Counter-factual history

What if William Pitt had adopted Adam Smith’s advice instead of introducing income tax in 1799? Might many of the social tensions and economic crises that befell Britain in the nineteenth century have been avoided? Scholars pose such questions to develop counter-factual history, an attempt to visualise how a community might have evolved if people had made decisions based on a wider range of choices. Historian Niall Ferguson (1997: 85) stresses that counter-factual scenarios are ‘simulations based on calculations about the relative probability of plausible outcomes in a chaotic world (hence “virtual history”):’ ‘Because decisions about the future are – usually – based on weighing up the potential consequences of alternative courses of action, it makes sense to compare the actual outcomes of what we did in the past with conceivable outcomes of what we might have done’ (ibid.: 2).

To deny the possibility of alternative outcomes is to deny the state of freedom. Freedom consists in a person’s right to choose how to live. To achieve that freedom, people need options, all of which must be realistic, some of which they must be free to sideline. Thus, it makes sense to ask: in the past, to what extent were people free to exercise the right of choice? Do systemic
hurdles restrict people's choices today? How may we expand our
options for the future?

In our view, the problems that confronted the pioneers of mass
transport systems would have been nowhere near as horrendous
if they could have captured more of the value they created. In fact,
we postulate the probability that the relationship between the
public and private sectors would have been altogether different if
Parliament had followed Adam Smith's advice. We may see this in
the current confusion over the status of Britain's rail network.

Economists at the Treasury and the Department for Trans-
port, who sat in judgement on the financing arrangements of the
privatised company, were outraged at the prospect of Railtrack
paying £84 million in dividends to shareholders — a month before
they were proposing to shut the company down. After all, wrote
the then director of railways: 'Even after the assistance package
last April [when Railtrack was advanced £1.5 billion], Railtrack
declared a dividend. The company has clearly been badly managed
since privatisation' (Osborne, 2005).

But weren't shareholders entitled to a return on the capital
they had invested in Railtrack? Were the 'losses' attributable to
operational inefficiencies or to the capital costs of renewing the
rail infrastructure — and Parliament's failure to link capital invest-
ment with the ensuing value that spun off the tracks and into the
pockets of landowners?

The failure to elaborate the accounts to identify all the value
delivered by the railway enabled the Department for Transport to
declare Railtrack commercially unviable. That brought privatisa-
tion to an end, and left investors holding shares that they could
not sell.

Incoherence in the financial framework is disguised by the
government's follow-up experiment with the not-for-profit Network Rail. Its debt was forecast to reach over £13 billion by March 2004 (House of Commons Transport Select Committee, 2004: para. 80), and £23 billion by 2014. Nobody really knows whether the railways are financially viable or a noose around the nation's neck, because the Treasury fails to follow the money trail. It is appropriate to retrace our steps and take a closer look at the economics that confronted engineer George Stephenson.

The Stockton and Darlington Railway

Transport innovations open new frontiers even in old countries. They generate new commercial, social and psychological possibilities. In Britain, the technologies eased access to the riches of nature that had been beyond reach. To exploit them, frontier towns were created, the grids of streets laid out across ancient fields to accommodate the influx of people who would extract the treasures that lay beneath the soil. Middlesbrough was one such town. It was established as a consequence of the founding of the Stockton and Darlington Railway. This strategy of extending the frontier, however, differed from the American model of colonisation in one vital respect: the land had already been privatised by the aristocracy and gentry. Government could not offer free land as an inducement to investors to construct railways. Railway stockholders had to buy the land before they could lay a single mile of track. How did this affect railways and the economy of the United Kingdom?

The analytical starting point is the way in which a railway expands the production possibilities and therefore the value of enterprises. In the case of the most famous of the early railway
companies, the one with which Stephenson was associated, the Stockton and Darlington Railway Company opened up 100,000 acres of coal which had previously been inaccessible. Stephens-
son's railway slashed the costs of transportation from 7d per one ton of goods per mile on a wagon or by canal, to 1d on the railway. As a result, the price of coal fell by more than 6 shillings a chaldron (a unit of capacity equal to 36 bushels).

The postal service also enjoyed increased productivity. Its mail was carried at an astonishing 20 mph at one third of the former expense. This meant that, after the investors in the railway had made a profit, others would derive an additional material benefit based on a value that could be directly attributed to the railway’s presence. In competitive conditions, that value could not be captured by the railway’s investors. Who pocketed the difference?

