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SUCI demands immediate withdrawal of both National Internal Security Bill and Unlawful Activities Prevention Bill containing draconian provisions

Comrade Nihar Mukherjee, General Secretary, SUCI, in course of a statement issued on 21 December, 2008 expressed deep concern over granting of safe passage to both National Investigation Agency bill, 2008 and Unlawful Activities (Prevention) Act Amendment Bill, 2008 by Parliament on 18 December last. Both the Bills introduced with the avowed objective of containing rising instances of terrorist activities in the country contain draconian provisions like detention of trial for an indefinite period, presumption of offence before completion of trial and thus precluding grant of bail etc. which severely curtail the fundamental rights enshrined in the Constitution and defines terrorism in such a way that virtually brings all lawful political activities and legitimate people's movements within their ambit, mentioned Comrade Mukherjee. These Bills thus have striking resemblance with infamous POTA, a fascist Act introduced earlier on the same plea of combating terrorist strikes and had to be repealed four years back under strong public pressure when it was found that the same instead of containing terrorist acts in any way was being used as a handy weapon by both central and state governments to suppress legitimate democratic movements as well as parties opposed to them, he added. Comrade Mukherjee opined strongly that introduction of these two fresh Bills slated to become binding laws soon has been a crude attempt on the part of the Congress-led UPA government with full backing of the entire parliamentary opposition including both BJP as well as the pseudo-Marxists like CPI (M), CPI to bring back POTA through

backdoor for carrying out same anti-democratic activities of crushing people's just struggles and bullying political forces voicing genuine protest against the anti-people policies, oppressive measures and fascist moves of the bourgeois governments.

Firmly holding that existing laws are more than sufficient for protecting people's life and property from insane terrorist attacks, Comrade Mukherjee charged the government for not being at all serious in applying the existing laws and removing all the loose ends and the lackadaisical approach prevalent in the top echelon of police and bureaucracy, while, it shows no such looseness and negligent attitude to take no time at all in promptly arming the state and the government with draconian laws with the ostensible objective of firmly dealing with terrorist acts, which, however, ultimately turn out to be instruments of coercion for suppressing people's democratic rights and democratic movements.

Comrade Mukherjee demanded of the government to give up all pretentious gestures and gimmicks in regard to fighting and arresting terrorism so as to discharge its primary responsibility of protecting life and property of the common citizens. He also appealed to all sections of toiling people irrespective of caste, religion, ethnicity or region to come forward and develop powerful united movement in demand for forthwith rescission of the two draconian Bills purported to infringe upon and curtail inalienable fundamental rights.

SUCI demands immediate halt to barbaric US-backed Israeli attack on Palestine

Comrade Nihar Mukherjee, General Secretary, SUCI, in course of a statement issued on 30 December, 2008 severely condemned the horrendous aerial attack that the Zionist Israeli regime with the full backing of the US imperialists have been carrying out for the last three days on the Gaza strip of Palestine killing several hundreds of innocent civilians and grievously injuring thousands besides causing severe loss and damage to civilian properties as well as the bragging with which it is threatening to escalate the attack. Comrade Mukherjee continued by saying that ever since the Hamas came to power on people's mandate in Palestine, the Israeli authorities

have been targeting its leaders and workers on one pretext or the other, trying to assassinate them and have enforced a crippling blockade to make the people there suffer on every count including persistent threat of death. Firmly asserting that the heinous design of Zionist Israeli rulers aided and abetted by the world imperialist camp led by the US imperialists to deny the Palestinian people their rightful claim to have an independent Palestine country is the root cause of the grave situation in this part of Middle East, Comrade Mukherjee demanded of Zionist Israeli regime to stop at once all barbaric lethal assaults including pounding from air on freedom-seeking Palestinian

people and immediately agree to the establishment of a full-fledged Sovereign Palestine state, hand over Jerusalem to them, recognize the right of the Palestine people to return to their homeland now under its illegal occupation as well as forthwith vacate all territories of Palestine and Syria forcibly grabbed by it in 1967. Expressing fullest solidarity with the struggling Palestine people, Comrade Mukherjee called upon the toiling masses round the world to come forward and unitedly voice their protest against such barbaric attack of the US-backed Zionist Israeli rulers on Palestine and build up movement in support of the just cause of the Palestinian people.

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Darwinism : the natural historical confirmation for dialectical materialism

(The first part of this article was contained in our previous issue i.e. Vol. 42, No. 9, December 15, 2008. We now publish the remaining part.)

The setting : Darwin's advent was made possible in a specific background under conditions of industrial development, progress in science, liberal thinking in the ethos of Enlightenment of a Victorian English society, quest for an explanation of the riddles of variation and adaptation of life forms, and the conflicting views on the species question. He was brought up in the intellectual free thinking family atmosphere of this society, members of which generally stood freely on the sides of liberation of slaves out of a sense that 'under the skin all humans are the same'. The idea of progress, particularly the belief in unbounded human progress was central to Enlightenment. But a general belief in progress did not necessarily lead to the development of the theory of evolution. Darwin's years at Edinburgh as a student of medicine exposed him to thoughts reared on political radicalism that, some people believe, sowed the seeds of all his later thinking. His later years at Cambridge, in preparation for the respectable life of a country parson, passed in an elite social and intellectual milieu on a theological pasture — natural theological teaching dominating Cambridge teaching across the board. Natural laws governed the physical world that ran like clockwork, but underlying was the Creator's purpose and design. English cultural establishments regarded this natural theology as perhaps the strongest bulwark against social unrest because it enforced the idea of stable hierarchy, a powerful antidote against civil insurgency and rebellion. Theological doctrine was fully integrated into the political and social ethos. Darwin was in a mix of influences of Edinburgh and Cambridge.

Then came the voyage. "The voyage of the Beagle has been by far the most important event in my whole career.", wrote Darwin. This was because it went to be the making of Darwin. He left England with a general intellectual formation indebted to his mentors — Adam Sedgwick (in person), Von Humboldt, John Herschel, William Whewell, and Charles Lyell (on the page) among them.

Naturally enough, he had taken

up a number of their beliefs about the world. In the course of the voyage he found himself applying, testing and modifying their beliefs against his personal direct experiences that far transcended those of his mentors. Not the huge collection of specimens, the inland treks, or even the personal maturation, but the opportunity to develop an intense understanding of the variety of the natural world was its most significant aspect. In the Introduction to *Origin*, Darwin states that three findings from the voyage were the starting point of his views: 1. the fossils in Patagonia, South America, which convinced him of *continuity* of species across a limited range of variation; 2. the geographical distribution pattern of an ostrich (Rhea) in South America, which kindled an insight into the *role of environment*; 3. the animal life of the Galapagos Archipelago off South America, which he had not understood first but later proved to be the cornerstone of his understanding of *nature's control on modification and diversification, or common descent*. Meanwhile, especially on the voyage, he had learned from Lyell's *Principles of Geology* (1831-1833) that the earth's surface is forever on the move, that the changes are not *necessarily* progressive in nature in the theological sense. Darwin's lesson from it was that there was no God-given direction or progression. Further, alongside the non-historical and geographical approach he had encountered in Humboldt, Darwin had now an authority who had introduced the issue of historical process and temporal causation in a new way. Lamarck and Paley were dethroned. Darwin was exposed to evolutionary information. When he returned, he returned full of ideas and an inspirational determination to make sense of the riot of information he had gathered and the stirrings of queries in his brain. Darwin was no atheist; the liberalism nurtured in the ethos of Enlightenment on which he fed, the temper of reason it fostered in him in interaction with his experiences during the journey, the capacity for unprejudiced reflection so acquired would now deliver this young mind from within the web of religious tutelage and drive him to discover

the single most important idea in the history of biology : *nature had not been created in exactly the form it takes today; life evolves, it changes gradually but perpetually over vast gulfs of time, driven through those changes under the laws of nature, without any need of divine intervention*. And humans, far from being the pinnacle and destiny of God's creation, were but a single species among many, another product of evolution.

