puzzle:

A bat and ball cost \$1.10

The bat costs \$1 more than the ball

How much does the ball cost?

A number came to your mind which of course was 10 cents. The distinctive mark of this easy puzzle is that System 1 invokes an answer that is very appealing and very wrong. If you do the math you’ll see the correct answer is 5 cents. If, like 50% of students at Harvard, MIT and Princeton who answered the bat and ball puzzle, you got it wrong, ask yourself if you and your colleagues are letting your collective System 1s have a little too much influence over the nature, direction, and performance of your organisation.

Whatever resources your competitors may have at their disposal, the only factor that will allow their deliberations to be more meaningful and insightful than those of your leadership team is the speed and accuracy of their problem solving and decision making. The theatre of war is the meaningful business meeting, and the winning weaponry in your arsenal is your ability to think.

List of Figures

Figure 1: Pounds paid per litre of milk consumed as a function of week and image type

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Figure 2: A Process for Rational Thinking

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About Kepner-Tregoe

At Kepner-Tregoe, we recognize the challenges brought about by limits to your time and resources, increasingly complex operations, and escalating expectations on the part of your customers. To help you operate at your best, most efficient self, we provide time-proven rational and data-driven processes—developed in-house over a half century ago and refined through the years—that have proven to be effective in helping thousands of organizations improve business performance world-wide.

Key Products:

Kepner-Tregoe offers consulting services in the following areas:

- Incident Management/Problem Management
 - Business Process Improvement
 - Operational Excellence
 - Shutdowns, Turnarounds, Outages
 - Project Management Office
 - Corrective and Preventative Action Program
 - Strategy formulation/implementation
- and training solutions in:

- Finding root cause
- Making data-driven decisions
- Managing risk
- Planning and implementing projects effectively
- Managing people in projects
- Reducing operator error
- Managing and auditing investigations
- Effective issue resolution

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