The prospects of a railway were discussed for at least eight years up to 1818, as entrepreneurs ruminated over whether to favour a canal. Parliament rejected the railway proposal in 1819, but the enterprise received the royal assent in 1821. The backers included noblemen such as His Grace the Duke of Leeds, the Earls of Darlington and Strathmore, and Lords Dundas and Lascelles. They owned the land beneath which the rich seams of coal lay waiting. These landowners were well placed to derive a double windfall from the genius of people like Stephenson. First, the potential rent of their coal would be released. In addition, there was the rental value that would spill over into the general community. Thus, by monitoring the negotiations for the purchase of land on which to construct the railway, we derive an

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1 This account of Middlesbrough and the Stockton and Darlington Railway is based on the primary materials - newspaper reports, leases, parliamentary debates and so on - conveniently compiled by Moorsom (1975).
impression of the measure of the heightened efficiencies achieved in the economy.

One beneficiary was the Bishop of Durham. His farmland was worth £5 an acre. Six acres were needed to construct the Middlesbrough branch line. The bishop's agent valued the land at £5,073 9s 3d. Because the valuation was contested, the purchase was placed before a jury in March 1829. William Jekyl, a bricklayer, valued the land at £3,876. The railway company had discharged him as an employee, dissatisfied with his work. Christopher Hunton valued the land at £3,161. 'There was an impression throughout the Court that this witness was drunk, but Mr. Coltman said it was merely a peculiarity of manner which he exhibited.' Thomas Farthing, publican, valued the land at £5,592. 'This witness admitted that he was fond of horse-racing, and indulged in speculative notions.' The valuations offered on behalf of the railway varied between £797 18s 11d and £1,107. In the event, reported the Durham County Advertiser (14 March 1829), the bishop was awarded £2,000, or £333 an acre. This was a massive increase in value derived not from a change in the intrinsic qualities of his acres, but because of the increased productivity that could be anticipated along the track between Stockton and the new town of Middlesbrough.

The Durham Chronicle of 1 January 1831 sang the praises of the railway, which

has been productive of immense advantages to the neighbourhood through which the Railroad runs, by the facilities of conveyance which it has afforded to persons engaged in agricultural, commercial, manufacturing, and mining pursuits... [and] opening of a trade in coal between the London market and the various collieries contiguous to the Railroad. To effect this purpose, no expense or exertion
has been spared; and at length they have completed their project, in a manner highly creditable to their own character for enterprise and public spirit, and which promises to be attended with the most beneficial and happy results to the community at large.

Through the markets, part of the value of that ‘enterprise and public spirit’ was siphoned into the pockets of the owners of land for no good reason other than that they were the gatekeepers: their permission was required to run the tracks over the land.

Before the branch line could be opened in December 1830, the railway company had to buy more land at £322 an acre and options to buy additional sites at £500 an acre. It was estimated that in 1829 the savings arising from a reduction in the cost of carrying coal amounted to £11,289.

The heightened economic activity also generated new business for turnpike roads, whose tolls were increased; so much so that their debts were discharged within five years after the opening of the railway. The turnpikes became profitable even though they lost the coal-carrying wagons. On those highways, one horse could drag 1 ton at the rate of 8d or 9d a mile. On the railway, one horse could draw 10 tons of coal at the rate of 3d per ton per mile. Those net savings were converted into land values.

To open up the London trade, a new town would have to be built at the mouth of the Tees, where the water was deep. A consortium of investors purchased 1,040 acres from John Whinfield Parrington. Joseph Pease sailed into the mouth of the River Tees and landed on a spot where, from the mounds that were etched into the landscape, he deduced ancient settlement. It was here that they would break the ground and construct a new town. He recorded in his diary:
Imagination here had ample scope in fancying a coming day when the bare fields we were then traversing will be covered with a busy multitude and numerous vessels crowding to these banks denote the busy Seaport ... Who that has considered the nature and extent of British enterprise commerce and industry will pretend to take his stand on this spot and pointing the finger of scorn at these visions exclaim, that will never be? ... I believe it will. Had a most delightful sail on our return to Seaton calling and breakfasting at Cleveland Port, luxuriously entertained Tea Coffee Eggs Ham &c &c – 10d. each Waiter included.