At the stage, widespread unrest in the English society had led to the fear of an early revolution, especially in the aftermath of food riots, controversy over Poor Laws, and public reaction against Corn Laws in the thirties of the century. The establishment was apprehensive of any activity that threatened the status quo. To adopt ideas of 'transmutation' publicly was to brand oneself as a dangerous political radical. Darwin worked on meticulously to analyze his immense information and put together his ideas. By the end of 1838 he had set out the basic ideas that would underlie *The Origin of Species* some twenty years later. While he was engaged in writing his contemplated treatise on evolution, an anonymous (Robert Chambers) evolutionary book appeared (1844), *Vestiges of the Natural History of Creation*, that dramatically altered the texture of the debate — firing up the theologians, pushing secular thoughts uncomfortably into the Victorian drawing room, sparking off violent criticism on the one hand and fascinated attention on the other.

Although its scientific content was weak, many facts were incorrect, and the proposed mechanism of change at times laughable, its general evolutionary thrust was clear — 'the book had grasped the essential principles of gradual, natural origin'. It was a book that tapped the progressive aspiration of the age. Darwin was stunned, because the general thesis in *Vestiges* was startlingly similar to his. These were signs that evolution was already in the air, its footfalls could now be heard. Seeing the violent reaction to it, he continued gathering more information, experimenting, and reflecting on his idea more critically, obsessively building up his own edifice of dependable information and

reasoning that would be so much admired when he published the *Origin*. Darwin wanted to be sure of his ground in every respect. Then in June 1858, he received a manuscript from Alfred Russell Wallace (1823-1913), a naturalist, expounding the same theory Darwin had conceived but had not published by then — Wallace spoke of "natural selection", the same terminology. Similar experience of the wide variation of life in nature, deep reflection grounded in objective reasoning, common social times of Enlightenment, scientific ethos and temper brought about a coincidence of individual ideas — a coincidence that is rare but not unnatural. Mutual friends intervened, and much to the credit of Wallace and Darwin, a joint paper was published the same year. Oddly, the paper made no stir.

Darwinism : Next year, in November 1859, Darwin published a book of 500 pages, *The Origin of Species by Means of Natural Selection, or, The Preservation of Favoured Races in the Struggle for Life*. It does not fit the usual stereotype — no graphs, no calculations, no specialized language. It is personal in style, wonderfully. The *Origin* was not written as a history of life's evolution on earth. Rather, the *Origin* was structured as a long argument. Darwin accepted the facts of hands are for grasping, eyes for seeing, lungs for breathing. But he showed that the multiplicity of plants and animals, with their exquisite and varied adaptations, could be explained by a process of natural selection, without recourse to a Creator or any designer agent. Darwin brought the living world into the realm of natural science. All natural phenomena were henceforth opened to explanation by natural causes and viewed as the result of physical processes governed by natural laws. This achievement had implications more profound and lasting than his multi-pronged evidence that convinced his contemporaries of the fact of evolution — evolution had occurred, diverse organisms share common ancestors, and living beings have changed drastically over the course of earth's history. While Copernican and Galilean cosmic reorganization had fractured society's ruling establishment's imposed idea of man's blessed position in the centre of the universe, Darwinian evolutionary theory surely implied, and the ruling

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Darwin brought living world into the realm of natural science

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establishment instinctively got at it, that evolution substitutes a naturalistic explanation of evolutionary dynamics for the inculcated dogma that a benevolent supra-natural power fashioned man in his image to enjoy dominion over the earth and all other creations. In contrast, in evolutionary terms, humans represent but a tiny twig on an enormous and luxuriantly branching tree of life, with all twigs interconnected by descent, and the entire tree growing in a process governed by natural laws. The unique miniscule twig of *Homo sapiens* emerged in a geological yesterday. By contrast, the oldest bacterial fossils on earth arose at least 3,600 million (360 crore) years ago.

Darwin's theory of evolution emphasizes a slow gradual process. He wrote: "Natural selection acts only by taking advantage of slight successive variations, she cannot take a great sudden leap but must advance by short and sure, though slow steps." The Darwinian thrust, in contradistinction to the Creationist thrust of all life at once, was that speciation, that is, arrival of a new species from a pre-existing species, could happen only gradually, change occurring only bit by bit. Darwin conceded that, "If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down." Such a complex organ would be known as an "irreducibly complex system". An irreducibly complex system is one composed of multiple parts, all of which are necessary for the system to function. If even one part is missing, the entire system will fail to function. Every individual part is integral. Thus such a system could not have evolved slowly piece by piece. Now we know that the ear, the eye, the heart are all examples of irreducible complexity, though they were not recognized as such in Darwin's day. How does it tell on Darwin's theory? It tells that since the Darwinian formulation of realization of new species entails culmination of a natural process of gradual, slow cumulative modification and evolutionary change — involving cell differentiation and integral

development of irreducibly complex organs in the embryonic stage each of which involves sudden leap — necessarily it means, by implication, that the evolutionary process involves abrupt change as well. Evolution involves not only continuity, it involves sudden leap or discontinuity in the process of change. The slow, gradual quantitative change leads to qualitative transformation. Which is speciation.

Conceptual organization : In discussing the truth of evolution, we should make a distinction, as Darwin explicitly did, between the simple fact of evolution, that is, the genealogical connection among all organisms based on their descent from a common ancestor, and also the history of any lineage as a process of descent with modification, on the one hand, and, on the other hand, theories like natural selection that have been proposed to explain the causes of change called evolution.

The conceptual coordination of facts and reasoning in the *Origin* has taken form in two central ideas: the tree of life, as logical coordination of facts; and natural selection, as theoretical exposition of mechanism of the process behind the factual phenomena. According to the first idea, already stated, species change over time with some going extinct while others continue or split into multiple descendent species — this resulting in a pattern of diverging branches like in the case of a tree. Again, the tree of life itself involves two different ideas: the idea of one species changing into another, or *transmutation*; and the idea of one species splitting into two or more species, resulting in *common descent*. *The claim of common descent distinguishes Darwin's theory from those of his predecessors*. This idea is logically distinct from transmutation, because individual species might dramatically change over time without ever splitting. Each species might have its own first ancestor from which it evolved. This is what Lamarck believed.

In advancing the tree of life Darwin challenged the then received view that species were immutable. This placed him in opposition to two well-established beliefs : *first*, biologists generally believed that the range of variation

within a species was fixed — an idea which implied that the form of any given species could not change beyond fixed limits; second, a fundamental question confounded early adherents to evolution — if species are always perfectly or well adapted to their environments, how could species change and yet remain well-adapted? Darwin answered this question with the idea of dynamic mechanism of natural selection — his second idea that offered an account of how species could change, i. e., mechanism of change: the species changed through a process of selection akin to the method of artificial selection that breeders use to modify domesticated varieties of plants and animals.

