Review of *Knowing Our Limits* by Nathan Ballantyne
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Our world is complex, and coming to an accurate picture of it is hard. When it comes to the important questions, we find that intelligent and informed people disagree with each other. Yet at the same time, many of us seem to have confident beliefs about controversial issues – the appropriate level of the minimum wage, say, or the proper approach to criminal justice. In his rigorous yet highly enjoyable book, Nathan Ballantyne offers some remedies. He defends a set of principles, which, if we use them to guide our inquiry, will likely make us more *doxastically open* – that is, agnostic about what attitude (belief, disbelief, or suspension of judgment) is warranted given our evidence. In this way, the book is a project in what Ballantyne calls "regulative epistemology." A useful comparison here is *non-ideal theory* in political philosophy. There the question is: how should we design our political institutions given what humans are actually like? Analogously, regulative epistemology asks: given what we know about human limitations, how should we conduct our epistemic lives?

This sort of question has received little attention in contemporary epistemology. Much work within the field over the past few decades has been concerned with analyses of concepts such as knowledge and justification. However, regulative epistemology was a core concern of early modern thinkers who rejuvenated philosophy during the seventeenth century. In Chapter 2, Ballantyne places the regulative preoccupations of Descartes, Locke, Boyle, and others within the context of European intellectual life after the renaissance and medieval eras, as old certainties were crumbling and new scientific projects were taking root. The book's central aim is to make progress on the kinds of questions these early modern thinkers grappled with. But why now? What do we know that they didn't? One crucial advantage here is that we now have much more systematic knowledge about human biases and can draw from recent work in psychology and the social and cognitive sciences. Ballantyne stresses throughout that the project of regulative epistemology must be *multidisciplinary*, and demonstrates this commitment by incorporating a wide range of results from contemporary psychology.

Chapters 5–9 are devoted to formulating and defending distinct regulatory principles directing us to check ourselves, as it were, when it comes to our controversial beliefs. When we stand our ground on controversial issues – even as we recognize that intelligent and informed people disagree with us – how might we rationally do so? How might we justify to ourselves our stubbornness? Well, one common strategy is to attribute a *bias* to those who disagree. In Chapter 5, Ballantyne draws upon psychological research to argue that such attributions are usually very unreliable – we are pretty bad at ascertaining the biases of others. Moreover, we are extremely oblivious to our own biases. Standing our ground by attributing biases to our intellectual opponents, then, must be done with great care.

Perhaps luckily for most of us, many of our views will not be controversial given our milieu. How much comfort should this provide? John Stuart Mill thought that ages are no less fallible than individuals. Friedrich Nietzsche went further and claimed that insanity, while rare among individuals, is the norm among nations and eras. In Chapter 6, Ballantyne argues that we should take *counterfactual* interlocutors seriously. Many very smart and conscientious people are now dead. If they were alive,

could they give us defeaters for our beliefs? And what if history had gone differently? What might intelligent and informed people in those possible worlds say against our beliefs? Ballantyne suggests we are often in a position to recognize that "methodologically friendly" counterfactual interlocutors – i.e., possible people who share our basic epistemological commitments and methods – would likely give us defeaters for some of our beliefs. Recognizing this, he argues, should make us more doxastically open. I am a bit unsure here whether we, *qua* non-ideal agents with limited imaginations, can have sufficient grip on whether, and moreover, with respect to what, such interlocutors would disagree with us. The same factors that blind us on a particular issue can lead us to mistakenly reject the claim that these possible interlocutors would disagree with us. After all, the interlocutors must be *methodologically friendly* – and so, we can easily be tempted to think that interlocutors in other possible worlds where history has gone differently are *not* methodologically friendly.

What if, on a particular issue, while *some* such interlocutors would disagree with us, *most* would agree? Ballantyne thinks even this provides little assurance. He argues that we typically have little reason to think that the defeaters which would be provided by the minority of interlocutors "cancel out" with the evidence that the majority of interlocutors agree with us. However, it seems that many reasonable beliefs are such that in a minority of possible worlds, intelligent and informed people disagree with us. Consider, for example, any medical or psychological hypothesis accepted on the basis of a limited sample of data. Even if the relevant relationship is found to be statistically significant, there are a small number of possible worlds where different data points are collected and scientists accept a contradictory hypothesis. But this needn't bother us epistemically. It's not obvious then, that the fact that most counterfactual interlocutors would agree with us is not a *prima facie* reason to hold on to the belief in question.

On almost any controversial belief we hold, there are mountains of evidence that we haven't looked at and never will. Chapter 7 points out that, relative to many of those bodies of evidence, the belief in question will not be justified. Only if we have reason to think that our evidence is *representative* of the total evidence out there, Ballantyne argues, can we stand our ground. But we'll often not be in a position to ascertain whether our sample of evidence is fair. I worry here whether the condition of fair sampling generalizes a model of how evidence works in specific contexts (e.g. opinion polling), where there is a sample population and a target population, to other, structurally distinct evidential contexts. In general, for evidence about a claim to be strong is not necessarily for it to be a fair sample of, or even representative of, all the evidence out there. Rather, strong evidence for a hypothesis is such that we'd be very unlikely to observe it if that particular hypothesis weren't true.

Chapters 8 and 9 address underappreciated problems associated with *expertise*. Many inquiries into complex questions are essentially interdisciplinary. Yet, the most we can hope to achieve within our finite lives is expertise within one small subfield – and so, on such questions we risk *epistemic trespassing*. The natural approach this suggests is that, depending on the subfield, we should defer to the experts in that subfield. But things are not always so easy. In many cases, experts will disagree among themselves. Novices will be tempted to attribute bias to the experts who disagree with them, but this brings us back to the problems discussed in Chapter 5. Novices, Ballantyne concludes, should thus typically abstain from holding views on such topics.

Ballantyne's book is a historically rich, empirically engaged attempt to use epistemology in the service of making us better inquirers. Whether such a project can ultimately succeed in its aim depends on how biased thinkers like us can make use of the method he develops. Indeed, one might be skeptical for the very reasons Ballantyne identifies in Chapter 5 – might we, for example, be

tempted to wrongly dismiss our opponents as neither intelligent nor informed so that their disagreement doesn't even fall under the method's scope? At any rate, *Knowing Our Limits* is a timely contribution that will be stimulating to a wide variety of readers interested in the neglected question of how we might become better thinkers and inquirers despite our shortcomings.