## **Ideas**

## Type 1 and 2 thinking

The current model of how we think proposes two kinds of thinking. One is fast, intuitive, confident, and in charge most of the time. The second is slow, deliberative, lazy, and dormant most of the time. Kahneman (2011) has written the most popular book on the subject, and refers to "systems 1 and 2". His text is clearly written, but I find it too skewed towards examples from economics for our purposes. I think Manktelow (2012) provides the more thoughtful perspective for our field. He is especially helpful on the differences between Kahneman, who tends to emphasize the weaknesses of type 1 thinking (its biases) and Gigerenzer, who tends to emphasize the strengths of type 1 thinking (its efficiency).

## **Heuristics**

Most of this section is drawn from Manketlow's (2012) book, where one can find all the many primary sources.

Heuristic does not mean subjective or biased or irrational *per se*. It means a mental strategy for making decisions that is efficient – 'fast and frugal' – and correct most of the time in the context that created it. Three contexts have created three groups of heuristic: evolution of our species, long experience of individuals, and the application of big data techniques.

The first group of heuristics has been learned by our species, and is now hard-wired into our brain's system 1. There are dozens of them, and we use them all the time without effort or awareness. Although they must all have been adaptive from the perspective of the species, many have become 'cognitive biases', flaws from the perspective of the individual trying to be logical. These are organized beautifully in a large graphic under the article "List of cognitive biases" in Wikipedia (2017).

These biases are much studied by economists. Kahneman (2011) developed a model of how we make relative value judgements called "prospect theory". One of its foundations is that we feel losses much more than we feel equivalent gains. In our field, this means that damage to an object (a loss) will weigh more heavily on us and our stakeholders than an equivalent restoration (a gain). This can explain the popularity of 'minimum intervention' since even a small chance of treatment failure seems to outweigh an excellent chance of treatment success. Another foundation is that we judge gains, or losses, relative to what we already possess, or owe. This isn't just the trivial case that \$10,000 has more 'value' to us than it does to Bill Gates, but also subtle situations where we spend time and energy to find a store where we can save \$10 on groceries but we will not spend the same effort to save \$10 on the purchase of furniture, despite the fact that \$10 has the same value to us. In our field, if a conservator who is