

**THE PROGRESS OF LOCOMOTION:  
BEING TWO LECTURES ON THE  
ADVANCES MADE IN ARTIFICIAL  
LOCOMOTION IN GREAT BRITAIN.  
PP. 5-80**

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**BENJAMIN SCOTT**

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*Carriage & Co. Ltd.*

✓  
THE  
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BEING

TWO LECTURES

ON THE

*Advances made in Artificial Locomotion in Great Britain.*

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—“Progress has been made; the human race  
Advances palpably in its career.  
Old errors fall, and old truths seeming new,  
Shine on the nations with a steadier light,  
And point the way from sloughs of ignorance  
To the firm ground where they must stand at last.”  
MACKAY'S "EGYPTIA."

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BY

BENJAMIN SCOTT,

SECRETARY TO THE WORKING MEN'S EDUCATIONAL UNION.

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## PREFACE.

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THE following Lectures, designed for working men, are little more than a compilation from works of acknowledged merit. The writer acknowledges the assistance he has received from a very excellent little book, "The Silent Revolution," by Michael Angelo Garvey, LL.B.,\*—a work very suggestive upon many topics to those who lecture to the working classes; also from a lecture (privately printed) by the Rev. G. Ashmead, of Great Missenden. Use has also been made of a learned series of papers, by F. W. Fairholt, F.S.A., which appeared, in the year 1847, in the *Art Union Journal*. The *Leisure Hour*, a useful weekly periodical, Knight's "London," and the Cyclopædia of the Society for Diffusing Useful Knowledge, have all been consulted and quoted with advantage. The Lectures are longer than is desirable; but it was thought better to err in this respect than to omit matter of interest. Lecturers using them as a help will do well to prune them with a free hand.

\* Cash, London, 1862.

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## PROGRESS OF LOCOMOTION.

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### Lecture I.

HAVE you ever noticed that man, "the lord of creation," as he has been termed, to whom the brute creation has been subjected, is in many respects placed in a condition inferior to them as it regards physical capabilities? He cannot, unassisted by science, mount into the air like the bird, or cleave the sea with the denizens of the deep; he is at birth the most exposed, defenceless, and dependent of the creatures; his body is unprovided with protection from atmospheric inclemency, and those formidable weapons of self-defence supplied in some form or other to the other orders of the animal world; and when arrived at maturity, his physical power is less than that of most of the brutes; the lion, the elephant, and ox would lord it over him, did strength of body alone constitute power; and with regard to his senses, they are often less perfectly developed than those of the inferior animals—for example, the power of scent in the dog, or sight in the eagle tribe; and so as it respects power of *Locomotion*, man, in a state of nature, is decidedly inferior to many of the irrational creatures. While the Creator has endowed so insignificant a creature as the bee with the power of moving at the rate of seventy miles in the hour, and many of the feathered and finny tribes can change their place of abode and secure for themselves variety of climate by the rapidity of their migration, man, unless aided by art, wastes much time and strength in locomotion, and is much localized as regards his geographical position.

With all these disadvantages and restricted privileges, man has implanted within him strong feelings of curiosity and desire for research and discovery, and not only is this character bestowed upon him, but the injunction has been imposed upon him to subjugate the natural world to his use and profit, and to bring it under legitimate control.

These positions, at first sight, seem anomalous and irreconcilable, but they appear to me to furnish corroborative evidence that "there is a spirit in man," something conferring more power than mere physical strength or configuration, or development of the senses; affording more than compensation for any deficiency in these respects when compared with the inferior creation. God has bestowed upon man a body comparatively feeble, exposed, and defenceless, but an intelligence which has proved its superiority by the conquests it has achieved, the disadvantages it has overcome. Man, thus endowed, has become the most ubiquitous and locomotive of terrestrial creatures; he climbs the mountain or descends into its bowels, mounts into the air, traverses the earth's surface, crosses the ocean, and explores its depths; in fact, is a living, moving demonstration of the superiority of the intellectual and spiritual over the merely physical and material world.

The progress which man has been enabled to make towards extending his powers and facilities of locomotion, particularly as regards our own country, and the results springing from such extended powers of communication between man and man, constitute the subject of these Lectures.

Progress in these respects has been doubtless gradual; a float of ice or a drifting log, suggested perhaps the first idea of navigation, and a canoe hollowed out of the trunk of a tree was probably the first step in ship-building. And so with regard to locomotion on land; a tribe or family wending their way through forest or prairie, over mountain or along the banks of rivers, in search of fresh pastures, desirous of main-



taining intercourse with those they may have left behind, or of retracing their steps, if needful, would mark their "trail," which being traversed again and again, would become the first germ of a pathway through the wilderness.

