From approximately 1770 to 1970, in a series of industrial revolutions, human standards of living were utterly transformed by the ingenious application of the arts and the sciences. The University of Illinois economist Deirdre McCloskey put it this way: Two centuries ago the world’s economy stood at the present level of Bangladesh.1 In 1800 (in our dollar terms) the average human being lived on $3 a day; a person in contemporary France or Japan lives on $100 a day. In Norway, the average person earns forty-five times more than their predecessor did in 1800, a remarkable $145 a day. China today has managed to reach an average of $13 a day. That is four times the 1800 level and that number is rising rapidly. Only 1.1 billion of the world’s 6.7 billion people still live on $3 a day. If anything is progress, then that is progress.

But what made this possible? It was not any of the usual suspects. It was not education, nor was it trade. It was not knowledge capitalism, or merchant capitalism, or even industrial capitalism, even if the mix of capitalism and technology, and capitalism and science, and the global reach of capitalist commerce were each part of the story. This though is a story that also includes parliamentary democracy and skyscraper cities and the wide-spread diffusion of pharmaceuticals and the rise of the automobile, and much else besides. One might call it all ‘modernity’. Yet already by the seventeenth century some Europeans are living in distinctly ‘modern’ societies and yet still in 1800 the gap between the world’s richest and poorest societies was a modest ratio of 2:1, whereas today it is a jaw-dropping 60:1, and this gap widens every day. So modernity, commerce, democracy, technology, and so on, by themselves do not explain the economic miracle of the past two hundred years. What then does?

McCloskey says that the important difference is ‘innovation’, or rather the pace and scale of innovation of the past two centuries. To an extent, I agree. It was the institutionalisation of invention—aka innovation—that made the difference. Innovations ranging from automobiles to elections, constitutional states to antibiotics re-shaped human existence. That said, I also have reservations about the word ‘innovation’. Innovation comes from the root Latin word

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‘novus’ meaning new. The same root gives us novel, novelty, novice, renovate, and so on. There is much that is new in the past two centuries. Yet the quality of ‘being new’ does not explain the last two centuries. It was already well observed by the time of the eighteenth century that the work of innovation—of improvement—often leads not to development but to disaster. It is not always the case but sometimes, and often-times, we are worse-off because of improvement. The world is littered with reforms that, when applied, are retrograde. Movement forward sometimes leads us backwards. The rhetoric of betterment oftentimes in practice leaves us worse off. So we cannot say that modern capitalism’s great economic leap forward is explained by ‘the new’. Novelty was not a winning power. What mattered was the durability of the new. The new that is old is the key. This is the novus ordo seclorum—the paradoxical ‘new order of the ages’—that turns innovation and improvement into a lasting achievement. How is such a thing possible?

The American Founders used the ‘new order of the ages’ as their constitutional motto on the Great Seal of the United States. The motto merges the beginning and the lasting. It unites initiative and permanence, transience and durability. The capacity to do this is much more important than innovation on its own. What impresses human beings—and what contributes to the well-being of humankind—are innovations that last. The industrial machine first appeared in the late eighteenth and early nineteenth century. It is just as important today as it was at the moment when it was first created. We still live in a machine world. The machine in its many guises is essential to why we have a standard of living of $145 a day and not just $3 a day, and why now only a sixth of the world lives on $3 a day. To have gotten to such a point, a good fraction of humanity has had to have had the experience of making transience and durability one. This is not an easy thing to do. It is not an easy thing even to think. It is not easy because such ineffable merging is a short-hand for creation—and creation is difficult to either achieve or conceive.

To innovate in a way that the new becomes the old is to create, and not just innovate. So when Deirdre McCloskey says that the key to understanding the miracle of modern capitalism is ‘innovation’, whilst nodding cautious assent I think we also have to say that the miracle of innovation is due to the power of creation. Innovation works when it is not simply the new, the different, the latest, or the contemporary but when it translates each and all of these qualities seamlessly into the old, the deep-rooted, the long-standing, the established and the proven. That is the work of creation, and creation is the work of paradox. Let me explain this with an example that is unambiguously agreed by all to be an act of creation. This is the science of Einstein. What Einstein did (in essence) was to merge the electromagnetic theory of Maxwell with the