



Sept 2018

**Knowledge Management and Cognitive Bias;
Why our brains don't always work
the way they should,
and what this means for KM.**



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This newsletter is about some of the flaws that come with being human.

It covers the topic of Cognitive Bias and the issues this raises for Knowledge Management. It is about how humans make judgments based on the way their brains work, and how these judgments can be fatally flawed. It is about the difference between real knowledge and illusory knowledge or fake knowledge, and how KM can help us overcome some of the consequences of using the latter.

If you involve human beings in any part of your knowledge management approach, this newsletter is for you.

What is cognitive bias?

Cognitive biases are the plague of Knowledge Management. They cause

ISO standard, and free access to the Knoco KM survey report.

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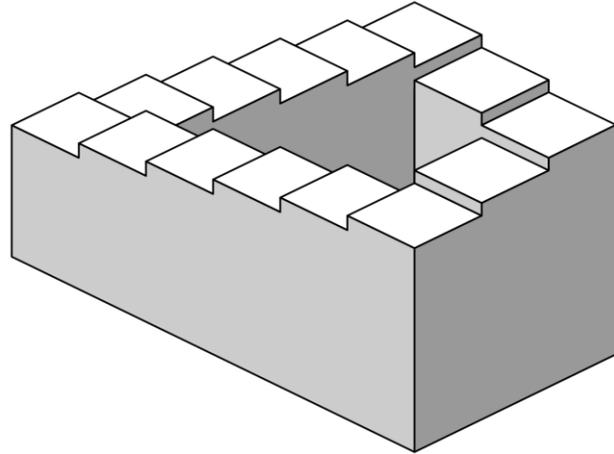
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people to neglect evidence, to fail to notice things, to reinvent their memory, and to be overconfident about their own knowledge. They are also an inevitable outcome of the way the human brain evolved to deal with potential overloads of information, through developing a lot of shortcuts to understanding, and through prioritising the information we retain; focusing on information that is consistent, that is used frequently, used recently, and likely to be needed in future.

Many of these cognitive shortcuts may have been valuable survival strategies in simpler times when we lived in hunter-gatherer societies and were engaged with catching food and not being eaten. The problem is that they are often not appropriate for the more complex modern world where we may be engaged in developing new products or managing complicated megaprojects.

For example, [the "Social proof" cognitive bias](#) means that if we are in doubt what to do, we tend to look at what others are doing and copy them. When a cave bear attacks and everyone is running away, this is a good strategy. When you are trying to develop a breakthrough product, you may need to think outside the box and not to follow the crowd. Similarly the "illusion of truth" effect, where people are more liable to think a statement true if they have heard it before, may have been a shortcut to knowledge in the days of oral history, but is a drawback in today's world of misinformation and fake truth.

Knowledge management needs to be able to distinguish between truth and bias, if it is to be a reliable tool for improving decision-making in an organisation. Knowledge Managers should be aware of the main cognitive biases, and seek to counter them through good facilitation and the use of Knowledge Management process. Below we discuss four of the cognitive biases most likely to influence our KM efforts, and how we can avoid them so that our organisational knowledge is not based on illusion.



[Contact Knoco](#) if you want more help with developing your Knowledge Management framework

The confirmation bias

The confirmation bias is perhaps the most powerful bias we need to deal with in KM. It is the bias that drives us to accept new knowledge only when it agrees with what we already believe; a tendency to want to confirm existing beliefs rather than introduce new ones. The confirmation bias is what causes polarised groups to form - those who support Brexit or Donald Trump (for example) select and accept information that supports their view, while people with opposing views will look for and accept contradictory information, each accusing the other of reading fake news.

In Knowledge Management terms, this could be a disaster. If people seek to reinforce the status quo and only "see" the new knowledge that supports this, then how can an organisation learn? Once a "best practice" is adopted, for example, then the confirmation bias would work against this ever being improved.

In order to counter the confirmation bias, your KM program should include systematic learning from experience based on rigorous root cause analysis. Use techniques such as [After Action Review](#) and [Retrospect](#), where outcome is tested against expectation and new knowledge derived through group

conversation around root causes, thus testing biases against evidence. Such techniques are far more rigorous than an expert or project manager writing down knowledge based on their own views. Both After Action reviews and Retrospects also look for the Surprises - those times when things did not go as expected, and were unexpectedly good or unexpectedly bad. Surprises are the opposite of confirmation, and any process that examines surprises will counter the confirmation bias.

You can also make use of [communities of practice](#) to counter the confirmation bias. [A study of cognitive bias at the World Bank](#) concluded that "group deliberation among people who disagree but who have a common interest in the truth can harness confirmation bias to create an efficient division of cognitive labour. In these settings, people are motivated to produce the best argument for their own positions, as well as to critically evaluate the views of others.

