ON THE NATURE, IN LAW, OF REALITY

David Goldberg

It's August 2009. I am in the part of the universe that I (and quite a lot of other people) call Andromeda Dieci. Next to me, in Andromeda Nove, is a man reading a book in Greek. The book is about legal philosophy. I can tell that even though I don't read Greek, because the name of the author – Ronald Dworkin – is, strangely, in English and I know that he writes books – rather good books actually – about that sort of thing.

I am not reading a book about legal philosophy. I am reading a book called Quantum by Manjit Kumar: it's a very good book about quantum physics. That's the sort of thing I really really enjoy doing when I am in Andromeda Dieci and I've just learnt something – I'll tell you what in a moment, hold on – that has made me spend some time thinking about the similarities between quantum physics and legal philosophy. Thinking like that allows me to rest my eyeballs, which is another thing I enjoy doing in Andromeda Dieci.

At any rate, all that is my perception of what was going on in my apparent universe on a certain day in August 2009.

What I had just learnt from my book was that physicists – really serious physicists, not nutcases – now believe that we do not live in a universe but, rather, in a multiverse. There are many worlds, parallel universes, all existing all at once and separated from the world we think we are in by membranes which we cannot see or feel, but which are just there, almost but, somehow, not quite, in grasp.

And in these parallel worlds, I exist, but differently from the way I perceive myself to exist here in this world. It's sort of comforting. Somewhere – but I can't quite get there with the perception of things I have here – somewhere there is a world in which I not only won *Arrowtown* and *Carreras*, but got the girl too. Or perhaps it needs two other different worlds to win and get the girl: it doesn't do to be too ambitious in Andromeda Dieci.

All of this kind of thinking has been developed, starting mainly from the work of Nils Bohr and, a bit later, Werner Heisenberg, who came up with something called the uncertainty principle. The description which these physicists provided of what is going on inside the atom is called "the Copenhagen Interpretation".

Now, of course, I am not a physicist, but, so far as I understand it, the theory is that you can have a pretty good general idea of what is going on inside an atom, but you can't know everything about that because particles sometimes do things that are unpredictable; there is "spooky interaction at a distance" (so that one particle, billions of light years away, will, even though nothing can travel faster than light, instantaneously react if you do something to a particle near you) and all that sort of thing.

Not every physicist agreed with that sort of idea – it's all right, I am going to get back to law quite soon now – and one of the physicists who liked it least was Erno Schrodinger.

Schrodinger is, of course, famous for his cat which was in a box and, at one and the same time, alive and dead. Until August 2009, I thought that Schrodinger had really meant that the cat was actually alive and dead at the same time, but it turns out that he was ridiculing the notion: the cat could only be alive and dead at the same time if all you were doing was thinking about it in an abstract way; if you actually opened the box and looked at the cat, you would find it either alive or dead, but not both at once.

Moreover – and I think every physicist agrees with this – even if the Copenhagen Interpretation is right at the sub-atomic level, it isn't right on a larger scale: particle physics does not tell us what the sun does to the earth; buses do not suddenly and unexpectedly materialise in front of you from nowhere, even if it sometimes seems like that.

What Schrodinger was saying was that the Copenhagen Interpretation did not accord with reality: the physics of the quantum must, in his view, be more predictable than the theory said it was; there must be some coherence between micro and macro physics.

Nonetheless, the Copenhagen Interpretation, despite all its unpredictability, works well enough that physicists can accurately say what will happen in any given set of circumstances, even though they can't say exactly how it will happen.

Or, to put that another way, there are some uncertainties which can be disregarded more or less because they are inherent in the structure. I wonder if you can begin to see where I am going?

To finish with the physics – well, almost – the idea that you could have a cat which was at one and the same time dead and alive, which Schrodinger thought was ridiculous – and I expect most of us do too – was taken seriously by the quantum community, and it was that which led Hugh Everett in 1957 to come up with the multiple worlds theory to which I referred at the beginning of this article. That theory is now taken very seriously by the physics community, even though the differences between micro and macro physics have not been resolved.

The trouble with all this is that it does not accord with anything that you or I would call reality. But it works: the equations which flow from these ideas enable computers to be built and so on.

So let me get to the law. I can do it quite briefly: the physics has done it all for me.

Any statute must now be read and applied bearing in mind the driving principle that:

> "the ultimate question is whether the relevant statutory provisions, construed purposively, were intended to apply to the transaction, viewed realistically."