The first 30 lots were auctioned at the Black Lion Hotel, Stockton, on 23 February 1830. To attract settlers, the advertisements promoted the properties as conveniently located just 150 yards from the new shipping facilities that were being constructed by the railway; enjoying a healthy, airy environment; and benefiting from beautiful views of the river and rural landscape. The streets were macadamised, and the town began to flourish, first relying on the trade hauled into town by the railway and then with the construction of an iron foundry in 1844.

Landowners made their fortunes. First, there were the rents from the extraction industries. Then, they protected their portfolios by offloading shares to urban investors who thought they could reap a profit from the fire-belching machines that were revolutionising the British economy. The railways, however, had accumulated debts, and someone would have to bear the loss.

The transport confidence trick
The flaw that nineteenth-century politicians built into the DNA of
the British capitalist economy made inevitable the shift towards state penetration of commercial markets. That inevitability was not pre-determined, Marxist-style; but it was the logical outcome of the failure of fiscal policy.

In the vanguard of that process was the problem of funding the nation’s infrastructure. In the nineteenth century, the unwitting losers were the people who invested in the capital projects – shareholders who lost their savings in the Great Capital Lock-up. Then, in the twentieth century, the losers became the taxpayers who were forced to assume responsibility.\(^2\)

The shareholders of the early decades of industrialisation were entrapped in a process that was akin to a classic confidence trick. The promoters of capital-intensive projects were vulnerable. They needed an escape plan. Timing was of the essence. They needed to execute their exit when the public believed that a project would deliver handsome dividends. Shares were sold when the price was at its highest. This enabled the promoters to recover their capital. The second generation of investors was saddled with debts that could not be funded out of revenue.

This process had two effects. First, it locked in the capital gains for the benefit of the promoters of the schemes. Second, it locked out the second wave of shareholders from dividends that they thought were in the offing.

No one warned investors that the financial rules were rigged against them. But the history of canal and railway construction

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\(^2\) The state acquisition and/or funding of transport was not the outcome of a doctrinal preference, as under state socialism. It was inherent in the financial architecture of capitalism. Statism was well embedded in Britain before the landslide victory of the socialists after World War II. The Port of London came under public ownership in 1908. London Transport came into existence in 1933 and the British Overseas Airways Corporation in 1939 (Ricketts, 2005: 70).
ought to have alerted them against investing in transport unless they owned land. The distribution of risks and rewards is highlighted by the two models for extracting the net benefits from infrastructure.

*The Bridgewater model*

The risks were low for the Duke of Bridgewater, who pioneered canal building on his family estate. He captured the value that cascaded from the canal on to his land.

Such cases were not entirely risk free. An example was the Vend, a monopolistic organisation of collieries in the north-east that supplied coal to London. But new railways enabled other landowners to open seams that were previously inaccessible. The monopoly dissolved under the competition (Sweezy, 1938: ch. 10). Coal rents in the north-east declined, to resurface as increases in residential rents in London.³

*The sucker model*

Landowners would form a company to promote a railway. As their chairman they would often select their member of parliament. At an opportune time they sold their shares to merchants. The risks were transferred to urban investors, who were saddled with the debts arising from the investment in the infrastructure. The landowners ‘cashed out’ by suckering others into committing their savings, then retreating and capturing the rents that cascaded on to their land along the railway’s route.

³ The breakdown of the Vend ‘involved a transfer of income from the monopoly rent of the north eastern collieries to London users’ (Hawke, 1970: 396).
Many shareholders, beguiled by the romance of steam and the publicity given to speculators who made fortunes, persisted with their investments. The cumulative losses were enormous.

The sucker model was the practical option for the American West. Stewart Holbrook summarised the modus operandi. After the grant of a charter involving federal lands:

Next the railroad boys would incorporate a land company, owned by directors of the railroad, to develop and peddle the lands. With the proceeds of the land sales, to which cash subsidies from Federal, state, or even city sources often were added, plus the sale of mortgage bonds in Europe, actual construction of the railroad was begun. Construction, however, was not done by the railroad company, but by a separate concern, also owned by the railroad’s directors, which commonly paid off handsomely, although the grade was made and the rails laid at stupendous cost to the holders of the railroad’s stocks and bonds. A considerable number of American railroads were financed by methods that cost the railroad’s directors not a penny of their own in actual cash. (Holbrook, 1947: 154)

Why dilute a windfall fortune by carrying the costs of infrastructure when the risks can be shifted on to suckers?

