The Dog Who Knew the Phone Would Ring

(Distortions in Thinking: Part 1)

By Joe Cheal

❝ We are prone to assuming some form of cause and effect ❞

Joe Cheal

As the telephone engineer examined the socket, the little old lady said, 'My dog's amazing! He barks every time the phone is about to ring. He knows when people are going to call me. He's psychic!'

Like the engineer, you may be sceptical. However, a few minutes later the dog barked and then the phone rang. Was the old lady right...or was something else going on?

With the example above, it would seem as if some form of 'distortion-in-thinking' is going on. Whilst the NLP meta-model is a linguistic model (that can highlight the gap between the person's direct experience and what they say about the experience), it may still be applied to the *way* we think. I would hope that some meta-model 'alarm bells' are ringing for you in the tones of 'cause and effect' and 'complex equivalence'. A classic distortion challenge question we might ask is 'how do you know that?'

In the scenario above, there is observable real-world evidence for the old lady's assertion, and hence there is really no gap between her direct experience (deep structure) and her utterances (surface structure). She thinks her dog is psychic because she has direct evidence and she can see no other explanation. We can still argue, however, that there might be a distortion-in-thinking in the form of 'misinterpretation'.

We have an effect, but what is the cause?
It seems that, on occasions, we are prone to assuming some form of cause and effect where either none exists or where the situation is more complex than we are assuming. So if we have an effect, how can we establish a cause? When we are working in a system, this is not always obvious or easy to do.

In the absence of deeper thought or further evidence, we may resort to 'pet theories' about why things have happened or are happening. The old lady had a pet theory about her dog (obviously). I create pet theories about why people do what they do…and with a psychology background I can often sound quite credible! I also resort to pet theories

66 Problem Mapping is a tool that encourages you to consider the impact of a problem 99

if I feel unwell…and these are immediately shattered if I have to see a doctor and he or she tells me the 'actual' reasons.

Another classic distortion in thinking is where we see correlation and assume cause and effect. A wonderful piece of research demonstrated an almost perfect correlation between the amount of chocolate eaten per person per country and the amount of Nobel prizes won by that country. It would seem that either eating chocolate makes you clever (as proposed unsurprisingly by Hotel Chocolat) or being clever means you eat more chocolate (presumably because you know what is good for you!). Of course, the reason for the correlation was an underlying factor that caused both the amount of chocolate eaten and the number of Nobel prizes…i.e. the wealthiness of the country.

In the same vein, we are told that research suggests eating our five-a-day (vegetables and fruit) will make us live longer and healthier. Whilst this may be true to a point, surely wealth plays a part in this one too. Those that can afford (or live a lifestyle) of fresh fruit and vegetables are more likely to afford to live longer and healthier?

Unfortunately, using correlation as an argument for causation might lead us to throw away our shoes…because as many as 97 per cent of people who contract the common cold wear shoes. Pesky shoes! As any scientist/mathematician will tell you: correlation does *not* equal causation (which is an example of an *inverse* complex equivalence!).

The six cause and effect thinking-distortions (and their challenges)

In order to break through some distorted thinking, we might ask some further questions.

Figure 1 shows six categories of cause and effect thinking-distortions and the questions that may challenge them.

In the 'psychic dog example' we have a case of a 'sequential' correlation (i.e. where one effect of an underlying cause manifests before the other effect instead of them happening 'simultaneously'). The reason for the dog barking was rather sad, I am afraid. It turns out that the dog was chained (metal chain) to an earth-post connected to the cable that carried the phone signal into the property. Whenever there was an incoming call, the dog received a mild electric shock just before the phone started ringing in the house.

Establishing causes in complex systems

The six cause and effect thinking-distortions (see Figure 1) encourage us to challenge other things that may be going on, for example, an interaction of causes. In a systemic environment (a complex system like a network with multiple connections between elements within the system) there is likely to be a ripple effect where one thing leads to another and bounces around creating further mini-ripples (for example, the butterfly effect in chaos theory). In this environment, it can be genuinely tricky to nail down a specific cause and effect. In acknowledgement of this potentially impossible endeavour, in mathematics, the Granger causality test asks more loosely: is one particular variable useful for predicting another?

So when we ask questions like 'why has the bee population declined?' or 'why is my throat sore?' or 'why is the air conditioning in this building not working properly?' we may actually be entering the realms of a

Type	Description	Challenge question
1 Correlation only	X and Y happen at the same time. Both may be symptoms of (i.e. caused by) something else or simply coincidence	What might have caused both X and Y?
2 Insufficient causal link	X leads to Y only if A is also present	What else needs to be true for X to lead to Y?
3 Insubstantial link	Sometimes X doesn't lead to Y (i.e. leads elsewhere instead)	Does X ever not lead to Y?
4 Contributing link	X may only be a contributing factor rather than a cause	Do other things cause Y?
5 Multiple links	X also leads to other things instead of (or as well as) Y	Does X ever lead to something else (i.e. not Y)?
6 Circular link	As well as X leading to Y, Y also leads to X	Does Y ever lead to X?

Figure 1

systemic environment complete with multiple causes and contributory factors. When we hear people insist that the grey squirrel is responsible for the decline of the red squirrel, we might remember other contributory factors like change/loss of habitat due to human intervention. When we hear that badgers should be culled for being responsible for the distribution of bovine TB, we might also consider other contributory factors like bovine farming practices and lack of suitable protection around food storage.

Problem Mapping: a tool for exploring the fuller picture

Problem Mapping (*1) is a tool that encourages you to consider the impact of a problem as well as a range of potential causes and root causes. The model helps to avoid the assumption of a single line of cause and effect (see Figure 2).

When exploring root causes there comes a point where you need to stop! If you continue asking 'and this was caused by…?' you will end up with 'the Government' or possibly a deity of your choosing (or 'way of the universe' if you are not deity minded). In fact, if you wish to use this as a practical tool for seeking solutions, the place to stop asking root-cause questions is where the causes go outside your control and influence. Any further and it is tempting to blame things beyond your scope.

The Problem Mapping tool can be useful for getting a group to work together on an issue and should give you a rounder view of the complete issue. I have also found that it helps those people who find the standard 'blank-page' brainstorming approach more irritating than innovating to engage in the process. When we have the problem mapped, we can use it for 'structured brainstorming' that focuses more practically on the issues at hand.