The quotation comes from the judgment of Ribeiro PJ in *Collector of Stamp Revenue v Arrowtown Assets Ltd* [2003] HKCFA 46 at paragraph 35. It was approved in *Barclays Mercantile v Mawson* [2005] STC 1 at paragraph 36. It was the first express recognition that the so called *Ramsay* principle had a factual aspect.

In *Arrowtown* the Court held that shares, which undoubtedly existed as a matter of company law, did not exist for the purposes of stamp duty: like the cat, the shares were alive and dead at the same time. In a similar way, the debenture in *Carreras* and the real contingencies built into the transaction in *Scottish Provident* were there and not there: the uncertainty did not matter; and something like that has recently happened in *Astell*.

That does not seem to me to involve viewing the transaction or the facts realistically: on the contrary, it seems to me to be viewing them highly artificially in a surreal rather than a real way.

Nonetheless, I have to accept that the sort of analysis adopted by the Courts in the recent cases accords well with the ideas of particle physicists which are supposed to represent what actually happens in the physical world: if in the cold hard world of mathematical equations, things can exist and not exist at the same time, how can anyone say that any Court's analysis is not realistic?

What, in other words, is the test of reality? Is it a question of uncertain physics or is it something which I can perceive? As Bishop Berkeley used to believe, does a stone exist only because I can kick it?

Some modern physicists, by the way, sort of answer that question yes, while also believing that things can sort of be alive and dead at the same time. The point here is that the very act of observation changes things: the cat is, according to these physicists, actually alive and dead until you look in the box; it is the act of looking which makes it one or the other. It follows things are only as they seem to be because we observe them. So, some physicists, like some judges, believe that reality is quite elastic: it can almost be what you want it to be; it is certainly what you see it to be.

For myself, I do not believe – and do not accept – that the idea of reality can, in law, be equated to sub atomic physics. Surely, in law, the concept of reality must accord to the everyday perceptions of large scale physics rather than those of particle physics. Law, after all, needs to operate on a grand scale or it cannot be a useful guide to the correct principle: it is no good if all it does is to micro-manage.

And perhaps I can, after all, get some support for what I have just said from the world of physics. There was one physicist who didn't believe that reality could be what you wanted it to be. He's the man who explained gravity and the bending of space time, who discovered that $E=mc^2$ and made your Sat Nav work accurately. He's my hero, not only because of his hair, but, rather, because by the

power of his mind alone he solved some of the great puzzles of the universe. I am, of course, speaking about Albert Einstein.

In 1935, with two other physicists, Podolsky and Rosen, he published a paper, now known as the EPR paper, which questioned the, by then, generally accepted wisdom. The authors said that the Copenhagen Interpretation was correct, but not complete. Before any theory could be said to be complete:

> "every element of the physical reality must have a counterpart in the physical theory."

In the view of Einstein, Podolsky and Rosen, a cat could not be alive and dead at the same time (they used the example of a keg of gunpowder which was both exploding and not exploding at the same time, but it's the same point): the aliveness or deadness of the cat in the actual world did not have a counterpart in the Copenhagen Interpretation, so it could not be complete.

Now, I realise that modern particle physics has moved on and rather left the protestations in the EPR paper behind, but large scale physics has not; and the idea in that paper resonates with me.

The law is that statutes are to be construed purposively. As Michael Flesch has shown elsewhere in this edition, that gives the Court considerable flexibility to make up – invent, if you like, what the law is; and it may be hard for lawyers to control what the Court does with such a flexible tool.

But perhaps there may be some scope for limiting the range of the Court's apparent ambition to tax by insisting on the need for every part of the judicial analysis of a transaction to have a counterpart in the legal analysis of the transaction.

I recognise that, so far, I have not managed to impose this degree of control on Courts dealing with my cases. But it's early days still. The need to take a realistic view of the facts is still only five or six years old and we are still learning how to handle that requirement.

I only learnt about the EPR paper three months ago. The idea that an analysis can only be described as realistic if every part of it has a counterpart in the legal analysis is new ammunition. It may help stop the wastage of the obstinate struggle in which the Courts are, dangerously, trying to make tax law up as they go along. It is surely not too much to ask that, in applying a realistic view of the facts, the Courts take a view which accords with everyday notions of reality – with large scale physics, physics on the human scale – rather than with the uncertainty principle. At any rate, I am determined to do what I can to ensure that that happens, armed as I am with new ideas gleaned from my trip to Andromeda Dieci.

By the way, Andromeda Dieci is a beach hut at Venice Lido. I was hoping you would think I spent last August in another galaxy. Perhaps, in another part of the multiverse, I did, but my perception is that I was on the Lido and that's the reality. I thought I should be real.