

Gregory Clark, *A Farewell to Alms*

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Declan Trott¹

For most of human history, material living standards have been static. But over the last century or two, large parts of the world have broken away from this equilibrium and enjoyed massive increases in income. Gregory Clark sets himself to answer three big questions: Why did living standards stagnate for so long? What allowed England to be the first country to break the trap? And why were some countries able to follow and surpass the leader while others have become even worse off?

His answer to the first question is that of Malthus: any increase in living standards was ultimately eaten up by an increasing population facing diminishing returns. Thus the labouring Englishman (or woman) of 1800 was, in terms of stature, diet and leisure, worse off than a Stone Age hunter-gatherer, or indeed his counterpart of 1400 who benefited from the shortage of workers following the Black Death. The many advances in productive technology that occurred before that time merely served to increase population.

While this Malthusian argument is an old one, Clark illustrates it with a wealth of historical data on population and living standards, and a simple graphical model which illustrates starkly the inversion of economic vice and virtue in this world: war and disease *raise* per capita incomes, while peace and hygiene *lower* them. Thus 'Europeans were lucky to be a filthy people who squatted happily above their own faeces'.

How did England escape? Clark argues that the usual explanations are all unsatisfactory. Invoking the Enlightenment, Protestant Reformation or Scientific Revolution merely pushes the question back one stage, even if the link is valid. The timing of changes in family size and the skill premium does not fit human-capital-based explanations, while it is hard to find evidence of any institutional changes at the crucial time. Intellectual property was still very poorly protected (many of the great textile inventors died in poverty) while the other elements of a market-based economy had been in place for centuries. Indeed, Clark argues that, by many measures, medieval England had better economic incentives than England today — lower taxes, inflation and government debt, a higher skill premium, and fewer restrictions on land use. The Industrial

¹ School of Economics, College of Business and Economics, Australian National University, Declan.Trott@anu.edu.au

Revolution saw a massive increase in the supply of innovations without any apparent change in incentives.

There were, however, four crucial changes over this time. Interest rates fell from double to single digits. Literacy rose. Society became much less violent. And work became longer and more disciplined. This environment rewarded middle-class values of patience, diligence, acquisitiveness and self-control. Clark suggests that these values were, in fact, being biologically selected for: the rich had more surviving children than the poor, and their children inherited their values, whether by genetic or cultural mechanisms. It was the long-run evolutionary change in the character of the people, rather than any short-run change in policies or institutions, that did the trick. This has the merit of focusing on differences between England, on the one hand, and Asia on the other: while Japan, China and India did have many of the same market institutions, they still had higher interest rates and lower literacy. What data is available for China and Japan also suggest that the rich enjoyed a much smaller reproductive advantage in those countries, perhaps linked to the fact that their populations quadrupled or quintupled between 1300 and 1750, while England barely recovered its losses from the plague.

This leads naturally to the third question: why the Great Divergence? Poor countries, especially colonies, had 'the cheapest labor in the world; security of property; complete freedom to import technicians, machinery, capital ... sea routes; and access to the largest market in the world'. This sounds like an optimistic list of China's advantages 10 or 20 years ago. Why were the results not similar?

Clark's answer is labour quality. Using mainly evidence from the textile industry, he argues that low-wage countries had much higher labour-output ratios (as would be expected given relative prices), but *not* lower capital-output ratios. It seems that in low-wage countries more workers had to be used on the same machines to get the same output, even with imported technicians and managers. This would only be rational if the low-wage workers were intrinsically less efficient: less diligent, less punctual and less disciplined; and there are plenty of recorded complaints along those lines. Thus investing in low-wage countries was not particularly profitable, and there was no tendency for incomes to converge. Indeed, since modern medicine has reduced mortality at any given level of income, we can have societies such as the poorest in sub-Saharan Africa in which the population continues to grow, despite the lowest living standards anywhere in recorded history.

To recap: England had the Industrial Revolution because of natural selection, and poor countries are poor because their workers are intrinsically less productive. This is a bold pair of hypotheses, which would no doubt attract vociferous condemnation even if backed by watertight evidence and presented in the most

modest and unassuming way. This they emphatically are not. Confining our attention to substance rather than style, the evidence is thin on crucial points, and could bear other interpretations. On the question of inheritance of productive characteristics, rather than simply cash and connections, there is only an unreferenced and unadorned statement that rich fathers tended to have rich sons, even when the inheritances were made insignificant by large families. There is also no attempt to show that the theory is quantitatively consistent with the observed selection pressure of income and plausible values of inheritability. The textile productivity data could be explained by efficiency wages, or climate, or the employment of assertive men rather than docile girls.

Further, it seems natural at a broader level to link natural selection and labour quality, and so turn Clark's two theories into one. However, this sits uneasily with the variability of growth in individual countries across time, as Clark admits: 'Regarding the underlying cause of the differences in labour quality, there is no satisfactory theory. Economies seem ... to alternate more or less randomly between relatively energetic phases and periods of somnolence.' Clark also mentions the huge increase in earnings enjoyed by workers moving from the Third World to the First, without seeming to notice the obvious problem this poses for the labour-quality theory.

But if the natural-selection theory, on the admission of its author, is a poor explanation for variation in labour quality across countries and time, it seems doubly poor as an explanation for the Industrial Revolution in England. If this is viewed, as Clark does, as an upsurge in the supply of innovation without any change in demand, the connection with bourgeois values seems rather weak. Even if these values are inherited and selected for, it is hard to see how patience, workaholicism and pacifism lead automatically to innovation. One could even argue that they would crush it or crowd it out. And since innovators in the pre- and early industrial era typically received meagre rewards, selection directly on innovation is even less plausible. One could perhaps make a case for selection on literacy reaching a critical point that allowed communication of ideas and thus continuous, sustained innovation, but then we are back in the world of the discontinuous, one-off Enlightenment/Revolution/Revolution theories that Clark abhors.

Perhaps, however, this is where we should be. After all, the Industrial Revolution was a one-off, discontinuous historic event.² We can increase our understanding of this event by careful study of the place and time where it happened, and places and times where it didn't, but until we invent a time

² The demographic transition to lower, deliberately controlled, fertility that allows final escape from the Malthusian trap is not, but existing theories seem to explain this pretty well, and Clark adds little or nothing.

machine to move between parallel universes there will always be a bit of mystery remaining.

Even if the answers are unsatisfactory, however, the questions remain. And *A Farewell to Alms* does a great job of posing the questions. It also contains many insights on the timing, composition, demographics and beneficiaries of the Industrial Revolution. This book deserves everything it gets, both in praise and in blame.