And next time…

In the next article, we will be exploring the nature of cause and effect from the other side…where we have a cause but we don't yet know what the full effect will be. In this, we will delve into the subjects of 'ecology' and the 'law of unintended consequences'. Tune in next time when we will be causing an effect… ■
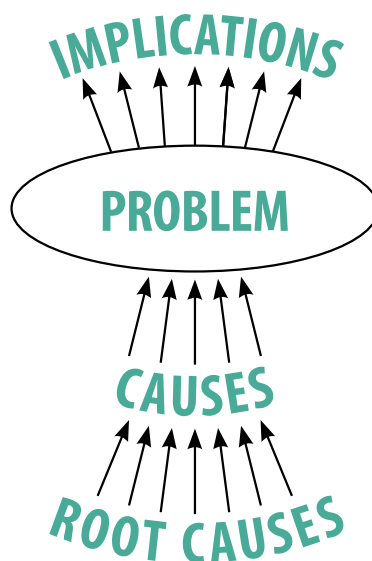
Figure 2

IMPLICATIONS

PROBLEM

CAUSES

ROOT CAUSES

Steps

1   State the problem or central issue as you see it.
2   List the implications of the problem.
4   List the range of immediate causes of the problem.
5   For each cause, continue to the root causes by asking: 'This is/was caused by?' and 'what else?' to each answer.
6   When complete, establish the main outcome you are seeking (to replace the problem).
7   Now use the implication and cause/root cause data to generate ideas and solutions.

Well, I wasn't expecting that to happen!

(Distortions in Thinking: Part 2)

By Joe Cheal

Joe Cheal

'Why do my actions have consequences?'
### *Homer (Simpson)*

Towards the end of the nineteenth century, the bumblebee was introduced into New Zealand from the United Kingdom. The purpose was to help pollinate red clover...however, the bees also pollinated a native lupin. The lupin has become an aggressive (albeit beautiful) weed since then. Meanwhile, Australia is looking at introducing the bumblebee to pollinate the tomato plant (a laborious task currently done by hand). It is unclear what the effect will be on the ecosystem: it is not clear what else the bee will pollinate...and which other species the bee will compete with...and hence what else won't then get pollinated if the competition is eradicated by the humble bumblebee.

Herein we see the utterly mind-blowing complexity of an ecosystem...and the consequences of 'monkeying' around with it! Every action we take will have a ripple effect...multiple chains of cause and effect that spread throughout the system we are in. This systemic activity can be summed up in one word: *ecology*. The term 'ecology' was

❝ Every action we take will have a ripple effect ❞

apparently coined in 1866 by Ernst Haeckel, a German polymath whose disciplines included biology, naturalism, medicine, philosophy and art. Being a polymath no doubt gave Haeckel a bigger picture perspective as he noticed connections and patterns within and between these disciplines.

Aside from bumblebees and polymaths, did you know that wolves help beavers to flourish? In an ecosystem where wolves and beavers exist together, wolves reduce the deer population which in turn increases certain plant populations (as less deer are eating them) which allows the beavers to flourish (which means more dams and hence more wildlife that use dams as their habitat). But then, with a reduced deer population, the wolf population drops due to decreased food supply and so the deer population then increases again and so continues a cyclical and systemic process known as the 'predator-prey' system.
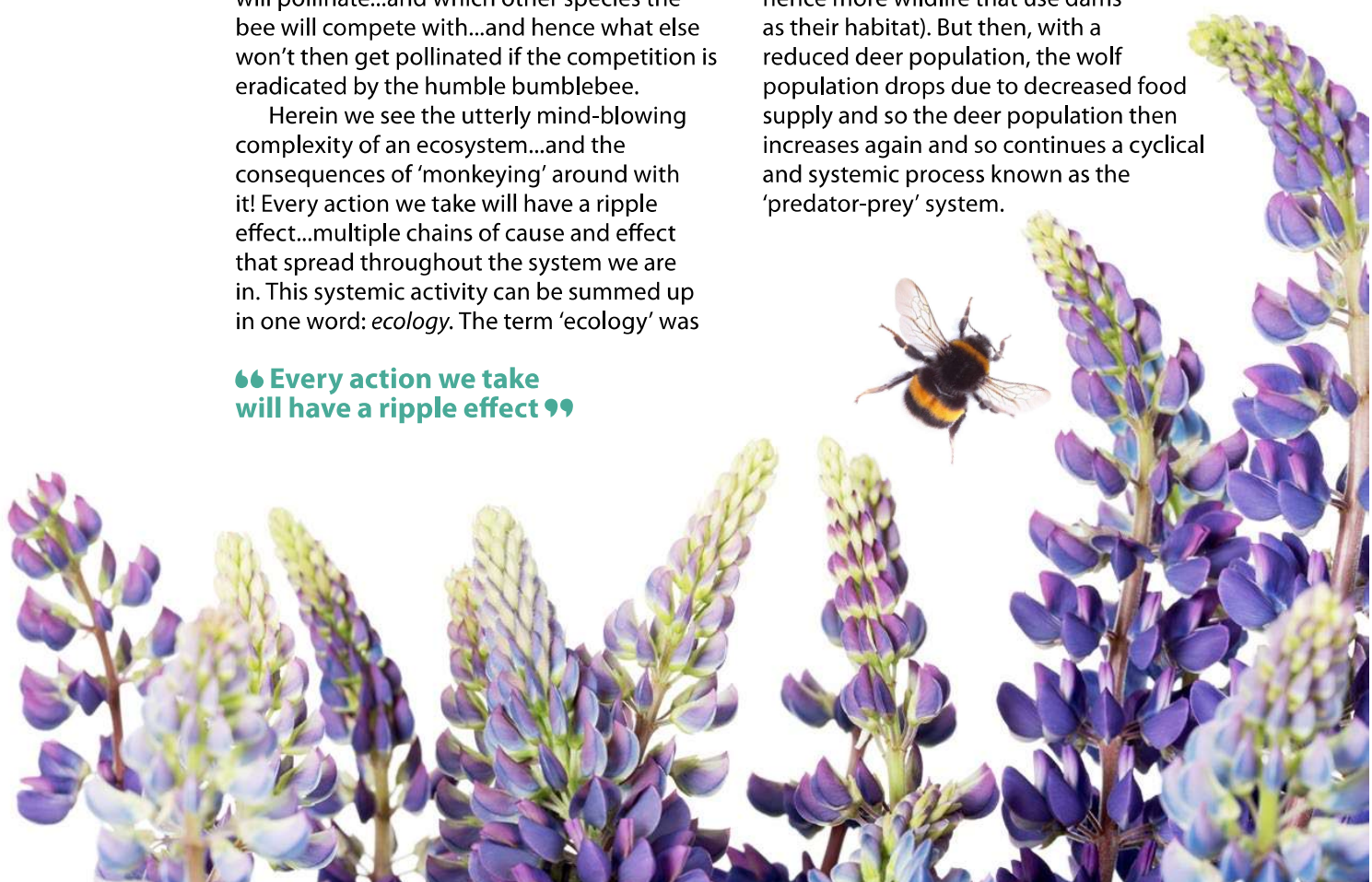
❝ Introducing something tends to have unpredictable results ❞

The law of unintended consequences
Introducing something (including actions) into an already complex system tends to have unpredictable results. In the 1920s, before the notion of chaos theory (and the 'butterfly effect'), sociologist Robert Merton coined the term 'Law of Unintended Consequences'. This is the systemic ripple effect of an action that we couldn't have predicted (or didn't bother to predict!).

