

## ANALYZING NIETZSCHE AND DARWIN IN SEARCH OF ORIGIN OF MORALITY: THE EVOLVING PERSPECTIVE

ANIRBAN GHOSH & MALABIKA CHAKRABARTI

**ABSTRACT:** *It is generally believed that the greatest asset of human being is the moral values and according to theist such values have been infused in human by the creator. By accepting such view we simply get rid of any effort of searching the origin of morality or ethics and also transfer the responsibility of being ethical on the almighty. But when atheist denied God, the liability of being moral comes to human and also the significant question arose why we should be moral. Probably more important is the hunt for the origin of our morality. In this article we have discussed about that origin of our morals in Nietzsche's view as he was one of the strongest atheist of all time and in the light of the Darwinian evolutionary philosophy which inspired the modern age atheists. In this course, we have showed that how Nietzsche's individual-centric value system faced the demand of societal explanation of interactive moral outcome and Darwinian school of evolutionary thinking articulates such issue in a broader perspective normally dealt with the philosophical views of human ethics.*

**Keywords:** *atheist, ethics, evolution, Darwin, morality, Nietzsche, sociobiology*

### 1. INTRODUCTION: THE CONFLICT

Theist emotion prioritizes God in all aspects of life. They develop some images based on that emotion and furnish God as the lord of this world who produce and protect life on this earth. They think that someone has to obtain the ingredients of life from him and even the peace of life can be obtained through his merciful flair. But such thinking basically paves the way of escape from anyone's guilt by involving God in that act. As ethics can judge the merit or quality of only the human acts and actions, if we accept God as the master of all who prompts us to do our deeds, how can one judge the ethical

---

GHOSH, ANIRBAN: Associate Professor of Zoology, Netaji Subhas Open University, India.  
Email: anirbanghosh@wbnsou.ac.in

CHAKRABARTI, MALABIKA: Assistant Professor of Philosophy, Anandamohan College, India. Email: malabikakwc@rediffmail.com

values of those acts? Where human are the puppets of omnipotent God, they can have hardly any responsibility of any of their actions and therefore nothing can be judged for ethical standards. They opined that the level of real existence is there where human beings entangle with the almighty in a close bondage and real Christians fall in love of God beyond rationality. But skeptics never left any stones unturned in such acceptance of God particularly in the domain of ethics or morality.

Human life is made up with different values. Among them moral values are one of the fundamentals which make human realizing the acceptance or rejection of human actions in any circumstances and in life also. We appreciate that any kind of livelihood can never be acknowledged. There may be many options in life like good or bad, honest or dishonest, true or false, loyal or disloyal and so on; but morality teaches us to accept the first options for each of them. Moral values are those which train us to restrain our actions, prevent us to act falsely or treacherously. Thus, to an intelligent man, life is not only for living but to build properly, to act rationally, to contribute rightly for others and for the betterment of future. In contrast, theists impose objection here. According to them God leads human beings in the path of advancement with his own judgment.

In any moral decision the role of decision maker is essential. At the same time, the decision maker must be someone with enough knowledge, rational mind and judgmental capacity. If we release the responsibility of judgment by accepting the almighty and do the sin acts, there will be no use of morals or ethics. Instead of it, if we consider the conscience as judge then only, we can proceed for ethical interpretation or moral judgment for a situation or act, because conscience is such a quality of human mind which possess the spontaneous ability to analyze the moral values. If so, then person will be the fulcrum or decider of his own act. Contrary to the so called popular believes of entanglement of theism and ethics, if we deeply analyze the ancient Indian and modern Western philosophical thoughts it can be understood that basically theism and ethics are not synonymous.

Morality and ethics have emerged from logical judgment. It is true that we may not explain everything around us always with proper logic, nor even in this age of modern scientific advancement. That's why the life is mysterious and beautiful, it is not predictable. But the progress of human civilization depends on logical development of scientific knowledge and we have to proceed rationally to meet every problem. If rationality fails for a moment in any situation we should not submit before that, rather our effort must continue in search of rationality or to make logical explanation. Human existence can be proved neither in acceptance of defeat nor in believing anything beyond logic, but to establish logic to cross the barriers and discarding illogical submission.