"There is also substantial laboratory evidence that groups make more consistent and rational decisions than individuals and are less likely to be influenced by biases, cognitive limitations, and social considerations. When asked to solve complex reasoning tasks, groups succeed 80 percent of the time, compared to 10 percent when individuals are asked to solve those tasks on their own. By contrast, efforts to debias people on an individual basis run up against several obstacles (and) when individuals are asked to read studies whose conclusions go against their own views, they find so many flaws and counterarguments that their initial attitudes are sometimes strengthened, not weakened".

"What the human being is best at doing is interpreting all new information so that their prior conclusions remain intact."

— *Warren Buffet*

[Contact Knoco](#) to learn more about Communities of Practice

The attention bias

The attention bias is our tendency to see the things we look out for or pay attention to, at the expense of other things. For example the phrase "since I read about cognitive bias, I see it at work everywhere" is an example of the attention bias, as is the way that once you buy a red car, red cars suddenly seem much more common. They are not more common that they were, you are just paying attention to them. The classic example of the attention bias is the Gorilla Illusion - if you have not seen it then [watch the video here](#). Alternatively you can [try this test to see how good your attention is](#).

Attention bias can have a dramatic impact on the decision-making process and can lead people to make bad or inaccurate choices, if they pay attention to only a few aspects of the situation. It can also have an impact on memories. Since people can become overly focused on a single item, they might fail to notice other aspects of the situation. When recollecting the event later on, memories may be distorted, inaccurate, or incomplete due to this bias.

In Knowledge Management, the best way to capture knowledge that does not suffer from attention bias is to include knowledge and observations from many people, all of whom may have been attending to different things. For example, in a multidisciplinary team you can assume that each team member will pay attention to their own discipline, and thus will see things that the others have missed. Use team techniques such as [After Action Review](#) and [Retrospect](#), or individual interviews of all team members in order to counter the attention bias and capture as much knowledge as possible.



[Contact Knoco](#) to learn more about After Action Review and Retrospect

The overconfidence bias (the illusion of knowledge)

The confidence bias is an interesting one, and has a major effect on performance in organisations. Overconfidence in particular is often linked to a lack of knowledge - the "[Dunning-Kruger effect](#)", where people with limited knowledge are overconfident in what they can achieve. The confidence bias is also known as the Lake Wobegon effect, after the fictional town where "all the children are above average". This bias is behind the fact that 21% of Americans think it "very likely" or "fairly likely" that they will be millionaires within 10 years, that 32% to 42% of software engineers think they are in the top 5% at their company, and that more than 90% of the faculty of one university rated themselves as above average teachers.

People who overestimate their own ability are doubly dangerous. Firstly they are less likely to look for knowledge from others due to overconfidence in what they think they already know, and secondly they may be mistaken by others as experts. Strange as it may seem, people are much more willing to accept knowledge from a confident person, even though confidence is often in inverse ratio to knowledge.

Overconfidence leads to wishful thinking, which is one of the primary causes of project cost and time overruns. Overconfidence is what happens when you don't know what you don't know, and [a recent Insead study](#) shows that overconfidence can be significantly reduced just by considering your lack of knowledge. In this study they gave people general knowledge questions, and found (as is often the case) that people were overconfident about their answer (You can [take a similar test here, to test your own level of confidence](#)). Then they tried again with two groups of people - with the first group they asked the people to list a couple of missing pieces of knowledge which would help them guess the answer better, and with the second group they asked them to consider reasons why their choice might be wrong (a "devil's advocate" approach).

The Insead study clearly shows that the approach of "considering the unknowns" has a major impact on overconfidence, while the devils advocate approach is far less powerful. The report concludes that overconfidence often arises when people neglect to consider the information they lack, and suggests that when judging the likelihood of an event or making a project plan, people first should make a list of the things they don't know.

In Knowledge Management, we have a simple and powerful process that allows exactly this process of "Considering the unknowns". This is the [Knowledge Gap Analysis](#), or its more elaborate version for larger projects - the [Knowledge Management Plan](#). Both of these processes require a team to list the things they do not know (thus reducing overconfidence) and then set up learning actions to acquire the knowledge (thus reducing the number of unknowns). Processes such as [Peer Assist](#) are also very powerful in reducing the overconfidence that comes with lack of knowledge. Your KM program should include these processes in the early stages of projects, to counter the overconfidence bias.

[Contact Knoco](#) to learn more about Knowledge Gap Analysis and KM Planning

Fallible memory (the illusion of memory)

Would you store your documents in a system that:

- Never stores many of them properly in the first place;
- Begins to lose them as soon as they are filed;
- Often won't let you find them when you need them;
- Returns search results that are wrong;
- Allows documents to be falsified; and
- Gradually adjusts all the documents to fit what you currently believe?

Of course you wouldn't - that would be the most unreliable document management system ever - and yet this is the way that the brain deals with memories. There are 6 ways in which brains lose or distort the knowledge they contain, listed below:

- Transience - the issue of the forgetting curve, and how our ability to recall declines over time. We go from remembering specifics to remembering the gist of what happened, and what we typically do later on is "fill in" specific details of a specific event with what typically would have happened in that situation
- Absent-mindedness - the process whereby the memory is never properly encoded, or is simply overlooked at the point of recall, and

never transferred from short-term to long-term memory. When your attention is divided, you never store the memory in the first place.