A grisly example of this comes from the First World War where stronger helmets were introduced for the soldiers. Instead of less head injuries, there appeared to be *more* coming in to the hospitals. How could this be? Simply put, people survived (with head injuries) who previously would have died.

A more positive example comes from the Second World War where armour plating was going to be added to certain parts of the warplanes. When the planes returned, it was calculated which parts of the planes were receiving more gunshots (measured by the bullet holes) and hence where the armour should be added. However, a mathematician, called Abraham Wald, demonstrated that the areas where the planes were apparently *not being shot* should be where the armour was added. Why? The planes that made it back *made it back*! Those that didn't make it back were the ones being shot in the vulnerable areas (i.e. the cockpit and tail fin).

Some people, when feeling well-protected, experience something called 'risk compensation' where they stay in a dangerous situation longer because they feel safer. The same may well apply to projects managers (or sponsors)... Just because they have carried out a risk assessment doesn't mean they should continue with a project that is obviously doomed to failure!

The lack of 'consequence thinking' can sometimes be a result of reactive change, particularly in organisations. For example, companies introducing 'customer charters', making promises to customers that cannot be fulfilled by staff due to ineffective systems... causing a drop in customer satisfaction. Managers trying to 'motivate' their team by introducing a reward scheme...that irritates and de-motivates the team even further. Companies rebranding only to find that no-one likes or understands the new brand (remember the two-million pound 'Royal Mail becoming Consignia becoming Royal Mail again' debacle?). Government departments introducing costly new logos which then have to be scrapped (try typing 'OGC', i.e. Office of Government Commerce, into the image section of a search engine).

We have a cause, but what is the effect?
The ripple effects of an action within a system, that is, the true nature of ecology (be it framed in conservation, resource management, organisations or human social interaction) is mind-blowing! But, before we decide to hide under a duvet and avoid doing anything at all, it is important to remember that we affect the systems we are in all the time...as they, in turn, affect us. The question becomes: can we be more aware of the potential consequences of our actions and hence more purposeful and productive in what we do?

In order to prevent some of the potential unintended consequences of an action, we might explore some methods of 'consequence thinking'.

Consequence questions
The 'consequence questions' are designed to stop you in your tracks for a moment and reflect on what you know (and perhaps don't know), including awareness of the system you are in as well as the potential ripple effect of your actions.
- In what context does this system sit?
- What are the known variables in this system?
- What are the known relationships between these variables?
- What other variables or relationships (if any) might be introduced into the system?
- How might introducing my/our action into the system affect the known variables?
- How might introducing my/our action affect the known relationships?
- How else might introducing my/our action affect the system?

The ARC Ripple Effect model
The ARC (Action – Results – Consequences) Ripple Effect model is a diagram that can be used to explore (visually) the knock-on effects of an action that we are considering taking. It is designed to challenge us in asking 'and what else might happen?' and then to go out another layer by asking 'and what might be the

❝ It is important to remember that we affect the systems we are in all the time ❞

various consequences of that?'

The aims of this model are (i) to prevent the issues associated with a lack of 'consequence thinking' and (ii) prevent us thinking too simplistically (i.e. that our action will lead to only one single effect).

The main steps of the model are:
1   Write the desired action in the middle of the page.
2   Consider as many different results that might occur from taking that action. Write each of these on a 'spoke' coming out from the centre.
3   For each result consider and write down the various consequences that could occur.

This should give you a fuller representation of the ripple effect. Bearing in mind that we may not be able to predict *everything*, it will at least, give you a starting point and may make you aware of some of the otherwise 'unintended consequences'.

The contingency diagram
The 'contingency diagram' (*1) can help in identifying potential 'risk-consequences' to an action, activity or project. This is done by writing down what could go wrong and so allow you to prevent potential problems and/or have a strategy for dealing with them. The 'contingency diagram' is a user-friendly risk management tool that allows you to involve others in formulating your backup plans. Indeed, it is usually a valuable part of the process to get other people's input as it gives a broader set of risks and solutions outside your own experience.

The main steps to creating a contingency diagram are:
1   Write down all the things that could go wrong (risks) with your action/activity/project.
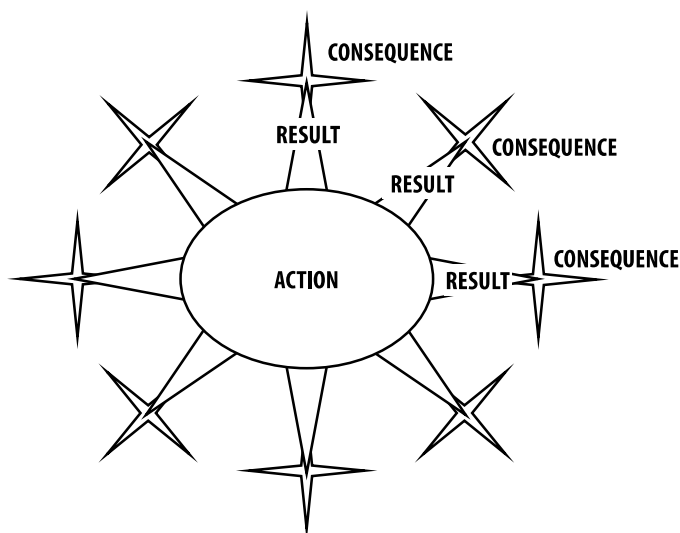
Figure 1. The ARC Ripple Effect model

2   For each risk, write down some ideas for:
   • preventing this risk from occurring
   • preventing it from being a problem
   • dealing with it if it happens
   • dealing with the knock on consequences if it happens.
3   Incorporate the appropriate ideas into your preparation and plan of action.

By creating a contingency diagram or list (complete with ideas and solutions) and then building these ideas into your preparation, you should find that your plan of action will be more robust and that your performance will be even more effective and confident! ■

Are the **Clangers** Living on Mars?

(Distortions in Thinking: Part 3)

By Joe Cheal

Joe Cheal

After the success of the Viking Mars missions in the mid-1970s, new and advancing technologies should surely have made future NASA exploration a breeze. Sadly, during the 1990s the Mars spacecraft (with the exception of the Mars Global Surveyor in 1996) suffered a series of oddly simple problems – faulty valves causing an explosion, improper testing contributing to a surface crash, a mix up between imperial and metric units causing burn-up on entry. And then there is my favourite reason given – it landed but fell over or fell down a gorge.

In 2004, the Beagle 2 Lander disappearance (due probably to airbags failing and/or parachute tangling) proved to be an expensive setback for British space exploration. Fortunately, since then, the NASA Mars missions have been rather more successful.

