

**BIOLOGICAL  
ANALOGIES  
IN HISTORY**

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Biological Analogies in History by Theodore Roosevelt

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**THEODORE ROOSEVELT**

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THE ROMANES LECTURE

1910

BIOLOGICAL ANALOGIES  
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BY  
THEODORE ROOSEVELT

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## **Romanes Lecture**

### **BIOLOGICAL ANALOGIES IN HISTORY**

AN American who, in response to such an invitation as I have received, speaks in this university of ancient renown, cannot but feel with peculiar vividness the interest and charm of his surroundings, fraught as they are with a thousand associations. Your great universities, and all the memories that make them great, are living realities in the minds of scores of thousands of men who have never seen them and who dwell across the seas in other lands. Moreover, these associations are no stronger in the men of English stock than in those who are not. My people have been for eight generations in America; but in one thing I am like the Americans of to-morrow, rather than like many of the Americans of to-day; for I have in my veins the blood of men who came from many different European races. The ethnic make-up of our people is slowly changing so that constantly the race tends to become more and more akin to that of those Americans who like myself are of the old stock but not mainly of English stock. Yet I think that, as time goes by, mutual respect, understanding, and sympathy among the English-speaking peoples grow greater and not less. Any of my ancestors, Holland or Huguenot, Scotchman or Irishman, who had come to Oxford in 'the spacious days of great Elizabeth,' would have felt far more alien than I, their descendant, now feel. Common heirship in the things of

the spirit makes a closer bond than common heirship in the things of the body.

More than ever before in the world's history we of to-day seek to penetrate the causes of the mysteries that surround not only mankind but all life, both in the present and the past. We search, we peer, we see things dimly; here and there we get a ray of clear vision, as we look before and after. We study the tremendous procession of the ages, from the immemorial past when in 'cramp elf and saurian forms' the creative forces 'swathed their too-much power,' down to the yesterday, a few score thousand years distant only, when the history of man became the overwhelming fact in the history of life on this planet; and studying, we see strange analogies in the phenomena of life and death, of birth, growth, and change, between those physical groups of animal life which we designate as species, forms, races, and the highly complex and composite entities which rise before our minds when we speak of nations and civilizations.

It is this study which has given science its present-day prominence. In the world of intellect, doubtless, the most marked features in the history of the past century have been the extraordinary advances in scientific knowledge and investigation, and in the position held by the men of science with reference to those engaged in other pursuits. I am not now speaking of applied science; of the science, for instance, which, having revolutionized transportation on the earth and the water, is now on the brink of carrying it into the air; of the science that finds its expression in such extraordinary achievements as the telephone and the telegraph; of the sciences which have so accelerated the velocity of movement in social and industrial conditions—for the

changes in the mechanical appliances of ordinary life during the last three generations have been greater than in all the preceding generations since history dawned. I speak of the science which has no more direct bearing upon the affairs of our everyday life than literature or music, painting or sculpture, poetry or history. A hundred years ago the ordinary man of cultivation had to know something of these last subjects; but the probabilities were rather against his having any but the most superficial scientific knowledge. At present all this has changed, thanks to the interest taken in scientific discoveries, the large circulation of scientific books, and the rapidity with which ideas originating among students of the most advanced and abstruse sciences become, at least partially, domiciled in the popular mind.

Another feature of the change, of the growth in the position of science in the eyes of every one, and of the greatly increased respect naturally resulting for scientific methods, has been a certain tendency for scientific students to encroach on other fields. This is particularly true of the field of historical study. Not only have scientific men insisted upon the necessity of considering the history of man, especially in its early stages, in connexion with what biology shows to be the history of life, but furthermore there has arisen a demand that history shall itself be treated as a science. Both positions are in their essence right; but as regards each position the more arrogant among the invaders of the new realm of knowledge take an attitude to which it is not necessary to assent. As regards the latter of the two positions, that which would treat history henceforth merely as one branch of scientific study, we must of course cordially agree that accuracy in recording facts and appreciation of their relative worth and inter-



