

# Making better decisions

How to counter blind spots in your thinking by understanding cognitive bias

By Peter Burow



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*We all like to think that we make decisions logically and objectively. Neuroscientists working with economists are discovering, however, that our decision-making isn't as rational as we believe. In fact, the way our brain functions means that we all have blind spots and biases that influence the choices we make. By learning how to spot the most common blind spots, both in yourself and in your team you can increase the effectiveness of your decisions.*

Decision-making is one of an executive's most important responsibilities. It's also often the hardest and riskiest part of the job. Poor decisions can damage the business and careers - sometimes permanently. Take the recent example of the Deepwater Horizon oil spill crisis in the US; bad luck or bad decision-making?

Of course it will be sometime before the situation is fully analysed and properly understood, so any discussion is necessarily limited to theory or conjecture. But it's certainly an interesting case. From one perspective, it could be argued that BP CEO Tony Hayward presided over an organisational culture that permitted risk taking, ignored expert advice, disregarded warnings about safety issues and hid facts. What if BP's failure to respond to the disaster itself with sufficient speed and attention was also a direct consequence of this flawed culture? Tony Hayward's comments throughout the process are revealing:

Hayward's apparent inability to understand public reaction to his comments makes him appear at best, defensive and out of touch with the reality of the situation and, at worst, weak, petty and selfish. But how could someone so senior with a team of top advisors be so blind? To find out, we need to look at the role blind spots play in how decisions are made.

### *The way our brain works can sabotage our decisions*

As leaders, we are constantly called upon to deal with complexity. Faced with the need to process vast amounts of information in order to make decisions, we resort to unconscious routines. These mental shortcuts (also known as heuristics, or decision rules which are simple for the brain to compute) enable us to make decisions and avoid both 'information overload' and 'analysis-paralysis'. In general, heuristics are very useful when making most routine decisions or when time is of the essence, but they can also lead to severe and systematic errors in judgment.

Researchers at INSEAD, Harvard, Oxford and Stanford Universities have identified a whole series of such flaws in the way we think when making decisions (besides heuristics, others include 'motivational factors' and 'social influence'). Of course, what makes these blind spots so dangerous is their invisibility. Because they are biases that are hardwired into our brains, we fail to recognise them and repeatedly make the same mistakes. These blind spots effectively create holes in our reasoning ability which, over time, produce recurring patterns of erroneous decision-making. In a group the combined, overlapping biases of the individuals in the team reinforce and amplify biases. This can result in disastrous decisions.

While no one can entirely rid his or her mind of these ingrained patterns, it is possible to learn strategies to compensate for bias. The best approach is always awareness and the first step is to understand how these blind spots are formed. Executives who familiarise themselves with these blind spots and the diverse forms they take can consciously adapt their decision-making processes to ensure that the decisions they make are sound.

### *How emotions colour our thinking - our core beliefs at work*

While neuroscientists continue to grapple with the complex ways that emotions interact with and influence the cognitive skills involved in decision-making, one thing is clear: emotions play a crucial role. In fact, we actually can't make decisions without them. By informing our desires,

preferences and aversions, emotions shape our rational calculations. This is useful and necessary, because if we didn't have an emotional response to something (one way or another) we wouldn't be motivated to make a decision about it. Complete apathy leads to total lack of interest – we 'tune out'.

Problems develop, however, because our emotional responses inform our rational decision-making in a way that perpetuates our own personal philosophy to life (our unique worldview). Neuro-economics describe people who decide different things in identical situations as different 'types'. These different types are described as having different decision rules or different core beliefs.

Core beliefs are deep-seated perceptions that everyone has about the world around them. Over the course of our lives, each of us has developed a complex matrix of core beliefs that we believe will keep us 'safe' in the world. These beliefs have evolved over millennia to help us respond quickly and unthinkingly to dangerous situations; they act as our survival strategies and are embedded in the most primitive parts of our brain.

### *System 1 and System 2 - Your emotional and rational Brain*

The interaction of our emotion-based core beliefs and our rational brain is illustrated in Diagram 1 - 'How the Brain Makes Decisions'. It shows how the two cognitive systems in our brain interact to make decisions and ultimately produce behaviour.

