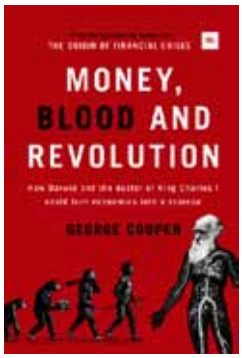
How the world makes money go round



Money, Blood and Revolution: How Darwin and the doctor of Charles I could turn economics into a science
by George Cooper (Harriman House, £14.99)

AS THE consequences of economics' derisory narrative since the crash continue to reverberate through the global financial system, with accompanying political and social collateral damage, the scrabble for a rationale goes on.

Without a proper explanation, corrective action can't be applied. If my car won't start, what's the point of replacing the engine if there's no fuel in the tank?

George Cooper's masterly and hugely welcome *Money, Blood and Revolution* illustrates the problems by looking at two entirely incompatible schools of thought in the post-financial crisis environment: the pro-austerity camp, and the pro-stimulus camp.

The row – still unresolved – has resulted in an "impasse between policymakers". Austerity has been devastating for those countries that have adopted it (or had it forced on them). Countries pursuing fiscal stimulus "are still accumulating debt at a faster rate than their economies are growing, making default or monetisation inevitable".

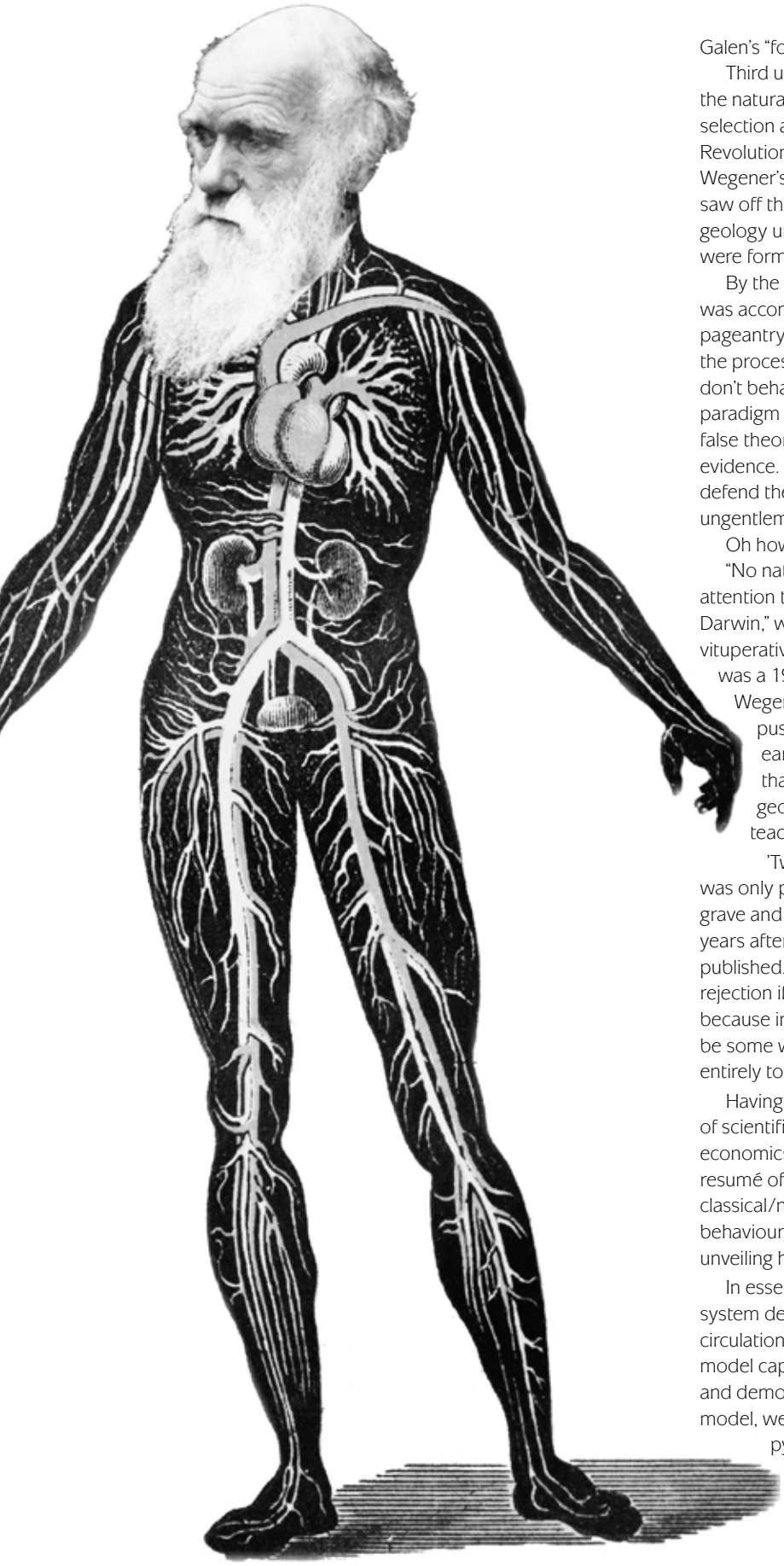
Stand back, says Cooper, and it becomes apparent that our economic system, having been providing "the wrong advice prior to the crisis" and "no advice after the crisis", has shifted from "pre-crisis negligence to post-crisis paralysis". At the core of this paralysis is "a science that has entered a state of crisis".

