

Il the books reviewed here explore a particular aspect of the nature of thinking: the distinction between rapid, unconscious, intuitive thinking and a more deliberate, reflective mode. This raises many issues, not least the question of who does the thinking. If much of our brain activity is unconscious, then we are not thinking it, it is thinking us! So, do we have free will?

## Blink: The Power of Thinking Without Thinking

This book, by Malcolm Gladwell, is the most accessible of these titles. It is written in an anecdotal style, with plenty of interesting narrative detail. He refers to our intuitive thought processes as 'the adaptive unconscious'. In this mode, the brain acts like an enormous computer, receiving, sorting, categorising and processing everything in our environment, and then acting on it at lightning speed without the need for conscious reflection. His objectives in the book are threefold: to persuade us that this kind of thinking is 'every bit as good as decisions made cautiously and deliberately'; to alert us to the contexts in which the adaptive unconscious can let us down; and to

show that we can educate and control this kind of thinking. Through numerous case studies, he shows how 'gut feeling', 'hunch' and 'nose' are often better ways of sizing up a situation than employing mountains of data. He illustrates this through reference to art experts detecting frauds, people unconsciously working out the odds of winning gambles, speed dating, doctors diagnosing diseases, and a host of other situations. How do we do this? Through 'thin-slicing' - that is, predicting outcomes on the basis of a few key factors selected from the mass of data by means of pattern recognition. The ability to 'thin-slice' is based on multiple encounters in our past experience. (Expert knowledge of this kind is also discussed in Donald Schon's The Reflective Practitioner.) Not only do we find it very difficult to explain how we can effortlessly act on our intuitions, but too much introspection actually blocks our ability to act spontaneously. Gladwell is up-front about the negative aspects of thin-slicing - the ease with which we are primed for certain types of biased behaviour and stereotyped associations, and the way we can be influenced by appearances. As he states: 'Taking our powers of rapid cognition seriously means we have to acknowledge the subtle influences that can alter or undermine or

bias the products of our unconscious.' And there are two contexts in which this system shuts down and leads us to make bad judgements, or to be incapable of making any judgements at all. These are when we are over-aroused by fear, threat or anxiety, as in police car chases, or when we have no time at all to process the information. Apart from the injunction that we should learn to slow down our reactions in such circumstances, he is adamant that we can train the ability to 'thin slice', especially in the area of micro-facial expressions, which can help us to 'mind read'.

## Thinking, Fast and Slow

This is a mountain of a book, drawing on research from neuro-science, behavioural psychology and economics, and laced with some intriguing thought experiments. Daniel Kahneman's emphasis is on fast thinking and the many pitfalls it poses in everyday life, in economic decision-making and in the assessment of risk. He calls fast thinking 'System 1', and deliberate, slow thinking 'System 2'. In Parts 1–3, he analyses the weaknesses of System 1: easily suggestible, influenced by mood, overdependence on causal reasoning, jumping to conclusions, peer influences and the tendency to substitute



easier, affect-based questions for the target questions. He expands on this by looking at the law of small numbers (we are unduly influenced by rare events), anchors (the mention of a number will prejudice us in favour of choosing a similar number) and regression to the mean (what we take to be success or failure is more often a random event, not a reliable indicator). As a simple example, consider which of the following formulations would be more acceptable: 'This operation has a 90% success rate' 'This operation has a 10% failure rate' or even 'Out of every hundred people who have this operation, ten will die'. He makes it clear that we think we understand far more than we do, and is scathing of 'expert opinion', especially in the area of business and investment: '... people who spend their time, and earn their living, studying a particular topic produce poorer predictions than dart-throwing monkeys.' Part 4 deals with choices and risk. He distinguishes between 'Econs', rare creatures who make rational choices, and 'Humans', who are influenced by any number of illogical factors. In Part 5, he describes two selves: the Experiencing Self, which rapidly forgets what actually happened, and the Remembering Self, which recalls selectively in ways which bias our choices illogically. This is a sobering book which makes us reassess our ability to act in our own best interests. The author believes people need help in making decisions, and

## Hare Brain, Tortoise Mind: Why Intelligence Increases When You Think Less

that such help can be made available.

In this book, Guy Claxton discusses three kinds of thinking. The first kind is the unconscious working of the brain, which does much of our thinking for us. It is able to soak up complex information from the environment and take action or solve problems intuitively before we are consciously aware of them. Think of the strange sensation we feel when stepping

onto an escalator which is not moving. The second kind he calls 'd-thinking', which is what we normally understand by thinking - deliberate, rational, clear and fast. The third is the ruminative, reflective thinking which characterises artistic creativity, scientific discovery and complex human situations. His main argument is that we are increasingly influenced by d-thinking in many spheres, ranging from business to education, and that we thereby neglect both the intuitive and ruminative modes, which are often more effective. 'If [the situation] is complex, unfamiliar, or behaves unexpectedly, tortoise mind is the better bet. If it is a nice logical puzzle, try the hare brain first.' Chapter 4 is important for the clarity of distinctions between fast, unconscious intuitions and slow reflection - the need to bear in mind a problem over



a long period without consciously thinking about it. And Chapter 5 sets out the conditions under which creativity can occur. Like Gladwell, Claxton points out that requiring people to verbalise or analyse their intuitive judgement tends to impair them. Trying too hard can get in the way of fluid intuitive reactions. Another key chapter is Paying Attention, in which he looks at detection - how experts use attention to small key elements to solve problems; focusing on inner states; listening to your body; becoming aware of 'felt sense'; poetic sensibility; the need to let things marinate, and to be in a flow state; and mindfulness - being aware of what is happening 'in the moment'. His discussion of the notion of wisdom in Chapter 12 is also highly relevant in a world given to over-reliance on statistics and quantitative data. As he says, 'many unwise decisions have been made by clever people'. He reminds us of the need to trust the 'undermind' more. The final chapter is an eloquent undermining of the current ethos, especially in education, with its heavy reliance on a content curriculum and standardised tests. Such tests 'favour those who are able to think fast, under pressure, on their own, about abstract, impersonal problems, which are clearly defined, have single right answers and have been formulated by unknown other people'. Claxton argues that we need also to develop a learning curriculum with an

emphasis on fostering resilience and resourcefulness in learners. 'The resourceful learner is able to attend to puzzling situations with precision and concentration, and also with relaxed diffusion ... to be able to "let things speak", to see what is actually there ... to make good sense of clues and hints ... to analyse and scrutinise but also to daydream and ruminate ... to ask questions and collaborate ... but also to keep silent and contemplate ... to be both literal and metaphorical, articulate and visionary, scientific and poetic.' This is a highly significant book both for teachers and for 'everyman'. (If you enjoy this book, try also Claxton's The Wayward Mind, a fascinating exploration of the unconscious mind.)



Teaching is a field where we are constantly having to make split-second decisions. We 'suss out' our students intuitively in a matter of micro-seconds - and they 'suss out' their teachers! Any training that might improve the accuracy of this would be welcome. In the broader educational context, as Gladwell claims, 'we have perhaps come to confuse information with understanding'. Statistics and elaborate data collection may be less reliable than we thought. This would suggest the need to reinstate reliance on intuition and teacher 'expert knowledge'. But Kahneman's conclusions suggest we also need to be circumspect!

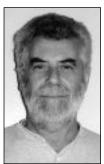
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