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THE DESTRUCTION OF MYSTICAL BABYLON.

By David Vedder.

Rev. xvi. 1-12.

Strike your harps, ye beautified spirits, whose flight

Was from fagot and flame to the regions of light; Who by famine, and torture, and headmen were driven

From the gloom of the vault to the glories of heaven!

Raise jubilant anthems—be glad and rejoice, The tyrant in purple shall fall! for a voice Has issued in thunder from God's holy dome,— "Let vials of vengeance be poured upon Rome!"

An angel obeyed the behest, and there fell The throes of Destruction, the torments of Hell, On all who had knelt at the shrine of the Beast, Or had his foul mark on their foreheads imprest.

He poured on the waters,—all stagnant, and red, And putrid they grew, like the blood of the dead; He poured on the rivers and fountains so fair, And Death like a cormorant rioted there!

Hark! peans ascend the empyrean to God, For drenching his shafts and his sword in her blood;

While choirs from the altar this chorus renew,— "JEHOVAH! thy judgment are righteous and true!"

A vial was poured on the sun—and 'twas given To scorch the blasphemers with lightning from heaven;

And the earth streamed with lava wherever they trod—

But they hardened their hearts, nor gave glory to God.

Wrath, ruin, and wo, at JEHOVAH's behest, Are rushing amain on the lair of the Beast; Thick darkness envelops the noble and slave,— Towers, temples, are wrapt in the gloom of the grave.

A vial of vengeance was poured in the air, And thence issued groanings and shrieks of despair,

And voices, and thunders, and lightnings, and fire;—

Below all was earthquake and pestilence dire,— And Mystical Babylon's name shall expire!

Strike your harps, ye beautified spirits, whose flight Was from fagot and flame to the regions of light; Who by famine, and torture, and headmen were driven

From the gloom of the vault to the glories of heaven!

RAILROADS:

THEIR HISTORY AND ADVANTAGES.

The substance of a Lecture delivered at ACADIA COLLEGE, by the President, March 1, 1853.

The first roads we read of were in the East. Like many modern roads, in that part of the world they were originally nothing more than the tracks of travellers and their beasts, and were neither made nor repaired. At an early period, however, the authorities saw the importance of making provision for the transport of military force, easily and expeditiously from place to place, and that led to the construction of roads by governments. See Numbers xx. 17; xxi. 22; Judges v. 6; Isaiah lxii. 10. The warriors and conquerors of antiquity took great pains in this respect. The Romans excelled all others. Wherever their power extended, they provided the country with roads and bridges of the most substantial character, many of which yet remain and command universal admiration. The celebrated Assyrian way, and other roads of the same kind, are still in use.

In new countries it is commonly long before these conveniences are secured, particularly when the soil is covered with the thick forest. The settler is too much engaged in clearing the ground and providing for the immediate wants of his family, to be able to give attention to matters of accommodation and comfort. The Indian's path, or one no

better, satisfies him at first, and many a weary day is spent in carrying provisions on his back from the mill or the nearest store to his log hut, guided by the blazed trees in the woods. To this succeeds a broader path, made by cutting down a tree here and there, so that a horse or oxen or wagon may wriggle through. Then follows the road, properly so called, the stumps being extracted and the holes kept filled up. This lasts many years. In the spring the sides are ploughed and the soil thrown upon the central part, so that a fair road is made, all the while the dry weather continues; but in a rainy time it is wearisome work to travel by it. As the country advances in improvement, and becomes more populous, the desire for more rapid transit begins to operate; when the framed house with its orchard succeeds to the log hut and its stump-crowded fields; and the neat, light wagon takes the place of the truck-like vehicle which was first employed, the want of good roads is felt. Should the district supply stone or gravel, the want is soon supplied, by the macadamizing process. In clayey or sandy regions the plank road is found very servicable; travelling is accomplished with greater speed and pleasure, and there is considerable saving of animal strength. Those who have attained to the plank road (there are many excellent specimens of it in Canada,) are in the direct path to the railway.

For this modern improvement we are indebted to the old world. It arose out of the necessities of the mining districts. The constant passage of the carts from the mines to the places of deposit on the wharves broke up the roads, and occasioned heavy expenses as well as vexatious delay. This led to the invention of train roads, which consisted of wooden rails laid on sleepers embedded in the earth, the cast-iron wheels of the carts being so formed as to be incapable of slipping off the rails. They were first used at Newcastle, about the middle of the 17th century. After a time the wooden rails were covered with plate iron; iron rails were substituted nearly a hundred years ago, and have been variously modified and improved since that period. On these roads the carts and other carriages were drawn by horses, whose power of draught was of course greatly increased by the diminution of friction. When the distance from the mine was considerable, it became necessary to secure the right of way, and upwards of fifty acts of Parliament were passed for that purpose before the construction of the present railroads. Locomotive engines were invented in 1824. It was then seen that the railroad could be employed for the conveyance of passengers, on a great scale, if the requisite means for its construction could be furnished. British capital came to the aid of British ingenuity, and the problem was solved.

The Liverpool and Manchester Railway was the first enterprise of the kind. It was opened September 15, 1825. In constructing this railway great difficulties were encountered. In order to pass over the Parr Moss, it was necessary to raise an embankment 25 feet high. The Chat Moss, four miles and a half across, and so soft and spongy that cattle cannot walk on it, and an iron rod sinks with its own weight—the yielding material being from ten to thirty-five feet thick—presented a still more formidable obstacle. The level of the whole work required the railway to be sometimes twelve feet above the Moss, sometimes nine feet below it, and sometimes on the surface. The skill of the Engineers was severely tested, but by a combination of ingenious expedients they happily succeeded; and now, where a cow could not stand, five hundred thousand persons travel with safety every year.