Actually, the concept of ethics or morality is complex. So, it can be discussed from various perspectives. Ethics changes its dimension from point to point, situation to situation. It may differ its stand for an anthropologist to a sociologist, again for a psychologist to a Marxist or even to a Darwinian evolutionist. The subject is flexible as per the analyst's perspective; decisions may change accordingly. Hence, no single and specific definition or decision may be possible for the ethical and moral values. This fluidity or dynamicity of morality depending on the situation or need and the

person's analytical exercise make ethics a challenging subject. So it is something immature to introduce someone supreme to impose morality. Our act is our doing and there is no point to pray to someone to inoculate someone's morality. Rather human acts in any moral ground according to his or her own virtue, emotion, situation and mental ability. To accept this view we need to establish the fact with the proper logical contexts and from different philosophical backgrounds.

In this article we will mostly discuss on two, one of whom was the very violent critique of God and others work displaced God from the position of creator of this living world including the human being, the most prestigious asset thought to be made by the almighty. The first one was Fredric Nietzsche from Germany, who was one of the strongest flag bearers of atheist existentialism from the nineteenth century. The second one was Charles Darwin from England; whose works and theories revolutionized the realization about the origin and evolution of this living world. Where Nietzsche directly attacked and denied God not only in morals, but in every aspect of human life and thoughts, Darwinian evolutionary viewpoint automatically disproves God and extension of his evolutionary philosophy has shown an alternative view of morality. Both Nietzsche and Darwinian school tried to find the origin of morality and establish it without God, and the process is still active. Both were contemporary, but interestingly at the initial stage of establishment of Darwinian thoughts, Nietzsche criticized the theory and thought that such theory could not have the ability to disprove God. But with time it was found that with Nietzsche's insistent denial to God in the moral act, the followers of Darwinian thoughts developed a completely different way to establish the moral or ethics where also there is no God. Now we will analyze how both of these explanations of morality or ethics developed in their own ways and how far they are successful in their attempts and whether we can get some directives about the spontaneous origin and developed of morality without God.

## 2. NIETZSCHE: ATTEMPT TO DISPROVE THEISM IN ETHICS

The philosophers, who vehemently disapproved God, have tried to establish morality in different ways. The forerunner among such philosophers were Nietzsche. Philosophers like Nietzsche, Heidegger, and Sartre were familiar as Existentialist, because they proposed that existence is the fundamental of any philosophical discussion. This 'existence' of them was actually meant for human existence. So the famous quote of Sartre was 'Existence precedes essence' (Sartre 1956) and all three of them denied the existence of God. As per Nietzsche, the rituals of churches are only some external engagements which have no use in human existence, life and values. As per his version (the) 'God is dead', and with the acceptance of this, Christianity with its external ornamentation will be finished. With this disprove the avenue for freeing the human existence will be achieved, a new era will be born with a new realization of moral standard. But the obvious question arises that when there is no God to judge the morality whom to answer, or in other word, to whom human will be liable for his ethical or unethical act. Will there be any urge or obligation to be moral? We will discuss this

issue keeping the dilemma in mind and try to find how theists established their views overcoming this.

Nihilism is one of the fundamental problems in Nietzsche's philosophy and he tried to cross such problem in his thoughts and deliberations. It includes also ethical nihilism. Actually, with the death of God a void has been created and to get rid of it Nietzsche tried to establish morality on a behavioral foundation. As Nietzsche's morality is analytical and he analyzed it from the perspective of act or doing, his morality bears a pragmatic essence. As per his opinion pragmatic approach can bring the truth in human life and it can explain the morality. In the book 'Genealogy of Morals' Nietzsche introduced two types of morality, namely, the moralities of Master and Slave. According to him these two moralities express differently, but both of them are intended to achieve power (Nietzsche 1998, 1:13). The philosophers who are reverend of power, Nietzsche was most prominent among them. He even believed that war is the means through which a world can emerge with superior values with courage, devotion, greatness and like values.