As Daniel Kahneman (who won a Nobel Prize for his



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work in the area of Neuroeconomics) explains, these two systems differ in speed, flexibility and operation:

*The operations of System 1 (our emotional and most primitive brain – where our core beliefs live) are typically fast, automatic, effortless, associative, implicit (not available to introspection) and often emotionally charged; they are also governed by habit and therefore difficult to control or modify. The operations of System 2 (our rational, more evolved and modern brain) are slower, serial, effortful, more likely to be consciously monitored and deliberately controlled; they are also relatively flexible.*

Both Systems 1 and 2 influence our judgments and choices - meaning that how we feel about something is as important as what our reasoning tells us about it. While this may conflict with our view of our own decision-making as highly rational, it often lines up with our experience of other people (who we see as occasionally irrational and emotional when we are arguing with them).

What makes this process particularly hard to track in ourselves is our tendency to rely on our primitive brain

with its relatively simple (emotionally-charged core belief) evaluations to arrive at our decisions. We do this because it's so much easier and requires far less effort than using our rational brain. We then retrospectively justify (or post-rationalise) our core belief-based decisions using our rational brain and see them as rational choices.

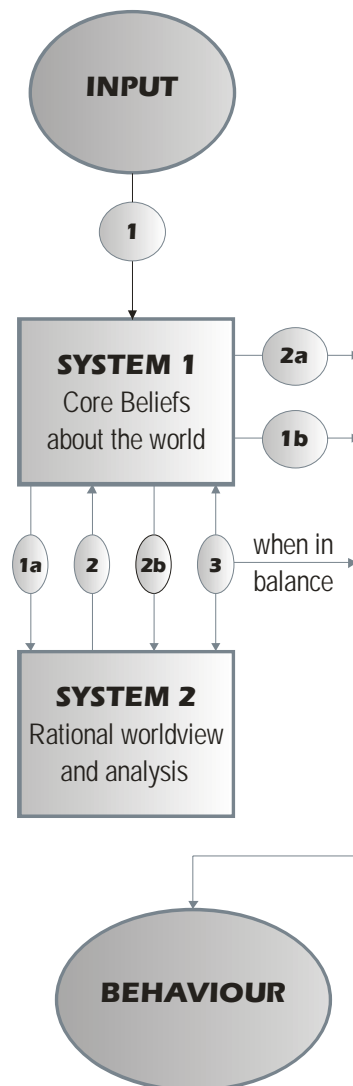
In this way, each core belief's survival strategy filters out important data. This produces blind spots in System 1's emotional responses that influence what otherwise seem to be System 2's rational decisions. They are therefore linked to the many forms of what psychologists call 'cognitive bias', which is a tendency to draw incorrect conclusions in certain circumstances based on partial evidence.

An understanding of your own core beliefs is a great asset for any current or aspiring leader because it enables you to predict and therefore circumvent likely cognitive biases, thereby increasing the effectiveness of your decision-making.

In the same way, insights about core beliefs and how they drive our decision-making can also be applied in a

Diagram 1 - 'How the Brain Makes Decisions'

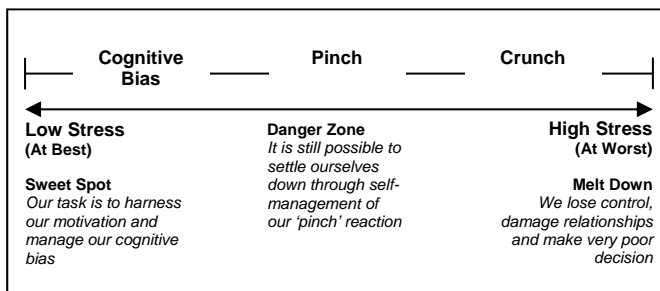
1. Input enters brain and the limbic system reacts emotionally, based on existing core beliefs – System I.
  - a) If the situation is 'out of the ordinary' (neuroscientists refer to this as "novel"), the information then moves to System II. Here it is assessed and matched against the individual's conscious world view and analytical style to reach a decision.
  - b) If the situation is not novel, an habitual response is invoked and translates into immediate behaviour.
2. The trial decision from System II is checked by the limbic system:
  - a) If it lines up with past experience (i.e. a similar decision has been made previously and the outcome is familiar) the individual will feel 'comfortable' with the trial decision, which will be embraced and translated into action.
  - b) If no similar decision has been made previously and the anticipated outcome is unfamiliar, a feeling of discomfort will arise and the trial decision will then be sent back to System II for further thought.
3. This moving between the two systems will continue until a balance is reached and both systems are comfortable with the trial decision. Only then will it be translated into behaviour.