Darwin argued that when human breeders domesticated a species, new conditions of life were imposed upon the species, causing much new inheritable variation. Human breeders take advantage of this inheritable variation, selecting for breeding, over successive generations, those organisms that happen to vary in desirable direction. Though the individual variations are slight, their gradual accumulation eventually results in new variables, more closely matched to human needs and desires. Darwin reasoned: in nature, too, there are changing conditions and hence variation, but variations are much less plentiful than in the animal farm. Here, the question of importance is how does inheritable variation accumulate selectively in nature? The question kept Darwin groping for a theory to work with. The answer could not be had from analogy with farm breeding. For, that would require a conscious or omniscient being to intervene and guide variation in its desired direction. Darwin's scientific temper, acquired through struggle in life under specific social-historical conditions, would instead make him look for the mechanism in the working of nature itself, not look for an agency outside of nature. And it cannot be construed that by a flick of mysterious accident during the storm in his brain he had chanced upon the Malthusian reactionary thrust. Chance upon Malthus's theory he did, but with his honed insight he could pluck from it the idea of a process of how nature might select and cause evolutionary progress. Many others read

Malthus, but not all stumbled upon the idea of 'struggle for existence' in the way Darwin did. This is because, the storm of thought in Darwin's brain created the rife condition for grasping the idea in the way Darwin did. He was victim of naivety, but what he culled was a concept of competitive struggle for existence in nature's munificence and misery. The rest — overpopulation relative to resources, ensued instinct-guided competition, survival of the best-adaptive, not all necessarily red in tooth and claw— has been premised upon this concept as the central idea. Darwin reached the conclusion that natural selection, mediated through struggle for *existence* in the natural environment, is the natural equivalent to the human breeder's artificial selection. In the process it happens that preservation of the better-adapted and elimination of the less-adapted occur, resulting in selection of a set of specific inheritable characters and its accumulation over long stretches of time, making possible in the end selective changes on a much larger scale than possible in the farm. Darwin argued, a number of causes (read factors) come into play, including inheritability, reversal to ancestral characters, the effect of use and disuse, and the direct action of the environment. The challenge he felt was to show that in nature too, albeit on a small scale, changed conditions have caused variation. He showed, natural selection is most abundant in groups containing large number of species exposed to a greater range of conditions of life. Hence species belonging to such genera tend to have more varieties than species belonging to smaller genera. This pattern eludes explanation on the view that a supernatural agency causes branching of speciation from a common ancestor. It is because, that agency might cause species to arise as products of isolated acts of creation, each separately than the others — maybe all at once or maybe some created earlier and some more recently; but should that be thought or believed to be the case, the fact of branching of species from a common ancestor cannot be accounted for — at least the believers could not picture the Creator with this mundane quality. Darwin identified the struggle for existence under changing conditions, at times accompanying geographic separation of one part of population of an ancestral species

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Claim of common descent distinguishes Darwin's theory from those of his predecessors

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from its other parts, as what ensured this branching pattern. For Darwin, varieties are "incipient species" while species are "strongly marked and well-known varieties".

Engels explained the process of natural selection very lucidly: "Darwin then investigated whether there were not possibly causes in nature which—without the conscious intention of the breeder—would nevertheless necessarily produce in living organisms over the long run changes similar to those produced by artificial breeding. He discovered these causes in the disproportion between the immense number of germs created by nature and the insignificant number of organisms actually attaining maturity. But as each germ strives to develop, there necessarily arises a struggle for existence which manifests itself not merely as direct bodily combat or devouring but also as a struggle for space and light, even in the case of plants. And it is evident that in this struggle those individuals which have some individual peculiarity, however insignificant, that gives them an advantage in the struggle for existence will have the best prospect of reaching maturity and propagating themselves. These individual peculiarities have thus the tendency to descend by heredity, and when they occur among many individuals of the same species, to become more pronounced through accumulated heredity in the direction once taken; while those individuals which do not possess these peculiarities succumb more easily in the struggle for existence and gradually disappear. In this way a species is altered through natural selection, through the survival of the fittest."

Engels added: "Now Darwin would not dream of saying that the origin of the idea of struggle for existence is to be found in Malthus. He only says that his theory of the struggle for existence is the theory of Malthus applied to the animal and plant world as a whole. However great the blunder made by Darwin in accepting the Malthusian theory so naïvely and uncritically, nevertheless anyone can see at the first glance that no Malthusian spectacles are required to perceive the struggle for existence in nature — the contradiction between the

countless host of germs which nature so lavishly produces and the small number of those which ever reach maturity, a contradiction which in fact for the most part finds its solution in a struggle for existence—often of extreme cruelty. And just as the law of wages has retained its validity even after the Malthusian arguments on which Ricardo based it have long been consigned to oblivion, so likewise the struggle for existence can take place in nature, even without any Malthusian interpretation. For that matter, the organisms of nature also have their laws of population, which have been left practically uninvestigated, although their establishment would be of decisive importance for the theory of the evolution of species. But who was it that lent decisive impetus to work in this direction too? No other than Darwin." Emphasizing further, Engels said: "...Darwin had in fact expressly included the whole of the organic nature in the struggle ... That the fact exists also among plants can be demonstrated to him (Duhring — Ed. *P. Era*) by every meadow, every cornfield, every wood; ... the question at issue is not what it is to be called, whether "struggle for existence" or "lack of conditions of life and mechanical effects", but how this fact influences the preservation or variation of species." That is, Engels points out that the 'struggle for existence' is a fact in the whole of nature, its importance being that it influences the preservation and variation of life; it is of little importance to insist on its nomenclature and belittle its importance because Darwin said he got it in Malthusian theory of overpopulation.

The virtue of natural selection is that arguably it is responsible for all the *divergent, adaptive* and *progressive* changes from the ancestral to descendent species: *divergent* in that many very different species are often descendent from a single ancestral one; *adaptive* in that, in the course of divergence, species have fitted to different functions, e. g., ducks to diving, hawks to swooping for their food; *progressive* in that adaptation has generally entailed speciation so that higher animals have more specialized parts — say, mouth parts and locomotor limbs, while the oldest ancestor absorbed nutrients

and moved themselves with their bodies.

If all organisms within a species were identical then there would be no 'choice'. Survivors of later generation would be identical to their ancestors of an earlier generation. Species would be fixed; evolutionary change would not occur. No differences, no evolution. Differential survival depends upon differentiated features. As Darwin saw, evolution needs choice, but where does variation come from? Darwin did appreciate the question, but science at the time was not in a position to answer this question — scientists could only speculate. Darwin did speculate, but could not answer. Somehow individuals are born varied; and, stripped of the Malthusian capitalist colouration, variation cannot but mean variation in power of adaptation relative to a given environment. This variation is not the variation or differences arising as effect of individual organism's lifetime activity but the advantage of individual's somehow-inborn, chance-beneficial variation in a lot that helps it survive. The giraffe got its long neck not by stretching its neck but because some individuals were born with longer necks than the fellows, and the longer the neck the more the chance a giraffe had of reaching food. By natural selection, the long-necked variety won out. Natural selection explained the giraffe's blotched skin just as easily; an animal with blotches on its skin would blend against the sun-spotted vegetation and thus have more chance of escaping the attention of a prowling lion.

Differences between the theory of Darwin and that of Lamarck are clear. For example:

1. Darwin's natural selection stipulates that somehow individual organisms are born with variation among themselves, and this variation means varied adaptive power — not the individual's bodily change as effect of its living effort, but its somehow-inborn advantage that helps it survive. It goes to explain differential modification by descent, in different environments, from a common ancestor. Lamarck's principle of inheritance implies that the organism is such an organization of matter that it can

generally change by adapting itself to the environment. This proposition at best explains lineal modification in originally separate lines of descent, not divergent descent from a common ancestor.

