

this effect from day one. Dubner offers regular reminders of his friends' impeccable credentials (Sen, A and Nozick, R perform brief cameos on pages 1 and 2 respectively) as if to suggest that any findings are flawless. So why begin a quest for the truth with some highly contentious speculation guaranteed to undermine all accompanying work and attract immense controversy?

Among other things, the authors set out to show that agents often seek to maximise their income at the expense of other, more laudable, goals while ensuring that such unpalatable preferences remain hidden. There are a number of good examples of this phenomenon in *Freakonomics*, including the suspicion that - whether or not he is an unusual economist - Levitt is a text-book economic agent.

Peter May

*Logical Pluralism*, J.C. Beall & Greg Restall, Oxford University Press, 2005. 151 pages.

We cannot logically deduce that London buses are coloured just because they are red. We all know what a valid argument is, and it is obvious that this argument wouldn't be valid. Obvious, that is, until you consider that there is a way in which we know that all red things are indeed coloured. Such considerations have led philosophers to propose modifications to our interpretation of logical conse-

quence. *Logical Pluralism* arrives at the bolder claim: what counts as a valid argument depends on which logic we are using and many logical schemes are equally acceptable. So we can deduce that London buses are coloured from the fact that they are red within one framework but not in another. Validity depends on what we need it for.

J.C. Beall (University of Connecticut) and Greg Restall (University of Melbourne) identify the link between truth preservation and validity as the core notion upon which all accounts of logic must agree. They stipulate that an argument is valid if the consequence is true in all cases in which the premises are true. Pluralism rears its head in the specification of what 'case' means. *Logical Pluralism* surveys the major trends in logic and proposes that the Tarskian models of classical logic, the possible worlds of modal logic, the situations of relevant logic and the constructions of constructive logic all provide suitable instances of 'cases'. Furthermore, it claims that each provides a different and yet satisfactory account of logical consequence. The argument is this simple: see that there are multiple successful notions of logical consequence; see that taking a pluralist approach has virtues, for we have a much more flexible approach to analysing argument. The authors then ask, "Well, why not?"

Beall and Restall are experienced at defending their thesis. One of the

*Book reviews*

strengths of this little book is that it pre-empt the majority of the reader's concerns. Should logical consequence be transitive and reflexive? What logic does the argument of Logical Pluralism use? And, most importantly, is this really interesting anyhow?

The fact is that it is. After reading *Logical Pluralism*, the logician who is defending her account of logic will hesitate to merely point out a competitor's flaws. The linguist who is frustrated with the mathematical bias of classical logic can take comfort that perhaps it is only really good for mathematics. And all philosophers can rejoice that the essence of their discipline – the art of argument – may be more flexible than they had previously assumed. This all makes for good philosophy: an intriguing but simple idea; well proposed; preliminary objections overturned; stunning consequences... and much work left to do.

Sally Riordan

*Physical Relativity*, Harvey R. Brown, Oxford University Press, 2006. 239 pages.

Albert Einstein was not the first to derive the equations at the heart of special relativity. Others before him knew the equations of length contraction and time dilation, but what was remarkable about Einstein – or so the story goes – is that he first came to terms with their implications. The difficult birth of the new theory could not be helped, for scientists

at the time were fixated by the ether, the mysterious substance postulated to pervade space, and were therefore unable to correctly interpret the equations that sat before them. Einstein realised the error, did away with the ether, and engaged with the problem in a more abstract way. The result was a world in which the peculiar behaviour of moving bodies was a property of space-time and not of matter itself. Or so the story goes.

*Physical Relativity*, by Oxford philosopher Harvey R. Brown, reviews the work of Einstein's predecessors and claims that it is not primarily their reliance upon the concept of the ether that distinguishes their thought from Einstein's. The crucial difference is that these scientists wished to construct the equations of special relativity from considerations of the underlying physical phenomena in order to obtain, not just the equations themselves, but an explanation of why they are true. The nineteenth-century Irish physicist George Fitzgerald is the best example: he hoped to understand length contraction by uncovering the relevant causal mechanisms that operate between molecules of matter. Harvey Brown takes care to explain how this, so called, constructive approach differs from that of Einstein's 1905 seminal paper on special relativity, in which length contraction and time dilation are derived mathematically from co-ordinate transformations.