Personally, I believe that the Clangers (*1) are alive and well and living in a little community somewhere on Mars. They have been collecting bits and pieces that arrive near their home with whistles of awe and wonder. The Mars Polar Lander, Deep Space 2 and Beagle 2 have been duly recycled (including a few trophies for the Soup Dragon's kitchen).

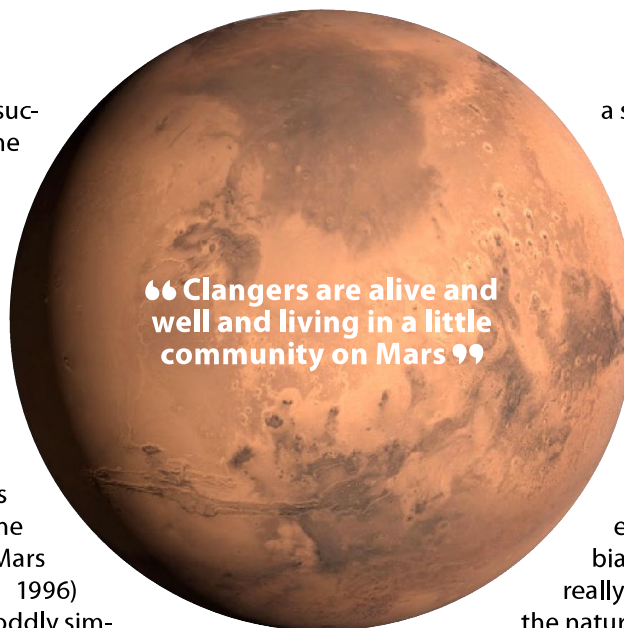And back to reality for just a moment... Whilst the previous two articles in this series have explored some of the issues of distorted 'cause and effect thinking', this article seeks to address a higher logical level in exploring 'who' is predicting the causes and effects in

> 66 **Clangers are alive and well and living in a little community on Mars** 99

a system. We will look at three key areas that affect the 'who': *bias*, *scope* and *primes*.

Bias: the positions we favour

A bias could be described as an unconscious (usually) favouring of a particular position. Each and every one of us carries biases that we cannot really escape from. However, the nature of our bias is likely to have a powerful effect on the outcome of our reasoning.

Humans generalise! Generalising serves a purpose; it allows us to learn rules and models that we can then apply to new situations. For example, we can generalise what a chair is and hence sit down rather than wondering 'what is that?' every time we go into a new room. It could be argued that our 'map of the world' is a collection of our generalisations. Because our psychological map is critical to our sense of identity, we will seek to maintain and, where necessary, defend this map. We tend to perceive (and actively seek) data that fits our map and *delete* that which doesn't. If data gets through our 'deletion' filter and doesn't fit our map, then we try to *distort* the data coming in. Although the NLP meta-model is a linguistic model, it can also be used to explain two types of perceptual filters we have to interpret the world around us.

Not only do we have a personal bias based on our own psychological filters (known as 'confirmation bias'), we may be biased (or affected by those who are biased) because of the culture we are in, or the job we do, or the role we play, or the political system we adhere to.

How about researcher bias as an example? In the United States, psychological research that has been carried out exploring the differences between Republicans and Democrats tends to place the Democrats in a more reasonable and favourable light (more 'towards' rather than 'away from'). Why? Interestingly, the vast majority of psychology research in the US is carried out by people who align with the liberal perspective. (*2) Only a small percentage of psychology researchers are conservative (republican).

Research journal publishing houses seem to have a 'publication bias' where a percentage of negative or null research results are not being published; 'proof positive' is sexier and more saleable it seems. The statistical results of Government-sponsored research are often interpreted differently by the different parties. Scientific research is often funded by corporations with an interest in a specific result.

According to one survey, (*3) 96 per cent of people used in psychology research are from western industrialised countries, and more than two thirds of these people are psychology undergraduates. Given that the WEIRD folk (Western Educated, Industrialised, Rich and Democratic) make up only about 12 per cent of the human population (and are apparently not necessarily representative of the other 88 per cent), can we really generalise such psychology research to represent how the majority of the human race thinks? Even in NLP research, I would suggest the majority of researchers in the NLP community have an agenda to demonstrate that NLP works in some way...whilst some outside the community may seek to actively debunk/disprove NLP by demonstrating that it doesn't work.

I'm not meaning to have a poke at science, psychology, psychologists or the scientific research community here, but simply to remind you (and myself) that we might benefit from using our own judgement from time to time – rather than simply accepting what the experts and people in white coats say. Indeed, as the writer of this article I am equally prone to 'author bias'. So honestly, don't believe a word I say!

Bringing it back to cause and effect, whoever is suggesting or challenging a distortion will tend to have their own 'system' bias. Therapists may carry a bias from their school of therapy, consultants will carry a bias depending on their management model (or, cynically, perhaps affected by who is paying them), senior managers may carry a bias as to their company ethos and culture, parents may be biased by their own upbringing (and the generation they grew up in) and the list goes on.

In order to bring your own bias to the fore when deciding, planning and acting, you might use these 'Bias Awareness' questions:
- What are my beliefs (i.e. what is true about this), values (i.e. what is important about this) and assumptions (i.e. why do I think this is the case) in this context?
- How might my beliefs/values/assumptions affect my decisions/actions?

❝ Every one of us carries biases that we cannot really escape from ❞

Scope: the sum of our knowledge
Our ability to understand 'cause and effect' in a system has to be affected (and limited) by the sum of our own expertise and knowledge. This could be described as the scope of our knowledge. When we engage other people with varied backgrounds in the process of understanding cause and effect, we (as a collective) tend to expand our scope. If everyone is similar however, we may simply end up consolidating the notion that our scope is 'correct'.

At the start of this article, I made reference to some of the NASA missions to Mars. Now before I am accused of 'NASA-bashing' (a curious term!), I confess that my own scope of rocket science is rather limited. Getting a spacecraft to Mars is simply incredible. The mathematics and engineering involved in getting a piece of metal from here to another planet is extraordinary. The earth is spinning at about 1,000 miles per hour and travelling round the Sun at about 67,000 miles per hour. Mars spins at about 540 miles per hour and travels at 54,000 miles per hour. It takes 11 months to get from here to Mars. Try throwing a dart at a dart board that is spinning rapidly as it circles you at a great distance... and whilst you spin yourself in the opposite direction! However, is it possible that the extraordinary intelligence of the Mars mission designers is so focused on the technical aspects that the obvious is sometimes missed? I wonder if they might improve matters by getting some schoolchildren in to help them with their contingency planning. 'What's that kid? It might fall over... or fall down a hole? Good point! Um... guys, we may need to do some rethinking!' I know I am being unfair; there are all sorts of pressures on the designers and engineers and millions of dollars evaporate quickly when it comes to space travel. However, the moral of the story for me is that when planning a project, make sure you have a broad range of specialists...*and* someone who can state (simply and plainly) the 'mundane obvious'.

