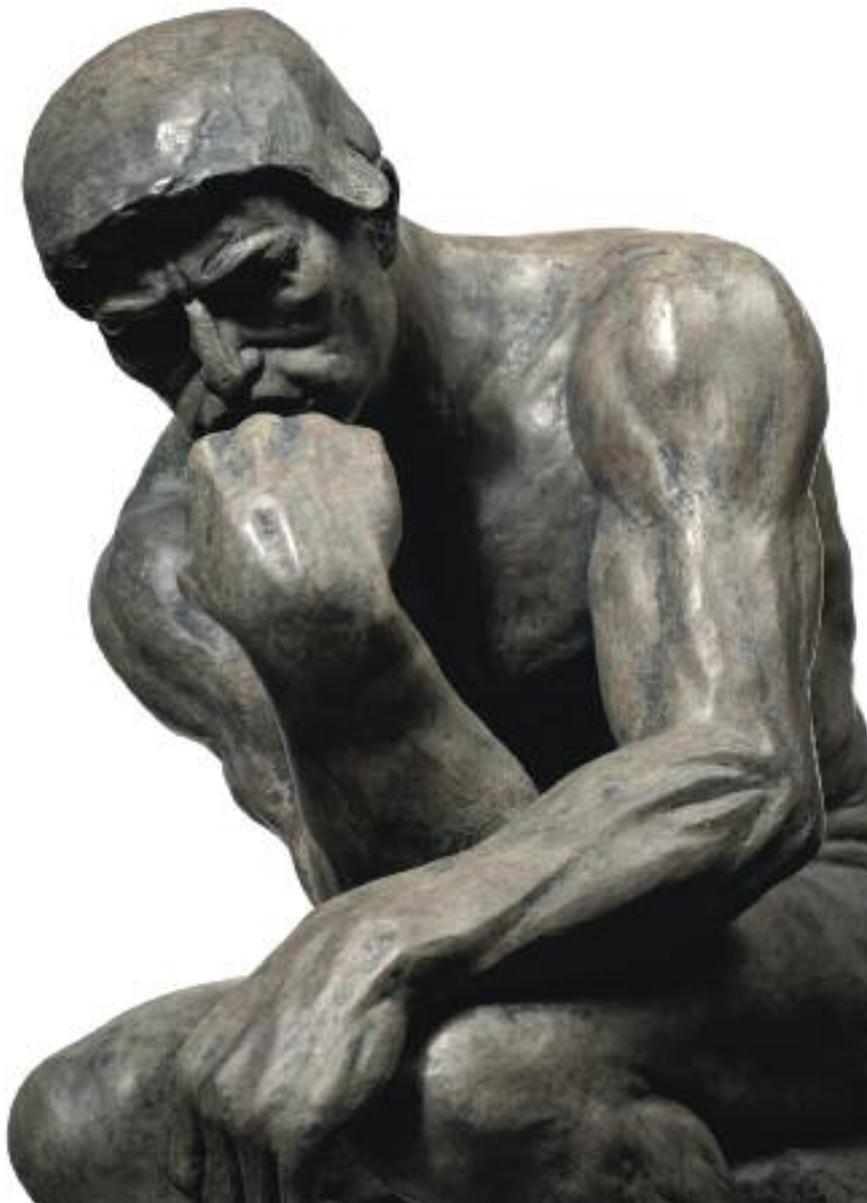


Think, Blink or Sleep on It?

BY BEN NEWELL

When faced with a tough decision, received wisdom variously advises us to “go with our gut feeling”, “sleep on it” or “think it through”. What advice should we follow and is there a single “best” way?



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In order to “get over” the “uncertainty that perplexes us” when we are faced with important, complex decisions, the politician and polymath Benjamin Franklin advised his friend, the British scientist Joseph Priestly, thus:

“My way is to divide half a sheet of paper by a line into two columns; writing over the one Pro, and over the other Con. Then, during the three or four days consideration, I put down under the different heads short hints of the different motives, that at different times occur to me, for or against the measure... I find at length where the balance lies; and if, after a day or two of further consideration, nothing new that is of importance occurs on either side, I come to a determination accordingly... And, though the weight of reasons cannot be taken with the precision of algebraic quantities, yet when each is thus considered, separately and comparatively, and the whole lies before me, I think I can judge better, and am less liable to make a rash step.”