Very early in the world's history man availed himself of the superior locomotive powers of the inferior animals. The first distinct mention of beasts of burden is in that most ancient of books, Genesis,\* where he-asses, she-asses, and camels are mentioned as forming part of the possessions of Abraham. The monuments of Egypt and of Assyria also acquaint us that horses, asses, and camels were very early subjected to the locomotive uses of mankind. From the primitive *trail* or track in the wilderness would naturally be developed the *bridle-path*, when quadrupeds came into extensive use for purposes of transport; soon followed, doubtless, the use of simple *chariots* or *carriages* on two wheels, as is evident from the mention of Pharaoh's "chariots" and "waggons" in the time of Joseph,† and the representation of these carriages on the monuments of Egypt, the former drawn by horses and the latter by oxen. How soon, at what date, and in what country the simple two-wheeled cart or chariot was first improved upon, and became the double vehicle with four wheels, it would now be difficult to determine. *Sledges* were likewise used in ancient Egypt, chiefly for transporting the dead, as appears from the representations of funereal ceremonies upon the tombs of that country. Another method of transport likewise existed in the East from very early times, and is still extensively used there—I refer to the *palanquin* or *litter*, supported on horizontal poles, and borne either by men or horses; that it was in use in the days of Solomon is evident from the reference to it in the book of Canticles, where the bridegroom is represented as travelling, surrounded by his guards, in his palanquin or state litter, which is infelicitously rendered "*bed*" in our English version.‡

To follow up the inquiry thus suggested, and to trace the

\* Gen. xii. 16. † Gen. xli. 43; xlv. 19. ‡ Solomon's Song iii. 6—8.

progress of artificial locomotion through all its changes in the world, would be to undertake a task of no trifling magnitude, would require an acquaintance with the records of the past which few possess, and open a field for speculation inconveniently extensive; it is proposed therefore that we confine ourselves to tracing in outline the progress made in these respects in the British Islands, so far as the scanty records of the social condition of those islands enable us to find our way.

And here allow me to remark that the page of past history is so crowded with the acts of ambition, the triumphs of brute force, and the sickening details of mutual slaughter, that little room has been left to record aught of social condition or progress. The dawnings of a more enlightened literature are evident, wherein the doings of war, if they must be still recorded, will be thrust with shame into the background, while the triumphs of peaceful progress, of scientific achievement, and of Christian improvement will be brought more into view.

The early history of Britain is little more than fable, and our knowledge of its social condition is almost conjectural until the visit of Julius Cæsar, half a century before the Christian era. The natives of these islands were at that time little in advance of the savages of New Zealand, when those islands were recently discovered. As it regards artificial locomotion, however, they had made some progress; the Britons, particularly the southern tribes, met their enemies mounted on horseback, and in carts or chariots, managed with much dexterity, as the Roman writers affirm, which carts, like most of the war-chariots of ancient nations, being armed with scythes, extending laterally from the naves of the wheels, cut down and much disordered the ranks of the invaders. The Britons, being equestrians as well as charioteers, must have been furnished with roads of some sort, which was undoubtedly the case, although the Romans have

generally been complimented as the first road-makers in this country.

The lines of the British *trackways*, as they were termed, have been ascertained, although their more ancient names are in some cases merged in those given to the more recent Roman roads. A list of these trackways, whose courses, however, are involved in much doubt, may not be considered uninteresting. 1. The *Southern Watling Street* extended from Richborough, near Sandwich, in Kent, by London, Verulam (St. Albans), and Weedon, to Wellington and Wroxeter, thence to Holyhead and Anglesea. 2. The *Northern Watling Street*, entering from Scotland, at Chew Green, extended, by Manchester and Chester, also to Holyhead. 3. The *Ickineld Street*, from Yarmouth to the Land's End, Cornwall, by Royston, Dunstable, Chinnor, Streatley, Old Sarum, Exeter, and Totness. 4. *Rykineld Street*, from the Tyne, in Northumberland, to Boroughbridge, Birmingham, Gloucester, and Carmarthen. 5. The *Ermyn Street*, from Berwick to Pevensey, in Sussex, by Doncaster, Stamford, and London. 6. The *Ikeman Street*, from the eastern coast of St. Davids. 7. The *Fosswoay*, from Lincolnshire, by Leicester, Cirencester, Bath, and Ilchester, to Seaton, in Devonshire, then a considerable port. 8. The *Saltway*, from Lincolnshire to Droitwich. There were doubtless other British roads, portions of which can be still traced in some cases, but respecting which no satisfactory evidence now remains.

You must not fall into the error of supposing that these roads in any degree resembled the present turnpike-roads. The greater part of the country at that period, and indeed for centuries afterwards, must have been much in the state in which unreclaimed land is now found in America.

“ Rudely o’erspread with shadowy forests lay  
Wide, trackless wastes, that never saw the day:  
Rich fruitful plains, now waving with deep corn,  
Frown’d rough and shaggy dikes with tangled thorn:  
Through joyless heaths and valleys dark with woods,  
Majestic rivers roll’d their useless floods.