66 We might benefit from using our own judgement from time to time 99

'Scope Awareness' questions:
- What is my/our area of expertise?
- What are my/our gaps in knowledge?
- How might these affect our decisions/actions?

Primes: the environmental factors

Priming, in psychological terms, is where something we perceive (see, hear, read, feel, smell, taste) then affects what we perceive after that. In this sense, a prime is an environmental factor that has a short-term effect on our thinking and perception. For example, ask a room full of people to take 10 seconds to notice all the green things in a picture or in the room. After the 10 seconds is up, ask them to write a list of those green things. Then get them to list all the red things they remember. The likelihood is they will remember more green than red items.

The environmental primes may affect how we make decisions and how we behave. Most of us act differently depending on the situation we are in, including the location, the event and the people we are with.

When we focus on something, or seek out a specific thing, our brains are primed to notice examples of that thing. If we are in a context where we are not consciously looking for a specific thing, the unconscious mind tends to be primed for what it expects in that *kind* of situation. Surprisingly, rather than notice what shouldn't be there, the unconscious tends to *filter out* unusual events and things if they do not fit the context.

A classic example of this is the 'basketball-gorilla' study. (*4) A video of some students bouncing and randomly passing three basketballs around is shown to a group of people who are asked to count the number of passes. Halfway through the video, a man in a gorilla suit walks through the students. When the study was first carried out, very few people saw the gorilla because they were focused on the number of basketball passes.

Not only will our environment prime us, but also the language that is used in that environment. For example, Elizabeth Loftus showed a group of people a video of a car accident. On a questionnaire, she asked some people what speed the cars were going when they 'hit' and asked others what speed they were going when they 'smashed'. Estimates for 'smashed' were faster than for 'hit'. A later question asked if there was glass on the road after the accident. 'Smashed' led to a higher 'yes' response than 'hit'... there was no glass on the road in the video.

Milton Erickson appeared to take advantage of linguistic priming when working with clients, for example in the use of presuppositions.

In addition to the environment and language, we will also carry an internal representation of that environment. We are primed by our expectations (and the perceived expectations on us) and these will affect how we filter information and affect what we notice. Here we enter the world of 'self-fulfilling prophecies', where we end up noticing only what we expected to notice.

'Prime Awareness' questions:
- How might who/where etc affect my decision making?
- What is being presupposed (assumed) in the language around me?

Know thyself

It would be a less than easy task to establish all the biases, scopes and primes you are experiencing at a given point in time and space. However, you *can* become a little more cognisant. In summary, 'know thyself'... and then take a moment to acknowledge the environmental factors and the impact they may have on you. ■

References

(*1) If you have no idea what I am talking about, check out the internet for British children's television programmes from the 1970s!

(*2) Yoel Inbar and Joris Lammers, 'Political diversity in social and personality psychology'.

(*3) L Spinney, 'Who's the oddball?'

(*4) As reported in Richard Wiseman's book *Did you Spot the Gorilla?*

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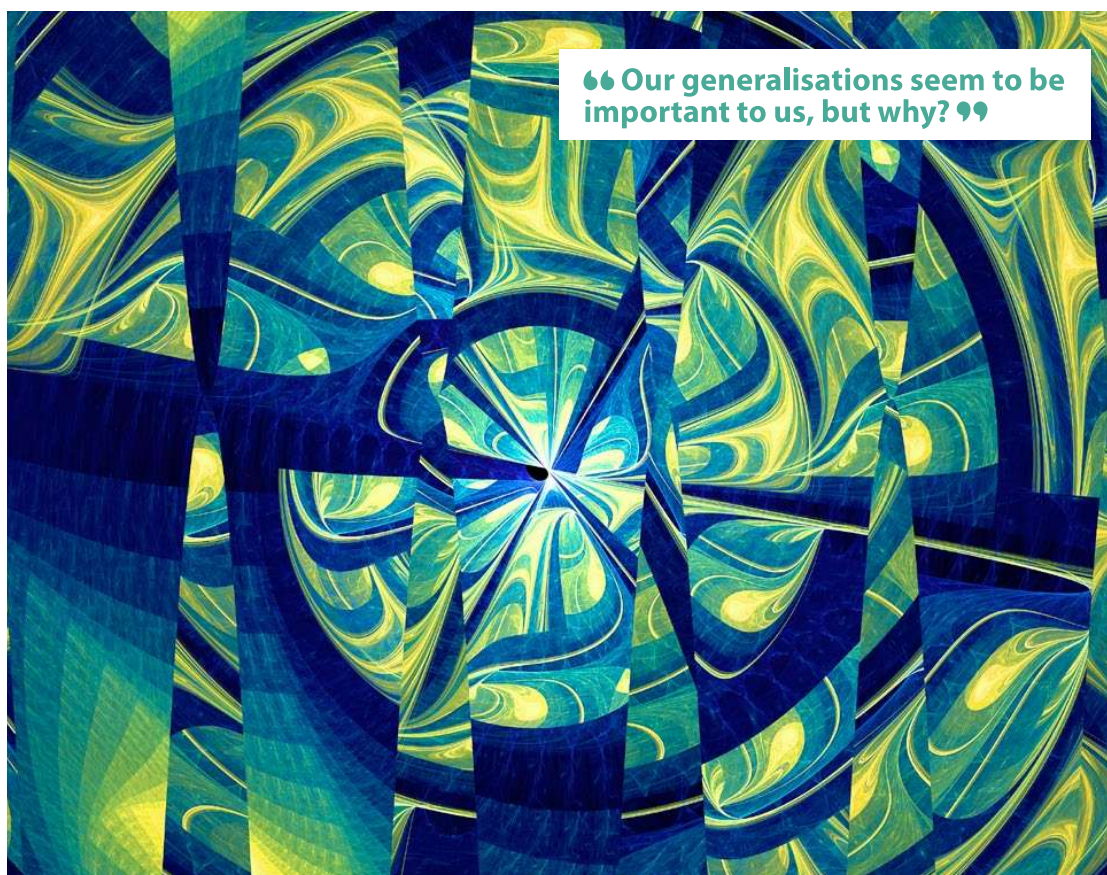
A **Dynamic Model** for the **Meta-model**

(Distortions in Thinking: Part 4)

By Joe Cheal

Joe Cheal

> **❝ Our generalisations seem to be important to us, but why? ❞**

In the first few pages of *The Structure of Magic I*, Richard Bandler and John Grinder (*1) give an example of a man who was convinced he was not worth caring about. Indeed he believed that his wife gave him no 'messages of caring' at all. When Richard and John went to see the couple, they found that the wife did express messages of caring but the man didn't appear to hear. It was as if he was deleting the positive messages from his experience. When they reflected the positive messages back to the man, he apparently smiled and said: 'She just says that because she wants something!'