2. Darwin's evolution involves a continuous and irreversible process of proliferation. It explains the palaeontological law of irreversibility of the sequence of faunal and floral succession. Once a species becomes separate from an ancestral line, it remains distinct ever. Species do not amalgamate or join with others. Natural evolution is a process of constant separation and distinction. In the Lamarckian view, each 'spontaneous' generation of life follows a separate and distinct path or lineage, there are as many lineages as there are beginnings.
3. Again, Darwinian evolution works by indirect mechanism of natural selection. Effectively random variation must first provide the raw material of change, and natural selection — which is *said to be* a negative force that can make nothing by itself — then acts by eliminating most variants and preserving those few that are better adapted, almost fortuitously, to changing local environments. Progress is made by removing the ill-adapted, not by actively constructing an improved version. If, however, organisms were somehow directed by information from an external natural source — the environment — on what would do them good and they developed those adaptive features by dint of effort during their lifetime and passed those improvements to their offspring in the form of altered heredity, we would have got the putative theory of Lamarck.
4. Also, natural selection includes no principle of predictable progress or movement to greater complexity. But Lamarckian inheritance is inherently self-complexifying because this inheritance accumulates favourable innovation by direct transmission. Darwin in that he steered clear of any doctrines of

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Darwin showed that no teleology or divine power pull species forward

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progression or inner striving towards perfection. Darwin did not allow his species any pre-set future goal, no teleology, or divine power pulling the species forward, no internal effort to drive the adaptive changes in any specific direction. Organisms shifted randomly. A well-adapted organism might be extremely simple. By contrast, Lamarck's transmutation is lineal, not branching; and, on this view, humans have to be considered better equipped by a preordained decree so as to be *fatalistically* the acme of evolutionary change. Humans are certainly *naturally* equipped to meet new environmental demands but no more than any other organism in respective environment — each organism is equipped in its own way to meet its possible new environmental demands. Beyond respective limit, each perishes. Hence the concept of a ladder of 'progression' on the 'absolute' scale of adaptability or any such absolute index is misleading. Considered in the light of adaptation — each in relation to its own environmental niche — lower organisms are not poorly designed, and higher animals are not better designed.

5. Natural selection does not appear to concern itself with environmental demand reaching directly into material that controls inheritance, that is, genetic material. Lamarck's principle implies that environmental demand directly produces material improvement to address new needs or new opportunities, that is, environmental demand directly causes change in material that controls inheritance.

Darwin noted that when artificial selection is applied, by choosing right individuals for breeding, in order to bring about rapid transformation of certain parts of a domestic breed, those parts are particularly liable to variation. He concluded, there is **"a constant struggle going on between, on the one hand, the tendency to further variability of all kinds, and, on the other hand, the power of steady selection to keep the breed true."** (*emphasis added*) Darwin's observation is a remarkable corroboration of the materialist-dialectical thesis that contradiction between the internal (somehow -

inborn tendency to further variability from generation to generation) and the external (**power of steady selection by nature**) causes change to happen; and that in this contradiction unless the internal basis of tendency for further variability is present or the somehow-inborn repetitive variability is there, the external, that is, the power of steady natural selection, which acts as the condition of change, cannot bring about the change. Note that the repetitive "tendency to further variability of all kinds" remains, however, an unaccounted observation.

If any confirmation of Darwinism were needed, it has turned up in examples of natural selection that have taken place before our eyes, now that we know what to look for. In England, the peppered moth exists in two varieties, a light and a dark. In Darwin's time, the white variety was predominant because it was less prominently visible against the light lichen (fungus and algae) covered bark of the trees it frequented. It was saved by protective colouration, more often than were the clearly visible dark variety from those animals that would feed on it. As England grew industrialized, however, industrial soot killed the lichen cover and blackened the tree bark. It was then that the dark variety was less visible against the dark bark and was protected. That is, the dark variety became predominant through the action of natural selection. In 1952, laws designed to clean the air were passed. The quantity of soot declined, the trees regained some of their light lichen covering, and at once the percentage of the light variety of moth began to increase. All this change is quite predictable by the natural selection theory of Darwin.

In Darwin's day, questions naturally arose on the postulated mechanism of natural selection: 1. If, as Darwin proposed, natural selection preserves individuals with favourable traits, then how are the favourable traits passed undiminished to offspring of the next and successive generation? 2. And, in fact, how do new traits arise in the first place? Natural selection explains 'survival of the fittest', not 'the arrival of the fittest'. For, howsoever prolonged the accumulation of change to a trait, unless that is both necessary and

sufficient to produce a qualitative transformation in culmination of the prolonged quantitative change, the new could not emerge. Darwin was aware of the problem. In his words: "The laws governing inheritance (of accumulating change to inheritable are traits — Ed. *P. Era*) for the most part unknown. No one can say why the same peculiarity in different individuals of the same species, or in different species, is sometime inherited and sometime not." Engels pointed out: "To Darwin it was of less immediate importance to discover these causes ("*causes* which produced the alterations in separate individuals" — Ed. *P. Era*) — which up to the present are absolutely unknown, and in part can only be stated in quite general terms — than to find a rational form in which their effects become fixed, acquire permanent significance. It is true that in doing this Darwin attributed to his discovery too wide a field of action, and made it the sole agent in the alteration of species and neglected the causes of the repeated individual variations, concentrating rather on the form in which these variations become general; but this is a mistake which he shares with most other people who make any real advance."

Many of his contemporaries called themselves Darwinians, but almost none accepted all or even most of Darwin's ideas. The version of evolutionary theory that became widely accepted in his day was that evolution occurred, but not by natural selection. They would not accept that the regularity observable in nature could be due to chance and natural selection. They would instead believe that evolution was developmental — species evolved according to some inner or preordained programme. A gulf, in fact, came to separate Darwin's theory from what many of his successors termed Darwinism.

In the second half of the nineteenth century, the evolutionary theory served several functions. One of these was to force philosophers and scientists to reexamine the nature of science. Explicit references to God had been gradually removed from physics and chemistry, but they were still acceptable in biological sciences and remained acceptable for quite a while longer. God was the primary cause. He had laid down the basic laws. He would not have instituted the secondary laws that Darwin postulated.

Darwin's Theory Evolves

By the turn of the century, Darwinism was widely held to be an extremely flawed theory. Paleontologists tended to be Lamarckians and catastrophists. Evolution was held to occur in abrupt steps, not gradually. The biometricians interpreted Darwinism as holding that variation is continuous. Mendelians, to the contrary, emphasized characters that are fairly discrete. Weismann was at one time credited with refuting the Lamarckian inheritance once and for all. Whereas, numerous biologists continued to hold some form of Lamarckism. Since Weismann's day, a number of theoretical arguments against Lamarckism have been iterated. For example: 1. It is impossible to see how hereditary material, which can preserve and transmit characters for many generations, can also respond to and be changed directly by environmental influences. Lamarckians' answer is that induced heritable changes are small, and only persistent environmental influences produce the cumulative effects that lead to visible stable inheritance. 2. Many acquired variations are the harmful results of old age, injuries, and disease, and it would be detrimental for organisms to pass on these "acquisitions". Lamarckians' answer is that, as with DNA changes, most of which are also detrimental, evolved internal selective filters eliminate many harmful variants, and most of those that remain are removed by the external filter, natural selection. 3. The evolution of characters that are not associated with use and disuse (for example, blotches in skin of the giraffe, warning colours in butterflies) are impossible to explain in Lamarckian terms. Moreover, although Lamarckism depends upon adaptability, it cannot explain evolution of the capacity to adapt. Lamarckians responded that natural selection is indeed sometimes the only explanation for the evolution of an adaptation and it alone can explain the evolution of adaptive plasticity. However, there is no reason to deny the possibility of inheritance of physiological adaptation. Lamarckians insist that inheritance of acquired characters is not an alternative to natural selection, it is complementary.

