Marx and Darwin: Two great revolutionary thinkers of the nineteenth century

Part 1

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17 June 2009

This is the first of a three-part series comprising a lecture by WSWS correspondent Chris Talbot to meetings of the International Students for Social Equality in Britain. Part 2 was posted on June 18 and Part 3 on June 19.

We have organised these meetings of the International Students for Social Equality in honour of Charles Darwin from a different standpoint from the many other bicentenary events. We want to bring out the connection between Darwin and that other great thinker of the mid-19th century, Karl Marx.

The importance of Marx hits you when you take in the events of the last few months. We are now in a world economic crisis comparable to, if not more severe than, that of the 1930s, which will have a major effect on all of our futures. Current economic theory completely failed to predict this crisis. The economists cannot explain how it happened and have no answer to it [1]. In contrast, Karl Marx spent much of his life developing an economic analysis that explains the inherent instability of capitalism and provides a scientific basis for the development of the socialist working class movement.

Superficially, it may seem there is not much of a connection between Darwin, the retiring English gentleman, and Marx ,who along with Frederick Engels, was involved in revolutionary communist activity for most of his adult life. But Marx and Engels themselves immediately recognised the significance of Darwin's theory when *On the Origin of Species* appeared 150 years ago. Engels wrote to Marx in 1859, just after he had read the first edition of Darwin's book [2]:

Darwin, by the way, whom I'm reading just now, is absolutely splendid. There was one aspect of teleology that had yet to be demolished, and that has now been done. Never before has so grandiose an attempt been made to demonstrate historical evolution in Nature, and certainly never to such good effect. One does, of course, have to put up with the crude English method.

The last sentence is a reservation that Engels and Marx held—only in private it must be stressed—regarding the methodological approach of Darwin. But throughout their lives they insisted on the importance of Darwin's work. Teleology, meaning a divine purpose which was working itself out in nature, had been demolished.

Most importantly, Darwin's theory could "demonstrate historical evolution in Nature." Here was the most significant development in natural science in the 19th century, the culmination of the revolution in science that began 200 years earlier. Science was at the core of the Enlightenment, the liberation from religious and dogmatic thought that had developed in the preceding century, the outlook of "Dare to Know" in Kant's famous dictum.

However, the tremendous strides that science had made were largely in physics and chemistry and they did not really involve evolutionary development, or history. It is true that geology, a science that does involve history, had become established, and work in evolutionary biology had begun, but it was still lacking a scientific basis. Darwin had brought about a revolution in thought that would place biology alongside the other natural sciences. And at its core was an explanation of historical development in nature.

Marx and Engels were well aware that to develop a scientific outlook on society—which was the only way that the emerging movement of the working class could establish socialism—a historical approach was needed. When Marx wrote in 1861 on Darwin he stressed this [3]:

Darwin's work is most important and suits my purpose in that it provides a basis in natural science for the historical class struggle.

This historical approach is the essence of Marx's method. It is derived from the dialectical approach of the great German philosopher Hegel, another product of the Enlightenment. By the mid-1840s, Marx and Engels had firmly established a materialist and scientific analysis of the historical development of human society, but throughout their lives they continued to develop this work, especially in Marx's great contribution to the politically economy of capitalism.

In parenthesis it can be pointed out that there was something of a division of labour between them and it was Engels who tended to lead their studies in the natural sciences, as the 1859 letter shows. Even so, we now know from research done on the extensive libraries of Marx and Engels by the International Institute of Social History in Amsterdam [4] that Marx read widely in the natural sciences after 1870.

Most of you are familiar with the key mechanisms of Darwin's historical theory of nature that is now regarded as central to the whole of biology. There are the two sides to it—Natural Selection and Modification by Descent. As Darwin explains himself in the first edition of *On the Origin of Species* [5]:

Can it, then, be thought improbable . . . that other variations useful in some way to each being in the great and complex battle of life, should sometimes occur in the course of thousands of generations? If such do occur, can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favorable variations and the rejection of injurious variations I shall call Natural Selection. (Chapter IV)

Several classes of facts . . . seem to me to proclaim so plainly, that the innumerable species, genera and families of organic beings, with which this world is peopled, have all descended, each within its own class or group, from common parents, and have all been modified in the course of descent. (Chapter XIII).