But critiques said that Nietzsche tried to deny God only depending on internal passion which was less logical at its base. It is also critically thought that our society is divisible into neither only master or slave as told by Nietzsche nor divisible into 'have' and 'have not' as designated by Marx. Our society is multi-layered and stratified. As Nietzsche was a strong opposition of Christian believes and rituals of Churches, his strong anti-establishment emotion mostly appeared to deny the existence of God. In contrast his denial to omnipotent God basically created a diverse and diffused idea of super human imaginary in the explanations of different issues by him, which is none other than a different form of the idea of God as depicted in different writings of him. Basically Nietzsche had an alternative thought about God, who was 'Dionysus' and who amazed Nietzsche by his prompt existence (Nietzsche 1954, IX:49). He thought that this was the actual truth of life which was not considered in Christianity. When Nietzsche declared that 'God is dead! God remains dead! And we have killed him' (Nietzsche 1956, 46), then it expressed the anger, anguish, and may also be the hatred towards the system related to Christianity and Church. That intensity of negative expression might have achieved from the convictions of the then Christian societal conducts, sacraments with political systems in amalgamation of Nietzsche's personal antipathy. The normal virtues of human life like kindness, forgiveness, peacefulness, manners etc which are usually practiced to relate with God, had been blacklisted by Nietzsche and designated as inferior qualities which express weaknesses of human being. He introduced the concept of 'Superman', through a strong desire of this superman to become the contender of God and to uproot Him from his divine thorn had been expressed (Tobin 1988, 150-54).

Nietzsche remained merely silent about the source of morality of his superman fantasy who by his immense power will do good for this universe. If the ground of morality of this superman had not been established properly, this colossal power may turn to be good or bad both and thus may indulge evil at its own whims. It is to be explained properly that where Nietzsche's superpower be different from traditional God? Only because of his human nature as said by Nietzsche or somewhere else is not

clear accurately. Nietzsche's version somehow seemed similar with the philosophy of enlightened monarchy or autocracy at the juncture of mediaeval and modern Europe which was formally named as the enlightened despotism where Kings exercised their political power for the benefit of people as 'Everything for the people, nothing by the people' (Greaves 1997, 694-99)<sup>1</sup>. His superman characteristics sometimes resembled with the characters of Fredrick the Great of Prussia, King Charles III of Spain and others in the 18<sup>th</sup> century Europe. Nietzsche probably could not imagine and extended his thoughts beyond his age. Later in the history of mankind we found such characters with political power again and again. If we look at Robespierre in French revolution and in post-revolutionary time culminating into Guillotine rule, Hitler's strong ruling for the German superiority and dominance crushing into the extreme sacrifice of humanity or the autocracies of Ceaușescu in Romania, they all appeared as immensely powerful mass-leaders but fell down pathetically as the heated villains of the state, society and humanity. So these names with superman like power and activities who were believed to be the rescuers or relievers of some nations or states or sectors could never meet the ethical standard and ended their life with wretched consequences. We should remember that Nietzsche never prioritized the societal or state values and thought to enact in execution of power by his superman like imaginary character, but made 'Him' free with his immense will force - which is actually that conducive milieu where autocracy arise.

Basically, from the discussion of Nietzsche's ethics it is clear that he had vehemently opposed Christianity. As per him, Christianity follows the 'morality of slaves'. In contrary, Nietzsche imagined such a powerful human being who never succumb to that morality of slaves, rather be a worshipper of 'morality of master'. Nietzsche told the love in Christianity is nothing but the expression of fear. Man being frightful about his neighbor in the thought that he might damage him, offers his fellow citizen the gesture of love to ensure his own safety. Nietzsche never thought that anyone spontaneously think about fraternity and love. That's why he expressed his opinion that, if he could become more strong and powerful, he could express his hatred about neighbors more openly. So, his superman is without sympathy, he is cruel, cleaver, tricky and intoxicated with his power (May 1999). Nietzsche never thought that his superman can be a cause of fear to common people. He admired such human power who achieved their greatness by demolishing other human entities who are not acceptable and this is the greatest demolition of ethical values. Thus, Nietzsche's philosophy of morals avoiding the concept of God is basically indulging the darker sides of human values and cannot establish a solid moral basis to act upon.