But unless these funding loopholes are plugged, investors in the 21st century may shun future schemes. One of these is the alpine rail tunnel that France and Italy agreed to co-fund at a cost of €12.5 billion ($15.1 billion, £8.4 billion) in May 2004. The 52-kilometre tunnel will receive a contribution from Europe’s taxpayers. But the two governments also want private investors to

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4 The emergence of the limited liability company, which made access to small-value shares easy for urban savers, was cited by contemporaries as an encouragement to speculative investments (ibid.: 391).
WHEELS OF FORTUNE

bear 30 per cent of the cost. Should investors sink their savings into such a bore hole? The major windfalls will be reaped in the Italian province of Piedmont, where Turin is the capital. The tunnel is predicted to have an explosively beneficial impact on the regional economy. Italian Prime Minister Silvio Berlusconi drew attention to some of the benefits: the tunnel would halve freight time and costs and slash pollution levels. He forgot to mention that the net benefits would not seep into the wage packets of Fiat workers, but would surface as higher residential and commercial land values. Nor will the rents be shared with the taxpayers of the poverty-stricken southern regions of Italy, who will contribute to the government’s share of the cost of the tunnel.

Rolling back the state

Funding infrastructure is a problem inextricably linked to the challenge of how to roll back the state’s involvement in the economy. If we want to diminish the penetration of the state’s activities in our individual lives, we first have to solve financial problems such as the funding of infrastructure.

The starting point for a reform agenda is the realisation that transport facilities do generate more than enough value to fund the capital beneath the wheels. In Britain the social rate of return on railway investment was between 15 and 20 per cent from 1830 to 1870, according to economic historian G. R. Hawke. This was, he explained, an underestimate:

Investors in particular companies were probably correct in asserting that further expenditures by their companies were lowering their dividends. . . . From a social point of view, the important implication is that the marginal social
rate of return was not declining between 1840 and 1870, and that the rate of return remained above the likely rate on alternative investments. (Hawke, 1970: 408)

Competition reduced the dividends paid to investors, but economy-wide productivity rose. Enhanced gains ultimately surfaced in the land market.

Social rates of return sum the total benefits to communities throughout the nation. The economy gained from investment in shipping and the iron industries, the increased efficiency in the pooling and use of savings through innovations in the capital markets, and from the expanding social and environmental achievements that were delivered by the carriages on the iron tracks. The economic, social and aesthetic gains translated into a growing demand for land, and that raised rents to sums that were at least equivalent to the capital cost of the railway revolution.

The problem for investors, however, was that the Irish navvies who dug the earth out of the ground were shovelling money into the pockets of landowners. The wheels delivered windfall fortunes throughout the kingdom, but investors who were not landowners were legally unable to claim a share. Although it was unable to solve this problem, we will see mounting demands for the restoration of the state in the funding of utilities that were privatised in the late twentieth century (as when the obsolescence of their infrastructure compels them to invest on a large scale). Eurotunnel, once again, illustrates the point.

One million owners of shares in Eurotunnel sacked their board of directors in April 2004 when their assets were deemed to be almost worthless. They feared that they would lose their money under the weight of the £6.4 billion debt. About 60 per cent of
the shares were in the hands of small investors in France, 5 per cent were held by the British public, and 10 per cent were owned by banks. In February 2004, Eurotunnel appealed for government intervention. It proposed a bail-out deal.

No one intended to dupe the investors who bought Eurotunnel shares. Their plight was the outcome of a financial architecture that separated the benefits of operating the tunnel from the benefits of owning land that was scattered throughout the nation. Small shareholders were not the original investors. Most of the institutions that financed or constructed the tunnel sold their shares when prices were at their peak. That locked in their gains, and shifted the risks to Johnny-come-lately savers. Rather than campaign for state aid, ought shareholders to engage in the search for a more efficient and fair funding model?

The challenge is to develop a win-win formula in which no one loses. Can this be achieved by the application of the principle that people should pay for the benefits they receive?