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Perhaps in parallel to presenting this core idea of Darwin's theory, I can briefly set out Marx's historical approach to society by quoting a footnote that Marx adds in Chapter 15, Section 1, in the first volume of Capital [6]:

Darwin has interested us in the history of Nature's Technology, i.e., in the formation of the organs of plants and animals, which organs serve as instruments of production for sustaining life. Does not the history of the productive organs of man, of organs that are the material basis of all social organisation, deserve equal attention? And would not such a history be easier to compile, since, as Vico says, human history differs from natural history in this, that we have made the former, but not the latter? Technology discloses man's mode of dealing with Nature, the process of production by which he sustains his life, and thereby also lays bare the mode of formation of his social relations, and of the mental conceptions that flow from them.

I hope this quote establishes briefly the mechanism of social development understood by Marx and the central role played by labour, "the productive organs of man." As Marx explains, the social relations of society—fundamentally class relations—and the ideology that flows from them are rooted in the process of production. I will add also the second part of this footnote, as it very much relates to the subject matter of this talk.

Every history of religion, even, that fails to take account of this material basis, is uncritical. It is, in reality, much easier to discover by analysis the earthly core of the misty creations of religion, than, conversely, it is, to develop from the actual relations of life the corresponding celestialised forms of those relations. The latter method is the only materialistic, and therefore the only scientific one. The weak points in the abstract materialism of natural science, a materialism that excludes history and its process, are at once evident from the abstract and ideological conceptions of its spokesmen, whenever they venture beyond the bounds of their own specialty.

Marx took a scientific materialist position, particularly in relation to religion. I will come back to the question raised about abstract materialism in the last sentence.

A vast range of developments have been made in biology since Darwin's day and the excerpts presented here are only intended to present the essential elements of his theory. But it must be stressed that the synthesis with genetics that took place in the 1930s and 1940s and then the discovery of DNA in the 1950s and the understanding of the biochemical basis of genes since then have only validated Darwin's basic theory.

We could make the same point about Marx. The development of imperialism at the end of the 19th century and the beginning of the 20th century that led to two world wars and fascism has had to be extensively studied and explained from the Marxist standpoint. The 1917 Russian Revolution was a tremendous confirmation of Marx's theory. It established the first workers' state. The rise of Stalinism and the bureaucratic degeneration and eventual collapse of the Soviet Union called for extensive analysis, which our movement, the International Committee of the Fourth International has carried out.

The two great historical theories of the 19th century, of Darwin and Marx—the pinnacle of Enlightenment thought—have fundamentally changed our understanding of the world. They were part of the development of science in its broadest form—the desire to comprehend the natural and social worlds in order to change them for the benefit of mankind.

Consider the letter from Darwin to Marx in 1873. Marx had sent him a copy of *Capital*, and it is true, as cynical writers today such as Francis Wheen in his biography of Marx have pointed out, that Darwin's copy only has the first 100 or so pages opened. But Darwin had a fiercely exclusive focus on his own specialized study and seldom strayed outside it. He wrote [7]:

Though our studies have been so different, I believe that we both earnestly desire the extension of Knowledge, & that this is in the long run sure to add to the happiness of mankind.

This approach—to extend knowledge for the benefit of mankind—was taken for granted by both Marx and Darwin and was widely accepted by intellectuals and scientists in that period. I maintain it is possible to retain it today despite all kinds of arguments that it is naïve, or utopian, that it doesn't take into account so-called human nature, and so on. The many attempts, stemming from the Frankfurt School of social theory and developed by poststructuralists and postmodernists in the last two or three decades, to deny the objective materialist basis of science and to pour scorn on the achievements of the Enlightenment do not diminish the fundamental importance of this approach to knowledge.

This is a vast subject area that is central to the development of a socialist movement in the twenty first century. In this talk I just want to focus on two contemporary Darwinian issues that relate to these many attempts to attack science.

Firstly, I want to look at how evolutionary science is actually viewed today and how it is being dealt with by the political and religious establishment. Secondly, I want to look at controversies that have arisen over the last three decades or so relating to Marx and Darwin and that have created much confusion in understanding the important relationship between these two great thinkers.

To be continued

Footnotes:

[1] See for example John Kay, "How economics lost sight of the real world," *Financial Times*, April 21, 2009.

[2] http://www.marxists.org/archive/marx/works/1859/letters/59_12_11.htm

[3] http://www.marxists.org/archive/marx/works/1861/letters/61_01_16.htm

[4] http://www.iisg.nl/imes/mega-summ.php#iv-31

[5] cited in Sean B. Carroll, *The Making of the Fittest*, Quercus, London, 2008.

[6] http://www.marxists.org/archive/marx/works/1867-c1/ch15.htm#S1 (footnote 4)

[7] cited in Francis Wheen, *Karl Marx*, Fourth Estate, London, 1999.

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