However, at one point we can validate Nietzsche. When the world struck into the prejudices of past, the false external rituals became the face of religion and God, at that point someone was needed to appear who possessed the power and will to build everything in a newer form and had the ability to bring life in dead or wrecked remnants

---

<sup>1</sup> The creed of enlightened despotism was best summed up in the motto of [the] reforming monarch Charles III of Spain (1759-1788): '*Everything for the people, nothing by the people.*' The enlightened despots represented a stage in the transformation of the personal monarchy of the old dynastic states to the impersonal rule of modern bureaucracies. (Greaves 1997, 694-99)

of mankind. So, he might have some exuberant warrior attitude and might need some destruction to bring fresh life. Nietzsche dreamt to have an all new life and livelihood. As per him conservative past never could accept new or mankind always preferred limited entry of new things along with the older things, but dared to conceive all afresh and anew. Nietzsche tried to hurt that fear and for that he expressed his excess anger and harsh satire towards old. He tried to bring new in full form and for this he was never hesitant to face the extreme conflict and involve in full-fledged battle with the predecessors. Basically, this warrior attitude was the actual theme of Nietzsche's moral (Tobin 1988, 150-54, May 1999).

### 3. A COMPARISON OF NIETZSCHE'S MORAL WITH INDIAN THOUGHTS

In the Indian epic *Mahabharata*, it was observed that when traditional practices indulged or coddled the sinful or evil forces, the demolition of such wicked become essential with the destruction of such traditions. Sometimes situation arises when such violence can neither be avoided nor be denied, because the destruction of one or few brings the good for the thousands or a big mass of people; truth has been established by wiping out the false. But in that case the sinfulness and malicious acts has to reach an unbearable level and when all peaceful means fail to rectify the system or hold it within a bearable level, the force of destruction can come into act and, the words of Lord Krishna can be uttered as, whenever religion and righteous world got into extreme trouble, He appears in the rescue of integrity by obliterating dishonest and diabolic sects to establish a good, lawful society again (Shrīmadbhagavad Gītā, Verse No. 4/8) (Ghosh 1992, 138)<sup>2</sup>. When we need surgical interception to dissect out some body parts or tumors it cannot be an act of violence but essential for life, likewise who causes the wound of colossal evil and swamping corruption in the society they need to be exiled where use of arms can never be considered as violence. Therefore, in Indian epics, Lord Rama or Lord Krishna became those imaginary characters who pronounced the victory of truth defeating the extreme dishonesty and malicious, sinful societal state through the great wars to establish the religious, ethical state.

Nietzsche's imaginative ruler, whom we discussed earlier, had similarity with the Carvaka's concept of king. The similarity was external, rather in-depth comparison showed very significant differences between the two. The king of Carvaka was the powerful executer and well-wisher of his people, and more importantly, he had to

---

<sup>2</sup> Shrīmadbhagavad (or Bhagavad) Gītā has been considered as one of the most famous and basic reference of Indian and Hindu Philosophy with 700 verses in Sanskrit that thought to be written by sage Vyasa and a part of the epic Mahabharata which had been thought to be written between two to five hundred BCE. In those verses the meaning of life, philosophy and duties of life had been described as the saying of lord Krishna to the epic hero Arjuna just before the great battle of Mahabharata at Kurukshetra. Several commentaries on these verses had been developed from different perspectives of Indian philosophy throughout the following centuries and remains as one of the backbones of Indian cultural heritage of thousands of years. The mentioned verse (originally in Sanskrit) and its translation has been adapted from the mentioned edited volume (Ghosh 1992, 138).