What the man could not delete, the man distorted. Bandler and Grinder put it this way: 'A person who has at some time in his life

been rejected makes the generalisation that he's not worth caring for. As his model has this generalisation, he either deletes caring messages or he reinterprets these messages as insincere.'

Through this story and subsequent descriptions, Richard and John seem to hint at a model that is never, to my knowledge, overtly expressed. In this article, I am proposing a dynamic psychological model that supports our understanding of the Meta-model and the universal modelling processes (UMPs) of generalising, distorting and deleting.

The eye sees only what the mind is ready to comprehend.
Henri Bergson (French philosopher)

THE UNIVERSAL MODELLING PROCESSES

What if everything revolves around our generalisations?

What if the processes of deletion and distortion are two 'lines of defence' in maintaining our generalisations?

Our generalisations seem to be important to us, but why? To generalise is to create a principle (e.g. 'what things are', 'the way things work', 'the way things should/ought to work', 'the way people should/ought to behave' and 'what is/is not possible') based on particular examples. From a psychological perspective, a generalisation is a principle or belief that we create from our experience/s...*that we then hold to be true*. The gestalt of our generalisations is our model (or map) of the world. Our model of the world is the very thing that allows us to function. Without our collective generalisations, we would have no model of the world and hence everything we experienced would be unfathomable (since we would have nothing to relate the new experiences to). Our generalisations are central to who we are and how we function in the world.

Of course, it is important to remember that our model of the world is just that...a model. One of the fundamental 'presuppositions' underlying NLP (borrowed from the philosophy of Alfred Korzybski) is that 'the map is not the territory'. The model is not the outside world, it is an estimation. An 'impoverished' map (built from unhelpful generalisations) can lead to poor decision making and heightened degrees of conflict. That is not to say that someone's map is 'wrong', but neither is it 'right'. Beliefs (and hence generalisations) hold no truth value; they are neither true nor false, they are simply estimations and assumptions.

If our generalisations are so important, why do we need the UMP of deletion? We have to delete information! Our sensory systems are not powerful enough to process everything that happens around us. And then our words will never be enough to describe in full detail what experiences we have processed...and so we edit and take short cuts.

The final UMP, distortion is the playground of the human mind! Perhaps we might also argue that *all experience is distortion*! As well as perceptual distortion (e.g. seeing what is not really there), cognitive psychology has sections dedicated to how we process and express information, including the cognitive bias in priming, mindreading, attention bias, cognitive dissonance, the list goes on.(*2) Lists of 'fallacious arguments' demonstrate the many ways we can intentionally and unintentionally deceive others in what we share with them.

THE MODEL

We could say that what we delete and what we distort is *driven* by our generalisations. In turn, deletions/deleting and distortions/distorting *protect* the generalisations and hence help to *maintain* them. If generalisations are the central core and then deletions and distortions are 'lines

❝ **What we delete and what we distort is *driven* by our generalisations** ❞

of defence', we might imagine a simple and yet dynamic model as shown in Figure 1.
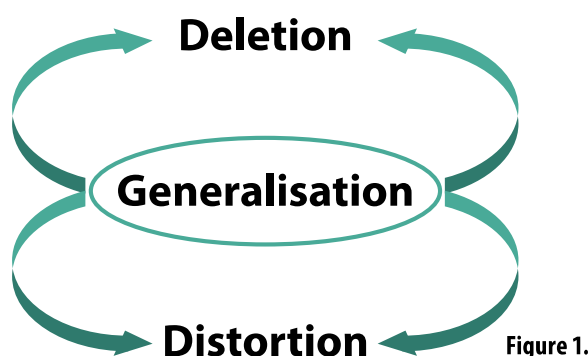

Figure 1.

This 'self-referencing' system appears to run effectively most of the time, where new information will be edited and adapted before being added as evidence to our generalisations and hence model of the world. According to Bandler and Grinder: 'A person's generalisations or expectations filter out and distort his experience to make it consistent with those expectations. As he has no experiences which challenge his generalisations, his expectations are confirmed and the cycle continues. In this way people maintain their impoverished models of the world.'

IMPRESSION AND EXPRESSION

In order to understand the UMPs from a psychological perspective, we need to consider two contexts: (i) information coming in from the outside world into the internal map (which I will call 'impression'); and then (ii) information going from the internal map out to the external world (which I will call 'expression').

Impression

With information coming in, I would suggest that deletion is likely to be our first line of defence, where we perceptually or cognitively 'lose' information that doesn't fit our generalisations/model. If information

gets through the deleting stage, there is a second line of defence, distortion, where we will adapt the incoming information to fit our current generalisations/model. Jean Piaget called this process 'assimilation'.

As information comes in, it will likely be affected by both: (i) perceptual (sensory/VAKOG); and (ii) cognitive (mental/thinking/Ad) filters.

- *Perceptual*: information comes from the outside world via our five main senses. However, there is so much information that we have to delete a significant proportion of it. In this sense, much information is ignored and never makes it into our internal processing. Once information makes it through to the nervous system, it is processed into some coherent 'internal representation' (i.e. sight, sound, touch, smell and taste are brought together into a unified experience). As an aside, according to Ron Rensink (*3) at the University of British Columbia, during a waking day, our visual system is offline for roughly four hours (due to blinking and saccade movement) and during those 'blind' moments, the brain makes up what it can't see!
- *Cognitive*: sensory information is then processed cognitively (i.e. the brain then decides what to do with the information). There may be an unconscious 'immediate reaction' (e.g. automatic/instinctive

behavioural response). Otherwise, new neural pathways are created with incoming information linked to pre-existing networks (in long term memory). Information that does not fit is more likely to be forgotten.

Expression

As we express information (i.e. as it goes from our map to the external world), it will likely be affected primarily by cognitive filters (though it could be argued that we are applying perceptual filters to our own map). When we want to communicate, we are drawing from an internal map and using this as our basis of 'truth' and 'fact'.

Purely from a linguistic perspective (i.e. what we say *rather than* how we say it through voice tonality and physiology) we express generalisations back through the filters of distortion and deletion. This would include the content of our writing as well as speech. The process of distortion will tend to be an interpretation of our map depending on the current context we are in. The process of deletion is driven by our inability to capture 'everything' in a few sentences and so we do not necessarily give the full picture. We pick and choose the bits we feel are relevant to the other players in our current environment.

BUT WHAT IF?