The theory of evolution, which Darwin initially outlined, has been modified and sharpened since

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Downtrodden people of Chengara are in the midst of a fierce land movement

In Kerala, Over 7000 families comprising largely *Dalits* and Adivasi people living in pathetic condition in slums and colonies, roadsides and riversides, have been conducting a movement for the last 16 months in Chengara demanding agricultural land to eke out a living. Organized under the banner of Sadhujana Vimochana Samyukta Vedi, led by Sri Laha Gopalan, as a form of movement they have entered into Chengara Rubber Plantation Estate which is held at present illegally by the monopoly house, Harrison Malayalam Plantation Ltd. whose lease for it had lapsed several years ago and who holds thousands of acres of unauthorized land in various districts in Kerala, as do other monopolies, including Tata. Under pressure of movement and widespread public support and sentiment for the genuine and legitimate demand the government had to call for two discussions, which however ended in failure and mere false promises. As Harrison managed to get a court verdict for evicting the people from the land but without any bloodshed, the hostile attitude of the government was also evident in the way it resorted to a very novel and cruel method to implement the court verdict. With the active support of the Achutanandan government, the CPI(M) organized blockades engaging trade unions and hired goons under pretext of their loss of job in the estate. This blockade is continuing for the

last four months. The struggling people in Chengara are thus cut off from the outside world. Even food and medicine are denied to them. Children are not allowed to go to schools. Four people have already died for lack of medical attention.

It was in this context that Kerala State Janakeeya Prathirodha Samithi rallied thousands of people belonging to various social-political and cultural and community organizations in support of the movement. On 3 December last, they assembled in front of the fine arts college, Trivandrum. Intellectuals and eminent personalities led the rally marching towards the State Secretariat demanding settlement of the Chengara land movement, to give agricultural lands, stop human rights violation in Chengara, stop evictions in the name of development. Sri Laha Gopalan, leader of the movement inaugurated the huge rally. Dr. V.Venugopal, general secretary, Janakeeya Prathirodha Samithi presided. Audio message of Justice V.R. Krishna Iyer was conveyed. Sri C.R. Neelakantan read out a pledge supporting the movement. Sri K. P. Kosala Ramadas (veteran trade union leader), P.C.George (MLA), C.P.John and several political leaders and leaders of Dalits and other community organizations greeted the gathering.

The Secretariat March turned out to be a rallying point where the struggling people from all over the state came together.

Ramsey Clark awarded UN Human Rights Award

Ramsay Clark, former Attorney General of US, President, International Anti-imperialist and People's Solidarity Coordinating Committee, and a distinguished fighter against imperialist oppression and violation of human rights has been awarded the Human Rights Award (UN Human Rights Award 2008) by the UNO. Ramsey Clark, as everyone knows, had shown rare mettle in resigning from the post of US Attorney General to register his protest against the war-mongering policies of the US imperialist regime and ever since, he has dedicated himself to the struggle against war and for protection of human rights. He went to Yugoslavia on a fact-finding mission to investigate the wrecking tyranny that the US imperialists carried out there and put the US government in the dock through a campaign based on his findings. He took leading initiative in constituting a People's Court which declared Bush a war criminal. He also went to Iraq for defending President Saddam Hussein in the so-called trial by the US-backed puppet regime there but was driven out of the court premises by the pliant Iraqi authorities fearing that his appearance might pose a serious threat to the doctored verdict they were contemplating to execute President Saddam. In November 2007, Ramsey came to India to attend International anti-imperialist conference and visited Nandigram in West Bengal to convey his solidarity with the fighting peasants. Later, he highlighted to the world the historic struggle of Nandigram people that forced the government and ruling dispensation abandon their pernicious move to set up an SEZ and chemical hub through forcible grabbing of fertile agricultural land. Ramsey is also the founder-President of International Action Centre--the anti-imperialist platform in US. After receiving the award, Ramsey, in his address, held war as the biggest enemy of human rights and reminded UNO that it ought to give up tailism of imperialist US and impartially work towards preservation of peace. The struggling people of India are jubilant at this honour of one of the most esteemed and eminent anti-imperialist fighter like Ramsey Clark.

Demonstration at Berhampur by AIDSO

The Berhampur (Ganjam) unit of the AIDSO organized a demonstration in Berhampur on Monday in protest against the recent recommendations of the National Knowledge Commission. The agitators also protested against the recent revelation that the transport department of the Orissa State Government had

'illegally' handed over a patch of land of Orissa State Road Transport Corporation adjacent to the Khallikote Autonomous College to the Reliance Company for setting up a shopping mall. The demonstrating AIDSO comrades handed over to the RDC a memorandum addressed to the Chief Minister.

State Level Educational Convention in Hyderabad

Worship of money making cannot ensure expansion; excellence and equity that are the goals set out by National Knowledge Commission (NKC) and it is contrary to the aims of education, said Shri J.V. Raghavendra Rao, retired Professor in Sociology, Osmania University while speaking in a largely attended state level educational convention held in Hyderabad on 23 December, 2008. He appreciated the consistent efforts of AIDSO to mobilize public opinion on the recommendations of NKC and believed that such type of conventions would be very much useful to create proper awareness on educational policies adopted by the

governments from time to time. Shri J. V. Subrahmanyam, retired Professor, Osmania Engineering College, held that real expansion and excellence cannot be achieved with commercial orientation of education. Shri Raveendra Sastry, Professor in Political Science, Osmania University, said that recommendations of NKC are nothing but continuation of the educational policies adopted by governments in accordance with the policies of globalization. Commercialization of education is one of the main reasons for declining of standards and the NKC proposes the same although clamoring for excellence in

education, he added. Comrade M.N.Sriram, All India President, AIDSO observed that the recommendations of NKC are not outcome of wide range of debates and discussions among people concerned with cause of education but prepared in course of closed door consultations with the representatives of industrial houses and so-called intellectuals working as yesmen of the government. He called upon the students and education loving people to rise against the disastrous recommendations of NKC. Comrade Sourav Mukharjee, General Secretary, AIDSO, said that all these are nothing but attempts to

convert education into a privilege of the rich and fundamentally change the character and content of education, destroying the spirit of cultivation of knowledge, man making and character building aspect completely and converting education into a lifeless commodity salable in market. It is an all-out attack on education, secular, scientific and democratic education, cherished by the great Renaissance thinkers and an attempt to bring about fascism by giving emphasis on technical aspects of science completely undermining its essence. Comrades S.Govinda Rajulu, State President, D. Raghavendra, State Secretary, and P. Teja, State Vice-President, of AIDSO conducted the deliberations.

Modern genetics corroborates and enriches Darwin's propositions

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Darwin's time through knowledge of the mechanisms of inheritance and mutation. Darwinism has evolved. Advances in other branches of science continue to sharpen and focus the Darwinian concept. For instance, an understanding of the theory of plate tectonics — the concept that large segments of the outer parts of the earth are in constant motion relative to each other, undergoing collision, destruction, and generation of new ocean floor through separation — explains a great deal concerning the forces that combine to drive environmental or external change and the manner in which species appear in widely separate parts of the earth. The ability to analyze very complex compounds like proteins and nucleic acids in detail has made it possible to trace molecular evolution and to judge, from the degree of differences among molecules, the degree of genetic relationship among organisms.

The rebirth of the Darwinian evolutionary theory in a developed version was made possible by mathematically minded biologists. The early mathematical formulations were further expanded. Since the mid-twentieth century, a modern synthetic theory on molecular biology, biochemistry and genetics has been sought to be built up to tie together all evidences at morphological level, species level, cell level, sub-cell level, studies in the laboratory and in the wild, and the host of ideas and formulations. As biologists came to better understand inheritance, they discovered that much of an organism's sub-cellular material plays distinct role in inheritance or hereditary transfer of material from parent to offspring, say, during fusion of egg and sperm in sexual reproduction. The core understanding of evolutionary biology at the cellular and molecular levels is this.