Franklin’s advice seems intuitively sensible. When faced with a perplexing decision we should carefully consider the evidence before us, weigh things up and try to settle upon the best course of action. Indeed, the essence of what Franklin called his “moral” or “prudential algebra” is found in many of the formal descriptive and prescriptive approaches to decision-making, such as decision analysis.

In contrast to this intuitively sensible advice, recent findings have questioned the use of conscious analytical thought for complex decisions. Researchers have sought evidence to support the ideas that we should make “snap” decisions or leave complex choices to the powers of unconscious thought. Such claims are seductive and appealing and have received a great deal of attention in the media, giving rise to such headlines as “Want to make a complicated decision? Just stop thinking” and “Sleep on it, decision-makers told”.

But what is the evidence for these claims? Is there really a “free lunch” to be had when it comes to making tough decisions?

Think, Blink, Sleep

The “think” technique is, in essence, the one described by Franklin; that is, using our conscious, explicit, analytical thought processes to deliberate and consider options carefully.

Blinking – made popular in the book *Blink* by Malcolm Gladwell – is the idea that we should trust our instincts and not deliberate on decisions. Gladwell gives the example of a fire chief instantly deciding to evacuate a burning building moments before it collapsed. This “decision” was made in a split-second (the blink of an eye), and apparently did not involve any deliberation – and yet it turned out to be a very good one, saving the fire chief and his men.

Sleeping on it – or not thinking about a decision – is a technique promoted recently by Ap Dijksterhuis and his colleagues at the University of Nijmegen. They claim that being distracted from a decision allows unconscious thought processes to help us achieve a better outcome. Unconscious thought is said to

be an active process during which information is organised, weighted and integrated in an optimal fashion. The benefits of this process are argued to be strongest when a decision problem is complex – with multiple options and attributes – because unconscious thought does not suffer from the capacity limitations that hobble conscious thought.

Decision-making in the Psychology Laboratory

How can psychologists examine the relative merits of these types of decision-making? A technique we have used recently in our lab is based on one developed by Dijksterhuis. Participants are presented with information about three or four objects (e.g. cars or apartments) described by 10 or more attributes (e.g. mileage, building security) and are asked to choose the “best” object. In most cases “best” is determined by the experimenter assigning different numbers of positive and negative attributes to each option. For example, the

best apartment might have eight positive attributes (low rent, good neighbours etc.) and four negative ones (e.g. poor location), while the “worst” apartment has the opposite arrangement.

After reading the information about the four options for some time, participants are assigned to one of the following three conditions that roughly map on to thinking, blinking and “sleeping” on it:

- In the conscious thought condition, participants are asked to think carefully about their choice for a further few minutes.
- In the immediate thought condition, participants are simply asked to decide as soon as they have read through all the information.
- In the unconscious thought condition, participants are distracted from the task at hand by being asked to solve a succession of anagrams before making their choice.

Which mode of thought is best? The answer to that is we are not sure! As is often

Five Tips for Improving your Decision-making

1. LIST YOUR PROS AND CONS

STRATEGY: A simple technique is to write two lists side-by-side on a piece of paper, headed “Pros” and “Cons”. Once you’ve listed the factors in your decision as one or the other, rate the relative importance of each out of 10. Then simply add up the scores and see if the “pros” outweigh the “cons” or vice-versa.

SCIENCE: This maps on to a formal statistical technique known as “multi-attribute utility analysis”. Decision analysts regard it as the optimal or rational way to make a decision.

USABILITY: This was famously tried and tested by Charles Darwin to help him decide whether or not to marry (he did), and advocated by Benjamin Franklin (see main article).

2. USE THE FIVE WHYS

STRATEGY: We tend to be “shallow searchers”. Far more effective is a “deep search” technique. For example, if faced with the decision about whether to look for a new job, you could ask yourself a series of five or more questions:

- Why am I applying for this job? Because I am unhappy with my current one.

- Why am I unhappy? Because I don’t like this type of work.
- Why don’t I like this type of work? etc.

SCIENCE: This approach is based on psychological research showing that, when faced with a decision, people often fail to generate enough hypotheses or ideas about what they could/should do.

USABILITY: This deeper search is useful for identifying the important aspects of a decision, and the reasons you generate can also be used as input for a “pros” and “cons” analysis as in Tip 1.