Other enterprises of the same kind were quickly taken in hand. The following were

the principal railways opened in the first fourteen years:—

- 1825. London and Birmingham.
- London and Greenwich.
- 1829. London and Croyden.
- 1840. London and Blackheath.
- South Western to Southampton.
- North Midland.
- Midland Counties.
- 1841. Great Western to Bristol.
- London and Brighton.
- 1842. Edinburgh and Glasgow.
- 1843. Eastern Counties to Colchester.
- 1844. South Eastern to Dover.

In 1845 a railroad mania broke out. Company after company was formed and the wildest speculations set afloat, involving a projected expenditure on 400 contemplated railways, of more than £300,000,000 sterling. A large portion of these projects fell through, dragging multitudes down to ruin, while here and there a reckless speculator enriched himself. It was several years before the money market recovered the shock. At last, however, affairs settled down. Many intended lines, which would have needlessly competed with existing ones, rendering all unprofitable, were relinquished. Others were carried on. The result is, that whereas, in 1825, there was but one railway in operation, 31 miles in length, at the close of 1852 the railways of the United Kingdom extended to 7338 miles. Their capital is £248,593,533, being £33,879 per mile. The receipts of the year were £15,543,610, being £2118 per mile.

The example of Great Britain was soon followed on the Continent. In Belgium the construction of railways was undertaken by the government, and the system of management adopted is said to be "the most complete in existence." The first railway was opened in 1836, and there are now more than 1000 miles of road in operation. The cost of construction has exceeded £16,000 sterling per mile. Having fixed the fares at a very low rate, (a penny per mile for first class carriages, three farthings for second class, and one halfpenny for third class; the government suffered at first a loss of £100,000 a year, which loss it was hoped would be materially lessened, if not cease altogether, by the increase of traffic.

In France there are more than 2000 miles of railway; in Germany, (including Austria and Russia,) upwards of 3000 railways are established; also in Holland, in Italy, in Denmark, and in Russia, and are increasing every year.

The Colonial possessions of Great Britain have already begun to enjoy the benefits. A railway has been opened between Kingston and Spanish Town, in Jamaica. The first section of a line from Calcutta to the Northern Provinces of India is in operation, greatly to the wonderment of the natives. Others are in course of construction in that country. The railways of British North America will be noticed hereafter.

Even in the land of the pyramids this modern method of travelling is about to be introduced. The Engineers are busily at work on the line from Alexandria to Cairo, and the solitude of the desert through which the Israelites passed to the Red Sea, will shortly be invaded by the steam whistle and the rolling car. Could the Pharaohs arise from their tombs, they would behold greater wonders than even their own pyramids and temples.

The people of the United States were not slow to avail themselves of the advantages of railroads. The immense extent of their country, and the long distances between their cities rendered the adoption of the system highly desirable. A railway from Quincy to Boston, for the conveyance of granite for the Bunker Hill Monument, was made in 1827. In 1835 the first railways for passengers were opened, being those from Boston to Providence,

to Lowell, and to Worcester. The progress since that time has been remarkably rapid. The following is the present state of the railway system of the United States:—

	In operation.	In progress.
Maine,	395 miles.	111 miles.
New Hampshire,	500	42
Vermont,	439	—
Massachusetts,	1140	66
Rhode Island,	50	39
Connecticut,	627	198
New York,	2933	904
New Jersey,	254	85
Pennsylvania,	1244	903
Delaware,	15	11
Maryland,	521	—
Virginia,	624	160
North Carolina,	249	248
South Carolina,	599	266
Georgia,	857	803
Florida,	23	—
Mississippi,	95	928
Alabama,	236	728
Louisiana,	63	200
Texas,	—	33
Tennessee,	199	509
Kentucky,	94	661
Missouri,	—	515
Ohio,	1855	1755
Michigan,	427	—
Indiana,	755	979
Illinois,	296	1772
Wisconsin,	50	470
	13,315	12,029

It may be safely affirmed, that the railroads now in operation in different countries, extend to 30,000 miles. The amount of travel performed on them may be judged of by one instance. The South Eastern Railway, from London to Dover, is 89 miles in length, with branches to Ramsgate and Margate, the last mentioned place being 101 miles from London. The trains travel 2037 miles every day, or 12,222 every week, (Sundays excluded,) making in the year 635,544 miles; and as about 100,000 persons pass over some portion of the railway every week, more than five millions of travellers use it in the course of the year.

In the formation of railroads immense expense has been sometimes incurred in securing a level line, by deep cuttings, viaducts, tunnels, &c. [Here an account was given, in detail, of some of the great works executed on the British Railway lines; particularly of the Primrose and Kilsby tunnels, and the Blissooth cutting on the London and Birmingham Railway—the summit tunnel at Littleborough—the box tunnel between Chippenham and Bath—the tunnel on the Edinburgh and Glasgow line—the viaducts at Manchester and Stockports—the high level bridge at Newcastle-upon-Tyne, and the Britannia tubular bridge over the Minar Straits.]

It may be naturally supposed that works of such a character would require an enormous expenditure of money. On the Continent, where property is far less valuable, and labor cheaper, the expense is less. Yet we have seen that the Belgium Railways cost upwards of £16,000 per mile; and those of Russia, 2306 miles already completed, have cost £12,294 per mile.

The following is the cost of some of the principal British Railways:—
Hull and Selby, 31 miles, £533,833; or £17,204 per mile.
Grand Junction, 82 1/2 miles, £1,500,000; or £18,180 per mile.
Liverpool and Manchester, 31 miles, £820,000; or £26,451 per mile.
South Western, 76 1/2 miles, £2,054,386; or £26,680 per mile.
Edinburgh and Glasgow, 46 miles, £1,900,000; or £41,304 per mile.