Every living being is made up of one or several cells, allowing for one exception — that of a virus. The cell is the basic element of living beings — it is primarily a mass, surrounded by an envelop or membrane which separates the inside from the outside. The outside is the medium or environ in which are found nutrients or the energy sources. The inside is the place where transformation occurs, cell 'function' is accomplished. One

function is reproduction — cells arise from cells. The single cell gobbles up some of the nutrients from the outside medium, grows in size, then it divides into two daughter cells, i.e., two individual single cells. Another characteristic is that, in multicellular organisms, cells differentiate to undertake specialized tasks, e.g., cells of the skin, cells of the heart, cells of the bone, so forth. Molecular biology and genetics have revealed how all these take place in the natural course of development. Cells have within them immense molecules, including those of two vital compounds called nucleic acids and proteins, which perform two different types of functions. Nucleic acids give order, proteins carry it out. In the cell nucleus, there is a nucleic acid, DNA (deoxyribonucleic acid), which contains all the heredity or genetic information and instruction coded in molecular language and necessary for the maintenance and continuation of life. The DNA is exceedingly complex, it is structured like a spiral ladder — two strands twisted around each other and held together by steps of sub-units. For this, the spiral structure of the DNA is often called 'double helix'. It has been found that all living things depend on DNA for cell growth, differentiation, and transmission of heredity information from one generation to the next.

Reproduction involves material transfer from parents to offspring. During this transfer transmission of genetic code occurs to allow offspring inherit the inheritable traits of parent or parents. During division of a single cell into two cells, the double-strand or double helix DNA structure gets disjointed into two separate single strands, each separate strand then proceeds to manufacture its complementary strand by drawing in necessary materials from the medium. The ultimate result is that two new double-strand or double helix DNAs are produced, two new cells are born. It has been concluded that in the DNA there exists a segment that, taken as a whole, specifies a trait. This segment of heredity or genetic-coded material in the DNA has been called a 'gene' by molecular biologists or geneticists — a matter so organized as to be able to encode heredity information. Change in appearance or gene expression may be caused by mechanisms other than

changes in the genetic sequence. Non-genetic factors cause the organism's genes to behave or express themselves differently. The best example is the process of cellular differentiation. A fertilized single cell, as it develops into a multi-cellular body in the course of cell replication, changes into many different types — nerve cells, muscle cells, blood cells, so forth.

This, in a nutshell, is what goes on and can go on in a cell. But an organismal body is a large cluster of interconnected and interrelated cells. The growth of an organismal body proceeds through, first, cell replication and differentiation from a single fertilized cell, and, second, through development of the multi-cellular cluster in the embryonic stage in a lineage from lower to higher functional organization. Thus the basic evolutionary pattern proceeds through sort of repetition at different levels, as if moving in a spiral pattern with time. It is now recognized that the changes in the body as a whole — the development process — may constraint evolution, preventing certain characters from evolving in a certain lineage. A lineage's constraint may limit the sorts of external organic and behavioural patterns that it can evolve. This limitation is developmental constraint. This idea of constraint helps us explain why things did not happen in evolution that we might think or fancy would be advantageous. Say, why horses did not evolve wings? Or consider the fact that a horse develops through a stage in the embryo where it has four fingers or toes. Some of them are lost or greatly modified during embryonic development. One might think it would be advantageous for horses to develop hooves directly; but horses do not, they retain the four-hoof developmental stage in the embryo. Skipping the four-hoof stage is simply not an 'option' for the horse, because its law of development as a race or lineage necessitated this course of evolutionary change from the common ancestor to the present species in the interest of survival by adaptation to changing environment — even a presently living individual traces in a way a somewhat course of development in the embryo for its coming into being.

This far explains continuity of life, continuity of the same or similar traits from one generation to the next. *This is reproduction, not speciation — hence not evolution.*

For example, it may be found that an apple has a golden colour in half of it. But the seeds of the apple do not carry the mutation. The only mutations that matter to evolution of species are those that can be passed on to offspring. These occur in reproductive cells like egg and sperm and are called germ line mutation. In multi-cellular organisms, mutation can be germ line mutations, which can be passed on to descendants, or mutations in non-reproductive or somatic (bodily) cells which are not transmitted to descendants of the organism. Mutation in the germ line can produce new change in the offspring. If a new trait makes the offspring better suited to the environment, the offspring will be more successful at surviving and reproducing. In essence, this is natural selection and it causes useful traits to become more common. Over many generations, a population can acquire so many new traits that it becomes a new species. So, in the uniformity of continuity a break occurs, a discontinuity.

Mutations are abrupt and random change in the otherwise 'normal' course of simple replication by DNA disjunction. Mutations are random in the sense that mutations appear to be unconcerned with the organism "needs". They can be beneficial, neutral, or harmful for the organism. The occurrence of a particular mutation *appears to be unrelated* to how useful that mutation would be. Since all cells in the organismal body contain DNA, there are lots of places for mutation to occur. The source of mutation is, however, unrelated to which cells are affected. Clearly, while variation and selection act as partners in the evolutionary process, *mutation sets the boundary of variation*, and natural selection culls out the unworkable, the maladaptive, the disadvantaged. What is the reason for mutation to happen? It is thought that 1. DNA somehow fails to copy accurately — loosely called 'error' in copying — and the resultant set of small differences from the original is a mutation; 2. external influences can create mutations, namely, exposure to specific chemicals or radiation, causing DNA to break down; and when the affected cell repairs the DNA, it might not do a perfect job of the repair, so the cell would end up with DNA slightly different from the

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Evolution theory demonstrates how each advance is affected by constant conflict between heredity and adaptation

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original DNA, and hence a mutation.

As biologists came to understand genetic material, they discovered that much of an organism's DNA plays no role in the physiology of present day organism. Initially, the diverse findings and ideas appeared as requiring a whole new theory of evolution, but as controversy progressed, the disparate ideas were gradually transformed and assimilated into a synthetic theory — *it is Darwinism that evolved*. Time and again contrary views have been expressed, time and again they have been assimilated in evolving Darwinism. Certainly, genetics plays a large and important role in evolutionary thought. But the pride geneticists take in the success of their field has led to a hubris, tempting some of them to believe that evolution is a little above a genetic game. Such claims are much too narrow to provide a full understanding of Darwinism or evolution, because genetics helps to explain where at the molecular level, and probably how, mutation and, so, variation occurs. But it is to yet tell us: what does control successive or repetitive change in a direction or lineage. Or, how a chance-beneficial change, once it happens, persists over long duration without intervention of a chance-harmful mutation intervening randomly to disrupt a directed development? Short of this, evolution is not satisfactorily or fully explained. Strictly, genetics has established that mutation takes place at the molecular level, that this controls variation. It hardly takes note of the role of the molecular-level environment of the 'gene', the interaction between the 'gene' and its intra-cell medium — in short, it overplays the role of the internal and almost overlooks the role of the external. That is why, in a way, it has transferred the question of why variation, or why mutation, from the species level to the 'gene' level, without answering what role the environment plays in the interaction at every level— from population or species level through to molecular level — to cause change or variation or mutation. This becomes especially apparent in view of the significant advances the evolutionary morphologists and ecologists have made, going out of the laboratory into the field and

documenting the working of natural selection in nature — in the process trying to understand the role of the environment in evolution through interaction. The realization is growing that '*organisms in population is the theatre of action*'.

Evidence also mounted that evolutionary development should not be pictured only as a slow, more or less evenly and continuously moving process. Rather, many scientists came to recognize that there are long periods of relative 'changelessness' interspersed with situations in which comparatively sudden and pronounced changes occur. Which is to say, continuity together with discontinuity make up the evolutionary process. In any case, Darwin's basic point of view has stood firm and indeed the evolutionary idea has been extended to every field of science. We can say that the course of evolution of Darwinism traces out in the field of biology a conceptual development that reflects more and more closely the materialist-dialectical understanding of nature, or the objective reality. Emphasizing the singular contribution of Darwin, Shibdas Ghosh also noted: "Darwin had recognized the course of gradual change or evolution. But he failed to realize that in this process of change both continuity and break exist together and that quantitative change inevitably leads to qualitative change. He could not offer a clear explanation of the cause behind organic evolution and why evolution at all takes place. Later scientific developments have made it possible for the Darwinian theory to be further enriched and developed."