3. STRUCTURE YOUR OPTIONS

STRATEGY: Decision problems often involve an overwhelming number of options. To be able to grasp all of this – and have a decent overview – it’s important to group options into manageable chunks and then choose between these, then make further choices between each set of sub-options.

SCIENCE: This takes account of a key limitation – that the human mind is set up to process only a limited set of options at a time, so arranging information clearly makes good sense.

the case in science, there are contradictory results in the literature. The experiments conducted in our lab (and reported recently in the *Quarterly Journal of Experimental Psychology*) indicated that if participants engaging in conscious thought were given adequate time to read and deliberate with the information in front of them then more of them tended to choose the best option than participants in the “immediate” or “unconscious” conditions. Moreover, participants engaged in “unconscious thinking” appeared to be most susceptible to arbitrary factors such as the order in which attributes were presented rather than how important they were.

These findings contrasted sharply with those of Dijksterhuis and colleagues, who reported in *Science* that unconscious thought appeared to lead to the best choices in complex decisions. The reasons for these contradictory findings are currently being explored with recent papers from research groups in the US, France, Australia and The Netherlands all contributing to the

debate. The direction this debate will take is not yet clear, but it might temper some of the bold and general claims made about the benefits of unconscious thought.

Different Decisions, Different Modes?

Our aim as decision psychologists is to investigate the “whys” and “hows” of decision-making in order to understand and ultimately improve peoples’ choices. Through laboratory experiments comparing blinking, thinking and sleeping on it we hope to identify the boundary conditions for when these different techniques will work.

For example, there may be times when making a snap decision is appropriate – such as the fire chief’s situation – but an important boundary condition on using this technique might be that we do so only when we have considerable experience in the environment. A decision may feel like it came instinctively but only because it is the product of many years of deliberative

thinking, learning and conscious acquisition of information.

Similarly, “sleeping on it” might be useful when we have reached a kind of “analysis paralysis” – where we have thought about a decision every which way and we cannot come to a conclusion. Putting things to one side and returning to it later enables us to reconsider the decision with “fresh eyes”. This is not to say that we should expect the unconscious to solve things “magically” for us while we are not thinking, but that at times intense deliberation can be unproductive.

Perhaps the “best” advice for improving decision-making is to apply what psychologists know about the way in which we think, reason and use information – consciously (see Box). To advocate a reliance on the unconscious, an entity that by necessity we know very little about, seems unsatisfactory at best and dangerous at worst.

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USABILITY: This can help to make any decision seem less daunting, from buying a computer (laptop vs desktop? Mac vs PC?) to assessing medical treatments (surgery vs drug therapy? Drug brand 1 vs. brand 2?).

4. CONSIDER THE OPPOSITE

STRATEGY: Unwittingly, people often seek evidence in favour of their pet hypothesis and yet fail to seek out evidence that might undermine it. This is a very common problem when gathering information about “all” the options before deciding. To avoid this, try to consider other possible explanations that might fit just as well. Don’t simply attempt to confirm your preferred theory, but look for evidence against it too.

SCIENCE: This is known as “confirmation bias”. We like to indulge in selective thinking, and don’t like being contradicted. This technique counters the general tendency towards narrow-minded ideas and prejudiced evidence-gathering.

USABILITY: Overcoming that tendency to only consider a narrow sample of evidence can greatly improve judgement. Similar strategies focusing on the opposite can also help to curb bias and overconfidence.

5. USE DECISION TOOLS

STRATEGY: When trying to make a decision there are only so many details we can handle and ways we can process it all usefully. One solution is to use external aids that are designed to help with the specific aspects of information overload that people find difficult. These different modes of searching have their own pros and cons but a well-designed system can take a lot of the pain out of decision-making.

SCIENCE: Research shows that our ability to process and integrate multiple pieces of information is limited in characteristic and predictable ways (see Tips 1–4).

USABILITY: Some of the most sophisticated systems are used in medical and industrial settings, but the internet is increasingly making tools that capitalise on psychological principles available to everyday consumers. In many ways these sites offer a flexible and accessible form of the technique described in Tip 1. Sometimes being rational means acknowledging our limitations and turning to tools for help.

More detail on the background and science behind these techniques can be found in the book *Straight Choices: The Psychology of Decision Making* by Ben Newell, David Lagnado and David Shanks (Psychology Press).