- Blocking - the process where you know you know something, but you can't recall it. "It's on the tip of my tongue" you say, but you still can't recall the knowledge you know that you know.
- Misattribution - where you recall something that came from a completely different source. For example [president Reagan repeatedly told a story](#) about a heroic pilot to whom he posthumously awarded a medal, when he was actually remembering a scene from a movie and misattributing this as his personal experience. Misattribution can be a real problem with eyewitness testimony.
- Suggestibility - the way in which someone or something can implant false memories in your mind; a very disturbing phenomenon because the memories we've integrated from outside sources seem as truly real as our own.
- Bias - the way in which you gradually filter your memories to become consistent with your current worldview and with your personal "narrative". There are in fact 4 biases that we are prone to when editing our memories: Consistency and change bias, hindsight bias, egocentric bias, and stereotyping bias.



Some of the ways in which Knowledge Management can help address these failings of the human memory include:

- Team reflection processes, such as [Action Review](#) and [Retrospect](#), which are opportunities for a team to review and rehearse what

happened in an activity or project. By talking together, they fill in the gaps caused by absent-mindedness, and help cement the memories deeply enough to combat some (but not all) of the transience. AARs and Retrospects should become a habit in the organisation, and should be held as soon as possible after the activity in question, before transience sets in.

- Rehearsal through conversation - perhaps through conversations in [communities of practice](#), keeps knowledge fresh and avoids many of the time-related aspects of knowledge loss. Ensure your community discussions are open to all, so all practitioners get constant exposure to discussion, and can exercise their memories on a daily basis.
- [Codification into Knowledge Assets](#) - imperfect as codification is, it is the only way to retain details in the long term and avoid all of the issues mentioned above.

[Contact Knoco](#) to help with your knowledge codification.

Other biases

Wikipedia has a list of nearly 200 cognitive biases. Here are a few more than we need to be aware of when planning our KM programs.

- The availability bias - overestimating the likelihood or importance of things depending on how easy they are to recall. Recent and well publicised events are often seen as more important or common than they really are.
- The sunk cost bias - treating things more favourably if you invested a lot of time, money, effort or pain to get them.
- The curse of knowledge - how experts find it very difficult to communicate their knowledge to novice, which is why it is useful to involve a facilitator to help experts capture their knowledge.
- The IKEA effect - the tendency for people to place a disproportionately high value on things they have "made themselves", which tends to mean people treat their own innovations and best practices as more important than those of others.
- Survivorship bias - concentrating on the people or things that "survived" some process and inadvertently overlooking those that didn't because of their lack of visibility. This can be countered by

learning from failures as well as successes.

- Shared information bias - the tendency for group members to spend more time and energy discussing information that all members are already familiar with, and less time and energy discussing information that only some members know. This bias is often driven by a desire for consensus, and can be a real inhibitor to effective knowledge transfer.

News from Knoco

Some updates from across the Knoco global team are listed here.

Knowledge Management Standard - status update

The British Standards institute is holding an open webinar on October 8th to launch the new ISO KM standard. Nick is co-hosting the webinar, together with Ron Young and Judy Payne. We will cover why an international, principles-led, KM standard was needed, the new standard's requirements, and how to go about implementing the standard. You can find details and register your interest [here](#).

Knoco Caribbean



Glenroy London

Knoco Caribbean

Welcome to Glenroy London, who will be representing Knoco in the CARICOM countries. Glenroy has great practical and academic competence essential to successfully planning and implementing KM in organizations. He

has been operating in the Energy Sector for the past thirty-five years globally, regionally and locally in Trinidad and Tobago. He is a certified knowledge manager, and an ISO auditor. Welcome on board Glenroy!

Knoco Indonesia

Knoco Indonesia are conducting their 7th KM Masterclass on November 5th-7th 2018 (3 days) at the Double Tree Hotel, Jakarta. The course will transfer the key skills and techniques of knowledge management, and its strategic implementation. Contact riska@knocoindonesia.com for further details and to book a place.

Knoco Chile

Javier has recently participated in a [Digital Transformation Forum](#) with an speech about Learning Organizations. was part of [a group of professionals](#) in the filming of [a KM documentary and book](#), and was interviewed for [a Podcast on the Job of the Consultant](#).

[On October 11th Knoco Chile will participate in an Education Seminar in Medellin \(Colombia\)](#) and on November 9th will participate in [a neuroscience and learning seminar in Chile](#).

Knoco Brazil

Fabio recently held a Knowledge Management workshop Workshop for the Project Management Unit of the Brazilian Army. As usual, the Bird Island exercise was a great success.



Delegates at the KM training course run by Fabio, working on the Bird island exercise

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