It is said, "Darwinism is not just a wonderful idea, it is a dangerous idea." 'Dangerous' because, its implications have been historically misused and abused, e.g., by the Nazis in Germany, and the eugenics trying to "improve" the human race. Dangerous because, writ large, it could be seen countering the notion that there is some 'greater' meaning in life than here and now. From the beginning, Herbert Spencer, the English philosopher who coined the phrase 'survival of the fittest', emphasized the message for human society of the competitive nature of the evolutionary process — a set of beliefs that came to be known as Social Darwinism. In nature, only the fitter animals survive to

reproduce, but in human society people who would die in the state of nature were kept alive and allowed to reproduce. If the less fit are kept alive and allowed to breed, the human species would deteriorate. Hence, society should not do much, if anything, to ameliorate the unhappy lot of such inferior people as the Irish. But Spencer's arguments are invalid, for the biological changes involved in evolution are in no way similar to social changes — the two are guided by two sets of laws, interconnected but different. Genetic studies have confirmed beyond doubt that humankind is a single species, 'under the skin all humans are one'. And, whatever Spencer's intentions, his arguments were later used to support war and racism.

The fore-going glance is enough to reveal that :

1. Biological evolution is a fact. It is as fully a fact as the earth's revolution about the sun. It can be demonstrated today, and historical evidence for its occurrence in the geologic past is overwhelming.
2. But there is not unanimity on the question of precise nature of evolution or mechanism of evolution. Historians have remarked on Darwin's willingness to include increasing levels of Lamarckian principle of inheritance of acquired characters as the years went by. However, in general, it is insisted that except in the case of a few simpler plants there exists no unequivocal and irrefutable demonstration or proof of the principle of inheritance of acquired characters through direct action of environment on the organism.
3. Geneticists have established that the clue to variation is in mutation at DNA level, i.e., in 'copying error'. They have answered where and, probably, how mutation occurs. 'But why mutation, why copying error, why the abrupt change?' — so begs the question today as it did before. The environment, so important an issue at the species or organismal level, appears to lose appreciation at the 'gene' level.

Investigation by science in many of its disciplines, especially

genetics, molecular biology, biochemistry, ecology, will help clear the picture and provide knowledge of the mechanism or the process by which evolution happens the way it occurs. What will science watch for? Consider the objective position: The organism in population is inextricably linked to environment, the organism lives in integration with environment — the two cannot be considered in separation. The two are in constant mutual interaction. Which at once means that the two are in contradiction, both antagonistic and non-antagonistic. This interaction is the crux of the matter — Darwin, or Lamarck, or whomsoever you may look up to for answer. Existence is being in interaction — organism in interaction with its environment. Recall Engels: "From simple cell onwards, the theory of evolution demonstrates how each advance up to the most complicated plants on the one side, and up to man on the other is effected by the continual conflict between heredity and adaptation." Further: "...the variation of species conceived as a result of the mutual interaction of adaptation and, in which process adaptation is taken as the factor which produces variation, and heredity as the preserving factor." Darwin spoke of constant conflict between tendency towards variability (variation through modification by *adaptation* to changing environment) and power of steady selection (mechanism for inheritance or *heredity*). Engels put in the same idea on a broader canvas with the words 'continual conflict between heredity and adaptation'.

The random intervenes in the very foundation of genetics and is at the core of the heredity process. Let us consider the combination of genetic characters arising from the father and the mother, which develop in sex cells. It is impossible to know in advance either the result of the race towards the ovum, which is run by the sperms, which carry different genetic combinations, or the nature of these sperms. It is impossible, therefore, to predict before fertilization, the exact genetic constitution of the future offspring. Similar is the case with various mutations whose nature and location cannot be predicted in advance. All mutations do not have

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Determinism at every point of change makes each event a chance but causally deterministic event

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equal probability of occurring, it is inconceivable that we could make definite predictions. Added to this is the factor of contribution of the environment towards randomness. Is this randomness an inadequacy of knowledge, the cause of inability to predict? Is it, on the contrary, the irreducible randomness iterated by uncertainty principle of quantum theory? But the instance of the random aspect of genetics must not overwhelm its determinism — not predeterminism : after all, following the randomness of fertilization, the development of a living being is executed in a precise and orderly manner. Genetic programme has a deterministic seed within the pulp of randomness — determinism at every point of change makes each event a chance but causally deterministic event. Engels explained: “The Darwinian theory has to be demonstrated as necessity and chance”. Further: “Another opposition in which metaphysics is entangled is that of chance and necessity.” In the eye of the metaphysicians: “What can be more sharply contradictory than those two thought determinations? How is it possible that both are identical, that the accidental is necessary, and the necessary is also accidental? Common sense, and with it the majority of natural scientists, treats necessity and chance as determinations that exclude each other once for all. A thing, a circumstance, a process is either accidental or necessary, but not both. Hence both exist side by side in nature; nature contains all sorts of objects and processes, of which some are accidental, the others necessary, and it is only a matter of not confusing the two sorts with each other... And then it is declared that the necessary is the sole thing of scientific interest and that the accidental is a matter of indifference to science. That is to say: what can be brought under laws, and hence what one knows, is interesting; what cannot be brought under laws and therefore one does not know, is a matter of indifference and can be ignored.” Then Engels comments: “Thereby all science comes to an end, for it has to investigate precisely that which we do not know.... While natural science continued to think in this way, what did it do in the person of Darwin?”

Also: “Darwin in his epoch-making work set out from the widest existing basis for chance. Precisely the infinite, accidental difference between individuals within a single species, differences which become accentuated until they break through the character of the species, and whose immediate causes even can be demonstrated only in extremely few cases, compelled him to question the previous basis of all regularity in biology, viz., the concept of species in its previous metaphysical rigidity and unchangeability.”

In the understanding of many a modern evolutionary biologist concerning the chance event or the accidental or the random, evolution is absolutely random, it can go any direction. And, moreover, there is no lower and no higher organism. True, there is no universal direction or goal of the evolutionary process. Also true is the enormous branching of the tree of life. Yet life has an essential unity: it is dynamic, it is changing constantly. The essential nature of this evolutionary change is that living beings are coming into ever greater interaction with environment, ever more complex, ever more varied, ever more ramifying. For which they are attaining ever more complex of functional capacity, ever more coordinated bodily organization, ever more coordinated and complex internal communicability through nervous pathways. In this sense there is development of life, no preordained progression. In this sense, along each lineage, there is development from less complex to more complex organism.

In his life Darwin embodied the idea that a world understood through laws of science was no less awe-inspiring, no less meaningful than explained by the mythology of the past or later religious mould. Leave it to Darwin to sense the beauty of a barnacle and wonder in the workings of nature. But to most others of his day, and to this day also, the Darwinian view of nature sounds so bleak. But when factual matters cause us harm — some killer bacteria, say, or bacterial resistance to antibiotics — truthful science saves us, or finds us means to secure protection. No, more than this — it takes us much farther. For, it makes our interaction with nature far more acute, freeing us from

fetters of our animal heritage of a world that is tied to sensation alone. Now having the endowment of conceptual coordination and penetration, the subjective merged with the objective, we have earned the power to recreate nature, to reorder society, to recreate life on the canvas of painting, literature, music with finer, subtler, and much more sensitive touches of an aesthetic brush that is truthfully beautiful. Darwinism substantiated that things in nature, living or non-living, are in constant flux, in constant interaction — ‘the organism-in-environment’ — change and transformation arising from interaction between tendency towards variability and cumulative inheritance of change to traits. It is the position of materialistic dialectics which Darwinism corroborates and enriches.

But Why...