Cooper gives a nod of thanks to the work of Thomas Kuhn, which states that most sciences enter a state of crisis at some point and what the crisis calls for is usually a paradigm shift. To understand how these paradigm shifts allow resolutions to emerge, Cooper delves into four historical precedents – four examples where "scientific progress was held back by dogmatic adherence to a static, equilibrium-centred, paradigm" similar to the one economics is in now.

The first example, "A Crisis in the Heavens", looks at how Copernicus, the Renaissance mathematician and astronomer, had the confidence to question one of the cherished axioms in his field – that the Earth was at the centre of the universe and the Sun and planets revolved around it.

Little did he know it, but Copernicus' intuitively-derived heliocentric paradigm emerged thanks to his "Captain Kirk" mind-set during critical situations. When the *Star Trek* crew "confronted some seemingly insoluble problem", Mr Spock uses "cold, hard, deductive logic" while Kirk is an "imaginative, instinctive, and frequently illogical genius" for whom "problems were solved by intuition, and the details worked out later". So "invariably, when the problem arose, Kirk would make the intuitive leap towards the solution, with Spock protesting: 'But that is illogical, Captain'." (Cooper's hilarious footnote says he's referring only to Leonard Nimoy and William Shatner and red-cards the others because "the modern frat-boy reinterpretation of the franchise is quite unsuitable for advanced philosophical musings".)

The second example, "Blood and Bacon", is about William Harvey, 1578-1657, who made blood circulate around the body at a time when



Galen's "four humours" was the dominant theory.

Third up is "Darwin's Theory of Species", about the naturalist who had species evolve by natural selection and lastly comes "Continents and Revolutions", which describes how Alfred Wegener's 1912 theory of continental drift finally saw off the hotch-potch mess that had seen geology unable even to explain how mountains were formed.

By the way, none of these scientific revolutions was accompanied by any unfurling of banners or pageantry of triumph. Quite the opposite: "through the process of a scientific revolution scientists don't behave much like scientists at all. Before the paradigm shift they cling doggedly to obviously false theories regardless of the experimental evidence. After the paradigm shift they often try to defend their discredited ideas in a most ungentlemanly fashion."

Oh how they tried.

"No naturalist has devoted more painstaking attention to the structure of the barnacles than Mr Darwin," was Richard Owen's would-be vituperative put-down in 1860. More troubling was a 1985 report which noted that Alfred Wegener's theory of continents which moved, pushed by circulating currents within the earth's core, was unacceptable for so long that "in the 1950s it was claimed that a US geology lecturer could be dismissed for teaching Wegener".

'Twas ever thus and worse. Copernicus was only pardoned, taken from his unmarked grave and reburied a hero in 2010, almost 500 years after his then-heretical findings were published. So expect opprobrium and rancorous rejection if Cooper's assessment gains traction, because in every changing of the guard there will be some who don't find the new arrangements entirely to their satisfaction.

Having delivered an intensely succinct account of scientific endeavour to date, Cooper turns to economics, firstly embarking on a historical resumé of the theories so far – including the classical/neoclassical, Austrian, libertarian, Minsky, behavioural and institutional schools – and then unveiling his new model.

In essence, the author overlays a circulatory system derived from William Harvey's work on the circulation of blood on to economic activity. In this model capitalism pushes wealth up the system, and democracy pushes wealth back down. "In this model, wealth is moved up through the social pyramid by the activity of the private sector and is then recirculated back downward via the activity of the state sector." They act in tandem, like the >