team context; by understanding the core belief profiles of the team, it becomes possible to predict the most likely accumulative and amplified cognitive biases that the team will experience in group decision-making processes.

Furthermore, because emotion is so central to our decision-making, the implications of our core beliefs-driven survival strategies are wide-reaching. Depending on the level of stress the brain is experiencing (which usually increases as the situation becomes more novel or ‘out of left field’) our core beliefs play a variety of different functions. Each represents a different band along the core beliefs continuum (see Diagram 2).

Diagram 2: The Core Belief Continuum: From Best to Worst



At best, when everything is proceeding ‘business-as-usual’, our core beliefs help us make timely decisions. While these decisions may be correct, they are inherently biased. With awareness, we can learn to manage these biases using our rational brain by checking that our rules or heuristics are actually appropriate for the situation and, if they aren’t, by creating other less biased options.

As we become slightly stressed, our core beliefs encode the sorts of things that are likely to trigger us emotionally (based on whatever it is that we learnt to associate with survival when we were young). As the stress intensifies, we can get to an emotional tipping point, when we get triggered because we subjectively perceive (usually inaccurately) that our survival is being threatened. This explains why you might find some thing frustrating, annoying or infuriating, while others seem blissfully unaware it even happened - you simply have different core belief survival strategies that are wired to see different things as potential threats.

When something triggers you emotionally, you reach this emotional tipping point. This is also known as experiencing an emotional ‘pinch’. Unfortunately, as your stress levels increase further, usually because the issue isn’t addressed, the pinch can progress further to a second, much more dramatic tipping point called a ‘crunch’. This is often followed by damage to relationships, both personal and professional, and very poor decisions.

The rest of this article will be focussing on the cognitive bias aspect of this continuum rather than the

pinch or crunch tipping points. While it assumes at least a basic understanding of the core belief profiles in making the links to different cognitive biases, that’s certainly not necessary to grasp the key concepts we’ll be discussing. As an introduction, Diagram 3 provides a brief overview of the nine core beliefs. If you’re interested, you can find out more information about the core beliefs – and start the process of identifying your own and those of your team – by reading the book ‘Core Beliefs: Harnessing the Power’ (Burow, 2010).

## Understanding Cognitive Bias

Researchers agree there are at least twenty distinct cognitive biases that can be tracked and measured in both in individuals and collectively in teams. This does not include biases caused by an inability to understand and work with numbers - also known as innumeracy (see Table 1). These can be grouped into five main categories:

- 1. Pattern recognition biases:** Misinterpreting conceptual relationships or identifying patterns where there are none
- 2. Action-orientated biases:** The drive to take action too quickly

Diagram 3: The Nine Core Beliefs

Each of us has three of these core beliefs:

**Core Belief Profile 1 – Perfectionists** *Focus: Integrity/Clarity*

Driven by the belief that you must be good and right to be worthy. Consequently, are conscientious, responsible, improvement-oriented and self-controlled, but also can be critical, resentful and self-judging.

**Core Belief Profile 2 – Givers** *Focus: Influence*

Driven by the belief that you must give fully to others to be loved. Consequently, are caring, helpful, supportive and relationship-oriented, but also can be prideful, overly intrusive and demanding.

**Core Belief Profile 3 – Performers** *Focus: Achieving Results*

Driven by the belief that you must accomplish and succeed to be loved. Consequently, are industrious, fast-paced, goal-focused and efficiency-oriented, but also can be inattentive to feelings, impatient and image-driven.

**Core Belief Profile 4 – Romantics** *Focus: Elite Standards*

Driven by the belief that you must obtain the longed-for ideal relationship or situation to be loved. Consequently, are idealistic, deeply feeling, empathetic and authentic to self, but also dramatic, moody and sometimes self-absorbed.