But what if the UMPs fail? What if the defence lines of deletion and distortion don't work? Whilst this may be troublesome for an individual at that moment, it may also open them up to new possibilities. What if the complete system fails and the model collapses? Whilst it is unlikely (perhaps even not possible) for the whole model to collapse, might this be what some people call a 'life changing' event...a paradigm shift? I remember the moment as a child when I realised my dad was fallible. I thought he knew everything, but he said something I 'knew' to be wrong. It rocked my world but it gave me a strange sense of confidence too.

If we are to better understand others (and if we need to challenge what they are saying in some way), we require a more detailed model of how to get nearer to what the other person *really* means and/or what they *really* experience. This, of course, is where the NLP Meta-model comes into its own as a set of questions for exploration. Tune in next time when we will be playing with the Meta-model questions... ■

❝ Might this be what some people call a 'life changing' event...a paradigm shift? ❞
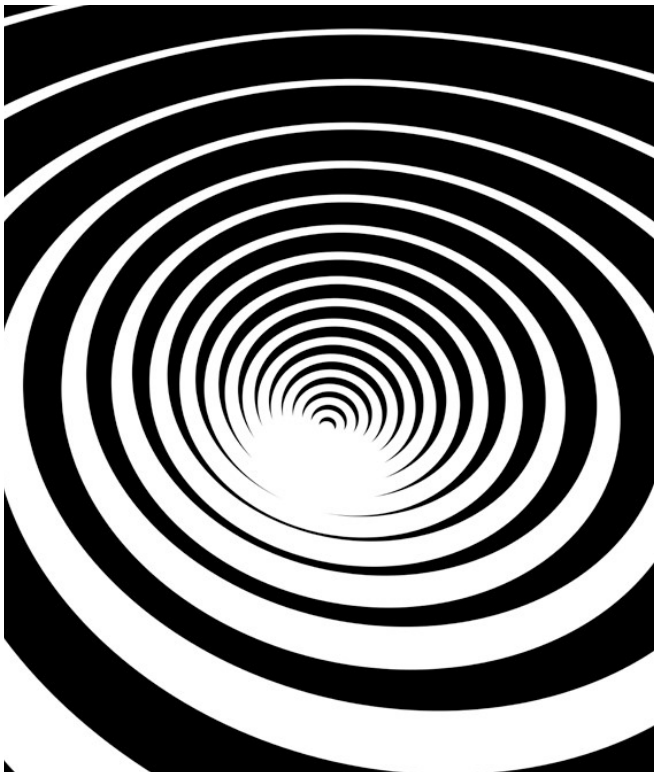
References
(*1) Richard Bandler and John Grinder, *The Structure of Magic I*.
(*2) Although not a place I particularly like to source information, Wikipedia holds an interesting 'list of cognitive biases' and 'list of fallacies'.
(*3) Referenced in: Graham Lawton, 'The grand delusion'.

Joe Cheal is an NLP Master Trainer and has been working with NLP since 1993. He is a partner in the GWiz Learning Partnership and GWizNLP (**www.gwiznlp.com**), transforming people and businesses through the fields of personal, professional, leadership and organisational development. He holds a degree in Philosophy and Psychology and an MSc in Organisational Development & NLP. He is the author of *Solving Impossible Problems, Who Stole My Pie*, co-author of *The Model Presenter* and *The Little Book of Persuasion*. He is the creator and editor of *Acuity: The ANLP Journal*. He can be contacted via: **joe@gwiznlp.com**.
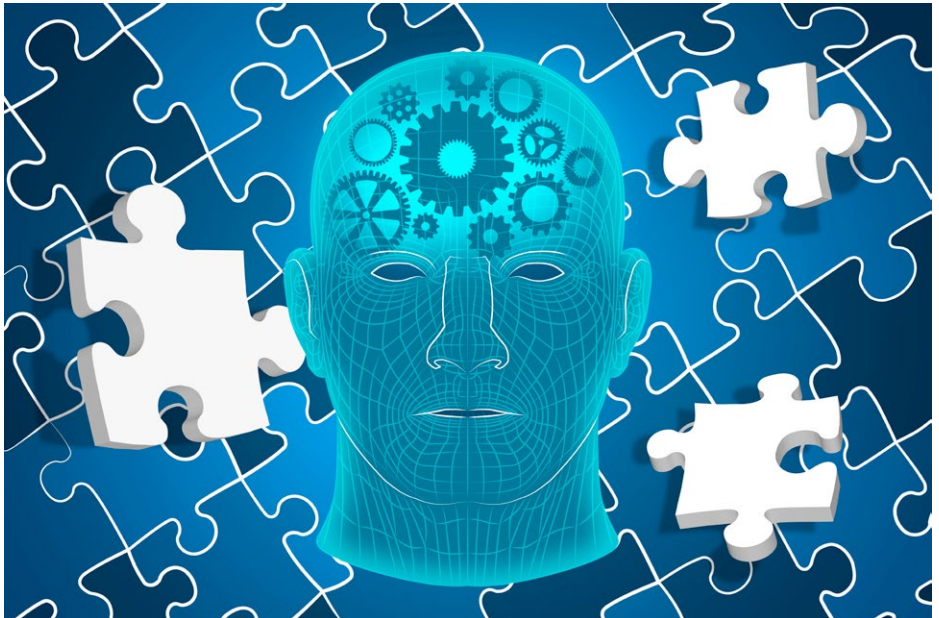
Playing with the Meta-model Questions

(Distortions in Thinking: Part 5)

By Joe Cheal

Joe Cheal

I n a second article inspired by *The Structure of Magic I*, (*1) I am curious as to how the meta-model questions affect us psychologically. Where do they take us and what do they 'do' to us? This is not designed to be a rehash of all the meta-model distinctions; it is more about having an understanding of the potential impact of the questions. (*2)

The purpose of the meta-model questions is to help someone get back to their original experience with a view to re-evaluating that experience in a more constructive and helpful manner. By changing the frames (e.g. categorisations, beliefs, evaluations) someone holds about their experiences, this, in turn should affect their ongoing states (*3) and hopefully give them other explanations, interpretations and options.

So it begins…
Whilst running a project management course

❝ **I am curious as to how the meta-model questions affect us psychologically** ❞

recently, I heard a delegate (let's call him Fred) say: 'My project isn't working…it's a nightmare!' Now, in order for him to reach that conclusion, Fred had to go through a (probably unconscious) thinking process. In a previous article I introduced the READ model (*4) (see Figure 1) and I believe that will serve as a useful platform for describing the thinking process. In a nutshell, we have an experience of the outside world (or we re-access a memory) and then we *describe* that experience (i.e. what happened?) We then *analyse* or categorise the experience (i.e. what type of experience is this? What category does this 'thing' fall into?) We *evaluate* the experience (i.e. what does this mean? Is this good or bad?) And then *reflect* (i.e. what do I

do with/as a result of that? What do I learn from that?).

