Chapter 3
Extracting Epistemic Lessons from Ameliorative Psychology
B&T begin this chapter by observing that Amelioriative Psychology (AP) is not in the business of developing a theory of epistemic justification.

They claim that epistemic justification is mainly about belief tokens, i.e., attempting to define conditions under which a particular belief is epistemically justified. Science, however, is not particularly concerned with tokens, but with types.

So, for example, a philosopher primarily concerned with the justification of particular beliefs may find a 65% reliable SPR pretty useless, since 65% reliability with respect to P is hardly an adequate basis for believing that P. On the other hand, an SPR with 65% reliability where human judgment produces 50% reliability is an extraordinary thing from the point of AP, and it should obviously be incorporated into our reasoning strategies with respect to P at least until something more reliable is discovered.
Robust reliability

- B&T identify robust reliability as the desideratum of any SPR. Robust reliability is essentially a kind of projectibility. Robustly reliably SPR’s work:
  - (1) in a broader range of phenomena than the one for which it is initially developed.
    - For example, the VRAG (Violence Risk Appraisal Guide) was initially developed for Canadian psychiatric patients, but generalized to a much larger set of people.
  - (2) without requiring a great deal of specialized knowledge about the phenomena in question.
    - Consider the “recognition heuristic”. When American and German students are asked which city is bigger San Diego or San Antonio, German students do quite a bit better. This isn’t because American students are stupider than German students (though this may be the case). It’s because they know too much. Americans try to answer the question by drawing on their knowledge of these two cities. German students simply pick the one they recognize, San Diego, which is the correct answer because in this case recognition correlates positively with size.
    - The recognition heuristic is not robustly reliable, however, because it requires us to know too much about the test subjects: i.e., to use it effectively we have to know too much idiosyncratic information about what they know and what they don’t.
The benefits of simple reasoning strategies

- You might have noticed by now that philosophical arguments are often rather complicated, which means, among other things, that they involve quite a few discrete inferences.

- Once you realize that each inference involves a certain level of reliability, then it becomes clear that long chains of inference, like long causal chains, have a serious problem. Suppose, for example, that you involve yourself in a reasoning chain with 5 discrete inferences each of which have an independent reliability of .90. That actually means that the likelihood of the conclusion being true is $0.9^5$ or roughly .77.

- So, all things being equal, the fewer inferences you have to make the better. And this means that very simple reasoning strategies using crude information can actually outperform very complicated reasoning strategies using high quality information. (That’s the trick of the recognition heuristic.)
A cost-benefit analysis of reliability

- B&T note that when the concept of a reliable SPR or reasoning strategy is essentially relative to the resources one has to expend on figuring out the answer to the problem. Philosophers are not accustomed to thinking in this way, of course, but in the real world you just can not afford to spend your whole life figuring out whether humans have free will.

- In this context B&T introduce the economic concept of diminishing marginal utility. The basic idea here is simple: the value you get out of most activities does not continue to increase the more time and effort you put into them. For example, if you are cleaning your toilet, you get it about 95% clean in 3 minutes. If you spend another 58 minutes you may get it another 2% clean, and if you spend the rest of the day you may get another 1%.

- The point is that choosing reasoning strategies is like choosing how long to spend cleaning the toilet. Somewhere around 3 minutes is justifiable. Less than that and you’re a pig. Much more than that and you’ve got an OCD.

- Because of diminishing marginal utility, it turn out the reliability is actually relative to the amount of resources you have to spend on a problem. For example (see graph pg. 61) if you have several different reasoning strategies to choose from, they may provide different benefits with different levels of resource allocation. For example, a method of estimating E may much more reliable than a tedious an error-prone method of calculation C if you only have a small amount of time. But if you have a lot of time to do precise measurements and check and re-check your calculation, then C may be vastly more reliable than E.
Another practical factor that philosophers are prone to ignore is the cost of adopting a new reasoning method. It’s one thing to say that for two people A and B of equal cognitive abilities, where A uses reasoning strategy 1 and B uses reasoning strategy 2 in an optimal fashion, that the reliability of $A_1 > B_2$.

But it’s quite another to say that if B were to adopt 1, then B’s reliability would go up. That ignores the fact that resources are required for B to learn to use 1 at an optimal level.

A concern about start-up costs is similar to a concern about making radical changes to one’s belief system. In general we realize that our principle task is to keep the boat afloat, and sometimes radical changes are going to sink it before any of the benefits can kick in.
B&T suggest that there are basically Four Ways to become a better reasoner.

1. Resource reallocation.
   - B&T note that much sub optimal reasoning is simply due to spending too much time reasoning about one part of a problem and too little on another.
   - As an example they note the problem of “affective forecasting”, people’s well-known inability to predict the conditions of their own future happiness. This is an area that is, by now, extremely well-studied. We know, for example, that the diminishing marginal utility of wealth kicks in with a vengeance at the lower range of middle income. We know that the vast majority of people who win the lottery are actually made less happy as a result.
   - We also know that the happiest people in the world are not the wealthiest or most religious, but simply those who have the strongest social networks.

The point here, then, is simply that if people spent fewer of their reasoning resources figuring out how to get what they don’t need and more paying attention to what they actually do need, they would be better off in the long run.

The problem of affective forecasting is interesting enough to let ourselves be distracted a bit by it. Here is Daniel Gilbert, ameliorative psychologist extraordinaire and author of Stumbling on Happiness, talking about it.
The fourfold path: 2\textsuperscript{nd}, 3\textsuperscript{rd} and 4\textsuperscript{th} ways.

- 2. Adopt a more reliable reasoning strategy when it is no more cognitively expensive than the one you are using.
- 3. When a competing strategy is more reliable but involves higher costs (i.e. more time and energy to do it properly) then these costs must be weighed against the opportunities lost by doing it. Hence, even if A outperforms B at a purely epistemic level (i.e., provides correct answers with greater frequency) we may rationally prefer B if it provides an acceptable level of accuracy at lower cost.
  - B&T note that these costs and benefits may be understood both from a pragmatic and from a more purely epistemic point of view. For example, if your goal is not only to maximize the frequency of true predictions, but the number of true predictions, then you may more rationally prefer B to A on epistemic grounds.
- 4. When a competing strategy is less reliable but involves lower costs, then it, too, must be weighed against the opportunities lost by the failure to do it.
  - This is really not a 4\textsuperscript{th} way, but the 3\textsuperscript{rd} way conceived in the opposite direction. The point here is simply that even if you are used to a certain level of accuracy, it can be rational to relinquish it in exchange for other practical or epistemic gains.