**Core Belief Profile 5 – Observers** *Focus: Analysis/Depth of Technical Knowledge*

Driven by the belief that you must protect yourself from a world that demands too much and gives too little to assure life. Consequently, are self-sufficiency seeking, non-demanding, analytical/thoughtful and unobtrusive, but also can be withholding, detached and overly private.

**Core Belief Profile 6 – Loyal Sceptics** *Focus: Loyalty/Scepticism*

Driven by the belief that you must gain protection and security in a hazardous world you just can't trust. Consequently, are themselves trustworthy, inquisitive, good friends and questioning, but also can be overly doubtful, accusatory and fearful.

**Core Belief Profile 7 – Epicures** *Focus: New Opportunities*

Driven by the belief that you must keep life up and open to assure a good life. Consequently, are optimistic, upbeat, possibility- and pleasure-seeking and adventurous, but also can be pain-avoidant, uncommitted and self-serving.

**Core Belief Profile 8 – Protectors** *Focus: All or Nothing*

Driven by the belief that you must be strong and powerful to assure protection and regard in a tough world. Consequently, are justice seeking, direct, strong and action-oriented, but also overly impactful, excessive and sometimes impulsive.

**Core Belief Profile 9 – Mediators** *Focus: Minimising Conflict*

Driven by the belief that that to be loved and valued you must blend in and go along to get along. Consequently, are self-forgetting, harmony seeking, comfortable and steady, but also conflict avoidant and sometimes stubborn.

3. **Stability biases:** The tendency toward inertia in the presence of uncertainty

4. **Interest biases:** Arising in the presence of conflicting incentives (including non-monetary and even purely emotional ones)

5. **Social biases:** The preference for harmony over conflict

**Cognitive bias in action: poor decision-making at BP**

Returning to the BP situation, the initial information available suggests that there were the apparent

elements of underestimating risk, ignoring advice, disregarding warnings about safety issues and post-rationalising . These are all classic markers of **Confirmation bias**.

This suggests that BP decision-making may have been biased towards confirming existing beliefs by seeking only information that confirmed preconceptions and by ignoring evidence in support of other viewpoints. Unchecked, Confirmation bias results in ill-informed, narrow and partial decisions most commonly seen in situations of ‘Groupthink’.