Fred is running a project and encounters a couple of challenges. He experiences a mistake and a missed deadline. For Fred, these two things fall into the category of 'failures'. This means the project isn't working 'properly' (i.e. it's a nightmare) and so he feels despondent about the project. From the 'deep structure' (*5) (stored experience) of seeing and remembering two mistakes, Fred gives us the 'surface structure' (words) of: 'My project isn't working…it's a nightmare!'

Using the meta-model questions

When someone presents a problem, Bandler and Grinder suggest we have at least 3 options (aside from ignoring the statement): (i) accept it at face value (e.g. Oh dear, that's a shame); (ii) guess what the details are (e.g. is that due to a lack of planning?); or (iii) 'meta-model it', i.e. 'ask for the piece that has been linguistically deleted' (e.g. which project? What is not working?)

When listening to someone with a view to 'meta-modelling', I like the idea that they are presenting me with a mental jigsaw puzzle picture (i.e. their generalisation). If there are too many pieces missing and hence I cannot make a picture of what they are saying, I will need to ask for more information to fill in the gaps (the deletions). Then I'm interested in what holds the pieces together to make the picture (the distortions). Finally, I want to reframe it, to give the other person some alternative ways of looking at the picture.

Using the READ model, I start getting them to re-describe the situation to 'get the full picture' (mostly through 'deletion' questions) and then re-analyse/re-categorise what they have told me (mostly through 'distortion' questions). With re-evaluation and re-reflection, some of the questions I will ask them directly

"The purpose is to help someone get back to their original experience"

and some I ask myself to create some new frames and reframes:

- *Re-description:* e.g. which project are they referring to? What happened? When/where did it happen?
- *Re-analysis:* e.g. what is the project designed to deliver? How do they know it's not working? What might have caused the issue? How is 'what went wrong' different to most other projects? How many projects have no mistakes and no missed deadlines?
- *Re-evaluation:* e.g. how is the situation manageable? What might be useful about what happened? Aside from the two issues, what is working well?
- *Re-reflection:* e.g. what have they learnt from this? What might they do differently now and in the future?

Questions, questions…

When asking 'deletion' questions we are usually chunking down into detail. This encourages the 'client'

REFLECTION OF EXPERIENCE

EVALUATION OF EXPERIENCE

ANALYSIS OF EXPERIENCE

DESCRIPTION OF EXPERIENCE

EXPERIENCE: RE-ACCESSING INTERNAL REPS

EXPERIENCE: DIRECT & SPONTANEOUS

EXTERNAL WORLD

Figure 1

to detail out their model of the world in the context you are discussing. In terms of the psychological effect it has, I would suggest that it gives them a clearer internal representation of the situation. Whilst everyone is individual, perhaps the sub-modalities of their picture might become a movie, more in focus, more colourful and at a more comfortable distance?

However, where do the 'generalisation' and 'distortion' questions take the client?

If we take an example with a modal operator of impossibility, e.g. 'I can't manage projects', we might ask a range of questions but what direction does the question orient the client? See Figure 2.

The examples in Figure 2 are not necessarily *guaranteed* to take the client in a specific direction and none of the questions are particularly better than the others. However, when asking people meta-model questions it is perhaps useful to understand *where you intend on taking them*. In this way, you are becoming more purposeful with your questions.

Eliciting generalisations and distortions
If you wish to know more about your own generalisations and distortions about a particular context you might try writing down some answers to the following questions. The results should give you some ideas of both limiting and empowering beliefs you have. So pick a topic (e.g. relationships) and take a moment:

- What are… (e.g. relationships)?
- What is true of… (e.g. relationships)?
- The good thing about (e.g. relationships) is?
- The problem with (e.g. relationships) is?
- What do (e.g. relationships) allow you to do?
- What do (e.g. relationships) stop you doing?
- In the context of (e.g. relationships), I am good at…?
- In the context of (e.g. relationships), I am not so good at…?
- What should (e.g. relationships) be/be like?

In order to get a sense of some of your (empowering and disempowering) distortions, for each answer you give, create another column and ask yourself: 'How do I know this?'

Once you've done this, take any of the generalisations you'd like to change and meta-model away… ∎

Question	Possible psychological affect/direction
What would happen if you did?	Takes client forward to possible future timelines
What causes you to think that?	Takes client back to past experiences
What stops you?	Takes client to current experience, probably to limitations in their capabilities and environment
How do you know?	Takes client on a 'reality check', back through more specific evidence (i.e. chunk down) of past experiences
According to whom?	Takes client back to themselves or other people telling them of their limitations

Figure 2
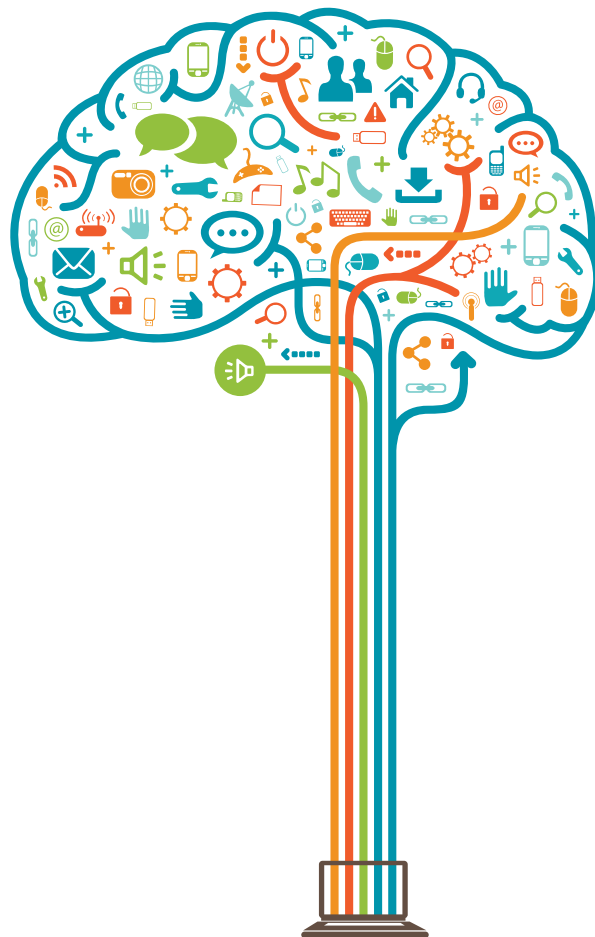
References
(*1) Richard Bandler and John Grinder, *The Structure of Magic I*.
(*2) For an excellent book on the meta-model, I would recommend L Michael Hall, *Communication Magic: exploring the structure and meaning of language*.
(*3) See 'Frames and States' in *Rapport* issue 41.
(*4) See 'Rebuilding our Map' in *Rapport* issue 39.
(*5) See (*1) for more details on Chomsky's concepts of 'surface' and 'deep' structure.

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