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relationship are just as necessary in historical study as in any other kind of study. The fact that a book, though interesting, is untrue, of course removes it at once from the category of history, however much it may still deserve to retain a place in the always desirable group of volumes which deal with entertaining fiction. But the converse also holds, at least to the extent of permitting us to insist upon what would seem to be the elementary fact that a book which is written to be read should be readable. This rather obvious truth seems to have been forgotten by some of the more zealous scientific historians, who apparently hold that the worth of a historical book is directly in proportion to the impossibility of reading it, save as a painful duty. Now I am willing that history shall be treated as a branch of science, but only on condition that it also remains a branch of literature; and, furthermore, I believe that as the field of science encroaches on the field of literature there should be a corresponding encroachment of literature upon science; and I hold that one of the great needs, which can only be met by very able men whose culture is broad enough to include literature as well as science, is the need of books for scientific laymen. We need a literature of science which shall be readable. So far from doing away with the school of great historians, the school of Polybius and Tacitus, Gibbon and Macaulay, we need merely that the future writers of history, without losing the qualities which have made these men great, shall also utilize the new facts and new methods which science has put at their disposal. Dryness is not in itself a measure of value. No 'scientific' treatise about St. Louis will displace Joinville, for the very reason that Joinville's place is in both history and literature; no minute study of the

Napoleonic wars will teach us more than Marbot—and Marbot is as interesting as Walter Scott. Moreover, certain at least of the branches of science should likewise be treated by masters in the art of presentment, so that the layman interested in science, no less than the layman interested in history, shall have on his shelves classics which can be read. Whether this wish be or be not capable of realization, it assuredly remains true that the great historian of the future must essentially represent the ideal striven after by the great historians of the past. The industrious collector of facts occupies an honourable, but not an exalted, position, and the scientific historian who produces books which are not literature must rest content with the honour, substantial, but not of the highest type, that belongs to him who gathers material which some time some great master shall arise to use.

Yet, while freely conceding all that can be said of the masters of literature, we must insist upon the historian of mankind working in the scientific spirit, and using the treasure-houses of science. He who would fully treat of man must know at least something of biology, of the science that treats of living, breathing things; and especially of that science of evolution which is inseparably connected with the great name of Darwin. Of course there is no exact parallelism between the birth, growth, and death of species in the animal world, and the birth, growth, and death of societies in the world of man. Yet there is a certain parallelism. There are strange analogies; it may be that there are homologies.

How far the resemblances between the two sets of phenomena are more than accidental, how far biology can be used as an aid in the interpretation of human

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history, we cannot at present say. The historian should never forget, what the highest type of scientific man is always teaching us to remember, that willingness to admit ignorance is a prime factor in developing wisdom out of knowledge. Wisdom is advanced by research which enables us to add to knowledge; and, moreover, the way for wisdom is made ready when men who record facts of vast but unknown import, if asked to explain their full significance, are willing frankly to answer that they do not know. The research which enables us to add to the sum of complete knowledge stands first; but second only stands the research which, while enabling us clearly to pose the problem, also requires us to say that with our present knowledge we can offer no complete solution.

Let me illustrate what I mean by an instance or two taken from one of the most fascinating branches of world-history, the history of the higher forms of life, of mammalian life, on this globe.

Geologists and astronomers are not agreed as to the length of time necessary for the changes that have taken place. At any rate, many hundreds of thousands of years, some millions of years, have passed by since in the eocene, at the beginning of the tertiary period, we find the traces of an abundant, varied, and highly developed mammalian life on the land masses out of which have grown the continents as we see them to-day. The ages swept by, until, with the advent of man substantially in the physical shape in which we now know him, we also find a mammalian fauna not essentially different in kind, though widely differing in distribution, from that of the present day. Throughout this immense period form succeeds form, type succeeds type, in obedience to laws of evolution, of progress and retrogression, of develop-