**Table 1 - Cognitive Bias and the core beliefs**

CATEGORY OF BIASES	COGNITIVE BIAS	CORE BELIEF PROFILE								
		1	2	3	4	5	6	7	8	9
PATTERN RECOGNITION BIASES	<b>Saliency Bias:</b> Giving disproportionate weight to recent dramatic events, thereby exaggerating the probability of rare but catastrophic occurrences	✓	✓		✓		✓			✓
	<b>Confirmation Bias:</b> Seeking information that confirms an existing perspective and ignoring evidence that supports alternative views	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<b>False Analogies Bias:</b> Relying on comparisons with situations that are not directly comparable	✓	✓	✓			✓			
	<b>Champion Bias:</b> Evaluating options on the basis of the track record of the individual who suggests it rather than on the facts	✓	✓					✓	✓	
	<b>Availability Bias:</b> Overestimating the risks of an event that can be imagined vividly, while leaving oneself exposed to less vivid risks		✓		✓		✓		✓	
ACTION-ORIENTATED BIASES	<b>Over Confidence Bias:</b> Overestimating one's ability to affect future outcomes, taking credit for past outcomes and minimising the role of chance. Also overestimating our skill level relative to others				✓			✓	✓	
	<b>Unfounded Optimism Bias:</b> Being excessively optimistic about the future and unrealistic about the likelihood of positive/negative events				✓			✓	✓	
	<b>Competitor Neglect Bias:</b> Planning without factoring in competitive responses	✓			✓	✓				✓
	<b>Over Cautiousness Bias:</b> Focusing on worst case analysis and failing to take any appropriate action at all (ie. the 'Prudence Trap')	✓	✓		✓	✓	✓			✓
	<b>All or Nothing Bias:</b> Failing to take a portfolio risk and instead seeking complete protection (ie. putting all the eggs in one basket and then watching the basket)	✓			✓			✓	✓	
STABILITY BIASES	<b>Status Quo Bias:</b> Favours options that perpetuate the status quo (to avoid both taking action/responsibility and opening oneself to criticism/risk)	✓	✓		✓	✓	✓			
	<b>Sunk Costs Bias:</b> Making choices that justify past flawed decisions, thereby avoiding acknowledging a past error	✓		✓	✓		✓		✓	✓
	<b>Anchoring Bias:</b> Giving disproportionate weight to the first information received		✓	✓				✓	✓	
	<b>Loss Aversion Bias:</b> Being swayed by the framing rather than the facts themselves (ie. being risk averse when an option is posed in terms of making gains and risk seeking when framed in terms of avoiding losses)	✓	✓		✓	✓	✓			✓
INTEREST BIASES	<b>Misaligned Perception Bias:</b> Choosing options that align with one's individual perception of the hierarchy or relative weight of goals pursued by the organisation (rather than on an agreed understanding of the hierarchy/weight)				✓	✓		✓	✓	
	<b>Inappropriate Attachment Bias:</b> Preferring options that support or are linked to one's emotional attachment to certain individuals or elements of the business		✓	✓			✓	✓	✓	✓
SOCIAL BIASES	<b>Herding Instinct Bias:</b> Conforming to the dominant views of the group	✓	✓	✓						✓
	<b>Sunflower Management Bias:</b> Aligning with the views of the leader or ultimate decision-maker (whether expressed or assumed)	✓	✓	✓			✓			✓
	<b>False Consensus Bias:</b> Overestimating the extent to which others share our views, beliefs and experiences	✓		✓				✓	✓	
	<b>Default Bias:</b> Defaulting to an existing strong social norm	✓	✓	✓		✓	✓			✓

Groups with this bias often exhibit a degree of ‘we’re right, you’re wrong’ certainty that is often unwarranted. In the BP case, this may help explain the wildly inaccurate early estimates regarding the environmental impact of the disaster.

BP’s actions also showed signs of three other biases: **Unfounded Optimism bias** (being excessively optimistic about the future and unrealistic about the likelihood of positive/negative events), **Over Confidence Bias** (overestimating their ability to affect future outcomes in the cleanup process) and **False Consensus bias** (overestimating the extent to which others shared BP’s perspective on the disaster and instead assuming that everyone else thinks the same way they do).

Each of these biases is common to the Core Belief Profile 3. Perhaps the team had too many Core Belief Profile 3’s in it’s composition, or perhaps they had a number of Core Belief 3 advisors. Or the BP culture may reflect the legacies of Core Belief Profile 3’s in the past.

While we can hypothesise about the decision-making factors that contributed to the accident, it’s important to note that BP would not be alone in experiencing biased decision-making.

And BP is not alone in this. More than 80% of the leadership teams that we work with in Australia have blinding cognitive biases which only really show up in crisis situations or when corporate performance is so low that it reveals earlier poor decision-making.

### ***Awareness is the key to counteracting bias and overcoming decision-making blind spots***

Highly complex and important decisions are the most prone to distortion by cognitive bias because they tend to involve the most assumptions, the most estimates, and the most inputs from the greatest number of people. And, of course, the higher the stakes, the higher the risk of falling prey to one or more psychological biases and behavioural blind spots because we are stressed and by nature therefore more emotional.

Even if you can’t eradicate the distortions ingrained in the way your mind works, you can build tests and discipline into your decision-making process that can uncover errors in thinking before they become errors in judgment and lead disastrous decisions.

### ***Cognitively balancing cognitive bias***

In a team context, the most effective and proven way to minimise the impact of cognitive bias on group decisions is to create awareness of the team’s bias and to use key questions to balance the bias. When I work with leadership teams, we enhance and sharpen the focus of this awareness by identifying the exact Core Belief profiles in the team using a tool called the Core

Beliefs Inventory and then cross tabulating this with the 20 biases (see Table 1). With this information, it is then possible to tally which of the twenty cognitive biases will have greatest influence over the team. The questions outlined in Table 2 can then be used to counteract the bias and drive more effective decision-making. Calculate key high priority biases within your team and then workshop the relevant questions.