From a quaint notion developed a hundred and fifty years ago, evolution ties together all information biologists have gathered in history. Evolution matters and matters a great deal today. For instance, in health care, in protection of biodiversity, in preservation of man's living environment. Hence the question: why evolution has not become generally known or acknowledged?

Stephen Gould, the noted evolutionary biologist, tells us a story: “A prominent English lady, the wife a lord or bishop, exclaimed to her husband when she grasped the scary message of evolution. “Oh my dear, let us hope that what Mr. Darwin says is not true. But if it is true, let us hope that it will not become generally known.” She may seem to be a quintessential fool, she enters history as a prophet for what Mr. Darwin said is true, and it has become generally known or acknowledged even in advanced countries.”

Richard Dawkins, known for his lifelong campaign to preach the message of evolution, sadly remarked some weeks back that over the years of his campaign he found the numbers of the ‘believers’ or anti-evolutionists increasing manifold. On the other side, Darwin was no godless radical striving to overthrow everything he knew. He was never imprisoned for heretical views like the natural philosopher

Galileo. There were no anti-Darwin riots. Instead, he was buried in Westminster Abbey in London as one of the nation's most revered scientific figure: “the greatest Englishman since Newton”. Here lies the clue, in subtle camouflage. The ruling establishment, even during Darwin's day, was no doubt apprehensive of threat to what the rulers have been preaching as God's ruling : that everything has been willed by Him, so will remain everything. The establishment thrives on the lie of unchangeability, on concealment of truth, on misdirection of education. For this, they count on helplessness of the multitude, on the sustained sense of insecurity of people from adversities of nature, from hostility, oppression and exploitation by those who rule society. For this they extol Charles Darwin as the nation's hero. But they constantly persist in sustaining in people's hearts the quest for solace from the Supernatural for all their woes and sufferings. They bury Darwin in state glory, seeking to bury Darwinism really. This is the camouflage the rulers deploy. They act through the in-built pervasive inequality of the encumbering exploitative social order. Campaign for awareness of science, of truth of evolution, more so of scientific-mindedness has to be carried on without relent. But campaign has to be oriented on the programme to disseminate the truth that knowledge, and science itself for that matter, cannot advance, the truth of evolution cannot be generally known or acknowledged, unless campaign is conducted as integral part of the struggle for existence directed towards rooting out the breeding ground of ignorance, insecurity, and quest for solace from the imagined Supernatural, which the encumbering social order generates and sustains. Towards achieving truthfulness, towards attaining freedom from animal-like subjugation to nature — through recognition of necessity of the laws of natural processes — towards realizing a life as full of grandeur as Darwin envisioned, which materialist-dialectical way approach ensures, carry on the campaign, elevate the struggle for existence higher and higher still.

Comrade Prachanda, Prime Minister of Nepal, accepts Comrade Manik Mukherjee's invitation to attend Anti-imperialist Conference in Beirut

Comrade Manik Mukherjee, General Secretary, International Anti-imperialist and People's Solidarity Coordinating Committee (IAIPSCC) and Deputy, International, SUCI, had been to Nepal to have a discussion with Comrade Prachanda, present Prime Minister of Nepal and Chairman of Communist Party of Nepal in regard to the necessity of building up worldwide anti-imperialist movement and invite him to the International Anti-imperialist conference scheduled to be held in Beirut, Lebanon, from 16 to 18 January, 2009.

On 16 December last, the discussion was held at the Prime Minister's residence in Katmandu. Comrade Mukherjee apprised Comrade Prachanda that after dismantling of the socialist camp, SUCI led by Comrade Nihar Mukherjee, General Secretary of the party and guided by the illuminating thoughts of Comrade Shibdas Ghosh, founder General Secretary of SUCI and one of the foremost Marxist thinkers of the era, took

upon itself the task of coordinating the anti-imperialist movements surging forth in various countries. Since no other party agreed to take the initiative, SUCI had to come forward and shoulder the responsibility. From that objective, a number of anti-imperialist conventions were organized in the country since 1995 with participation from several delegates from abroad. Then there was a request for forming an international body. Ramsey Clark, former Attorney General of US and a front-ranking anti-imperialist fighter gladly agreed to lead the proposed body. An international committee, IAIPSCC, was constituted in the international conference held in Calcutta in November 2007. The ensuing Beirut conference will be held at the aegis of IAIPSCC and a few other fraternal organizations. Comrade Mukherjee then informed him that anti-imperialist fighters expect his presence in this conference. Comrade Prachanda readily accepted the invitation and consented to be present there. He



Comrade Manik Mukherjee (right) in discussion with Comrade Prachanda (second from right). Also seated are Comrades Prakash, General Secretary, Unity Centre (second from left) and Comrade Basanta, Central Committee member, CPN (Maoist) (at extreme left)

mentioned that as he is the Prime Minister of Nepal, it is required that a formal invitation from Lebanese government comes to him. Foreign Affairs ministry of Nepal would contact Lebanese government in this regard.

Comrade Mukherjee handed

over to him the CDs of the selected works of Comrade Shibdas Ghosh. Comrade Prachanda remarked that Comrade Ghosh has been well known as a good communist leader and his writings have been philosophic. He has also read a few of Comrade Ghosh's writings.

Rokeya Memorial Day observed at Allahabad

AIMSS organized a meeting on 30 November last at Allahabad to mark the Memorial Day of Rokeya Sakhawat Hussain, an eminent renaissance personality and a pioneer of women's liberation movement. Comrade Lata Sharma, State president of All India Anganbadi Workers' Association discussed the life and struggle of Rokeya. The topic of the meeting was introduced by Comrade Sudhanshu Malaviya. Smt. Shailja Tripathi discussed at length the

deplorable condition of women in modern society. Shri Zia Ul Haq, chief guest of the programme, emphasized the need of a united mass-movement over the burning issues tormenting the womenfolk. In her presidential address, Dr. Nirmala Agrawal, reader in University of Allahabad, dwelt on many thought-provoking aspects of women's problem. Comrade Rashmi Malaviya, District Convener of Allahabad AIMSS, conducted the proceedings.

North-Eastern Education Convention at Siliguri

AIDSO organized a North-Eastern Regional Education Convention on 8 December last at Dinabandhu Mancha, Siliguri, West Bengal. The convention commenced with adoption of a condolence resolution and silence was observed in the memory of victims of Mumbai massacre and Assam bomb blast. The Convention was welcomed by Prof. Bani Prosanna Mishra, Chairman of the reception Committee. Seconding the main resolution moved by Comrade Mridul Das, Office Secretary, AIDSO, Comrade Sriram, President, AIDSO, termed the National Knowledge Commission (NKC) recommendations a comprehensive design of privatization and commercialization of education. Prof. Bhupendranath Kakoti of Assam condemned the move of the capitalist class to convert education into a salable commodity education and foment divisive ideas like chauvinism-parochialism. He also condemned the Lyngdoh

Committee report as a part of this anti-education agenda of the government. Dr. Doma T. Bhutia, Director of Human Rights Law Network, Sikkim, referred to verdicts of Supreme Court which are changing the universal concept of education into commoditization of education. Prof. Tarun Kanti Naskar of Jadapur University, Calcutta, held that NKC is nothing but a blue print of the pernicious National Education Policy framed during Rajiv Gandhi government to suit the class interest of the ruling capitalist class. Prof. Ajit Roy of North Bengal University, presided over the convention which was well-attended by the students from Assam, Tripura, Meghalaya, Sikkim, West Bengal.

Among other speakers was Comrade Sourav Mukherjee, General Secretary, AIDSO who dealt how NKC is expanding the education market to benefit the corporate house.



AIDSO, AIDYO, Komsomol and AIMSS demonstrate in Calcutta on 21 December in support of brave Iraqi journalist Alzaidi who threw shoes at Bush

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