Decision-making, either as a leader or as part of a team, is never an easy process. Unfortunately, as the stakes increase, so too does the likelihood that the outcome will be driven by cognitive bias, rather than the reality of the situation. The good news is that with awareness and questioning, you can significantly reduce cognitive bias. And once done, the effectiveness of your decisions will increase – to the benefit of both you and your team.

#### **Counteracting your team’s decision-making bias**

1. Use the Stanford Inventory to identify the Core Belief profiles of your team members
2. Use Table 1 to calculate the highest Cognitive Biases in the team
3. Use questions that balance up the Cognitive Biases (sample questions in Table 2) to shape decision-making

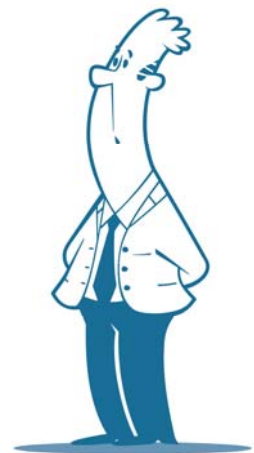


Table 2: Key questions to counteract cognitive bias

	Cognitive Bias	Questions for bringing the bias into consciousness
Pattern Recognition Biases	<b>Saliency Bias</b>	If we knew for certain that everything would go smoothly over the next 12 months, and that no rare but catastrophic events are about to occur, what might you decide to do differently?
	<b>Confirmation Bias</b>	What information can you find that does not support the current way of thinking?
	<b>False Analogies bias</b>	What differences can you find between the current challenge and the past situations that have been referenced in the decision-making process? List as many differences as possible.
	<b>Champion Bias</b>	If this option were being proposed by an unknown person from outside the team, how would you objectively assess its merits?
	<b>Availability Bias</b>	If you knew that none of the major risks you've already identified would eventuate, would that change your decision? What additional unlikely risks can you think of?
Action-oriented Biases	<b>Over Confidence Bias</b>	Assuming you have little ability to control all future outcomes, what role would you say chance could play in future success?
	<b>Unfounded Optimism</b>	If you were to look at this situation from a pessimistic viewpoint, what might you see that could go wrong?
	<b>Competitor Neglect Bias</b>	How are your competitors likely to respond to the implementation of your plan? How might that affect its efficacy?
	<b>Over Cautiousness Bias</b>	What is the best case scenario in terms of outcome? For that situation to eventuate, what would you need to do now?
	<b>All or Nothing Bias</b>	How else could you apply at least some of your resources across a number of portfolios?
Stability Biases	<b>Status Quo Bias</b>	How could we approach this issue in a completely new way? What benefits would this bring?
	<b>Sunk Costs Bias</b>	If you were an external expert, and knew nothing about the history of this issue to date, what would you recommend? If there were no financial issues to consider (ie. the financial slate were wiped clean) what approach would you adopt?
	<b>Anchoring Bias</b>	How many different sources of information have been considered on this issue? How many experts have been consulted? What was the trend of the last batch of information received? What did the information suggest on balance?
	<b>Loss Aversion Bias</b>	What losses could be avoided by adopting this approach?
Interest Biases	<b>Misaligned Perception Bias</b>	Which of the organisation's goals does this approach further? Would everyone agree that this is a high priority?
	<b>Inappropriate Attachment Bias</b>	If this decision were about a different part of the business/involved different people, how might your approach be different?
Social Biases	<b>Herding Instinct Bias</b>	If this were a decision that was solely your responsibility and for which you alone would be held accountable, what would you do?
	<b>Sunflower Management Bias</b>	If this decision were being made anonymously and knew that no one – including both the leader and ultimate decision-maker – knew what you had decided, what would you do?
	<b>False Consensus Bias</b>	How are the drivers of the different stakeholders different from our drivers? What stakeholders will be disadvantaged by this decision and why? What would need to happen for the key stakeholder groups to consider the decision outstanding?
	<b>Default Bias</b>	If a team at one of your major competitors was faced with this challenge, what would they do?