follow specific rules set by the society. He had the liability to become accepted by his creeds and society. In this case, as soon as specific rules came into play, the king became restricted from being willful on his own desire and whims. Though that king possessed the power of execution but the outline of that was well defined. Normally to introduce such rules or acts, a conglomeration of wise people representing that society or state who were also well aware of the traditional and contemporary knowledge of that time took the charge. Therefore on the basis of such outlines drawn by the prudent section of the state, the king who can catalyze the social prosperity and state's supremacy with advancement and happiness, he will be the most acceptable and powerful king as 'Lokasiddha Rājā Parameśwera' (Bārhaspatya Sūtra. 85) (Bhattacharya 2005, 92)<sup>3</sup>. We may remember such rulers like King Solomon of United Kingdom of Israel during 9<sup>th</sup> Century BC or Chandragupta the Second or Vikramaditya of the Gupta Empire in northern India during 4<sup>th</sup> Century AD, or like the legends of King Arthur during the mediaeval England; or Akbar the Great of 16<sup>th</sup> Century who not only established a great Mughal dynasty through a vast region of Indian subcontinent extended up to Afghanistan but also showed his responsible and responsive ruling accepted by the majority of the people of his kingdom. Here society and king developed a relationship of conflict and adjustment to mitigate the interest of both king and general people of his kingdom which was essentially depicted in Carvaka's hedonistic theory where such a comparable conflict came in between one's own interest and collective interest of the group. The extract of such conflict is the education to distinguish between one's need and greed. We can remember the famous statement of Mahatma Gandhi that there is enough on this planet for everyone's need, but not for anyone's greed. Be a king or a common people, if, someone become educated to draw the margin for greed and restrict him within his need, then the alliance or agreement may be possible between the interest of one and many that will lead the path towards future sustenance and happiness devoid of glamour possessing moral values at its core.

#### 4. WESTERN PHILOSOPHY AFTER NIETZSCHE: THE DILEMMA FOR ONE AND MANY

The conflict between one and many or individual versus group of people in the issues of morality became also prominent in the writings of Sartre in 20<sup>th</sup> Century. But, in the way of developing and defining the human existence, Sartre emphasized less on ethical background. However, an idea about Sartre's moral or ethical perspective can be extracted from his writings. One of the most prominent existentialist philosophers Sartre also cultured basically on individualistic human existence, but he introduced an idea of undesirable impact of individual liberalism on the group living or society. He

---

<sup>3</sup> Cārvāk Darśan or Lokāyata is one of the strongest ancient atheist philosophical school of India or probably the oldest Indian materialism developed around five to six hundred BCE or before by the priest Bṛhaspati, who may be more than one person. The primary text of such materialism and atheism had been lost, might be due to the rival philosophical schools of the regions but recovered from secondary literatures of later Indian śāstras, sūtras, purāṇas, epics, Buddhist and Jain literatures.

added restriction or restraint within the explanation of individual freedom and liberalism. This is the binding for someone's own duty, the duty for his own self and for others, for the sum, for the society (Sartre 1956, 52)<sup>4</sup>. Sartre's individualism is bound to own-self as well as humanity, it is inevitably entangled with the mandate to mature and fulfill others' freedom. His existentialism is humanitarian who rely on the idea of equality of freedom for him and for all. Therefore, here individual is very important who always holds the duty of selecting his own act and be responsible for the consequences. So, he has to be sensible and has to think that his act, by no means, can harm other person's liberty and comfort, not even it can scare the humanity. Thus, individual decision should always be taken here caring for the society and sum. If any such decision be taken by the Monarch or learned assembly, according to Sartre's philosophy they should take care of every individuals liberty and well-being with the full attention to the requirement of society and state. Therefore, it requires the acceptance of both individual interest and collective interest. Overall, ethics will be created in amalgamation of individual and society, and any ethical verdict one can only accept on the basis of surrounding and circumstances.

In this way, ethics or moral emerges as a balance between individual and society. In this balance, when existentialists emphasize more on individual existence and interest, the ethics evolved from materialistic dialectics introduced by Marx and Engels stands just in the opposite pole. Marx stated in his 'Thesis on Feuerbach' that, "... *the human essence is no abstraction inherent in each single individual.... [but] is the ensemble of the social relations*" (Marx 1969, 13-15). Marx actually opposed the idea of individualistic ethical standards, as did Engels. Engels stated that human happiness is not essentially dependent on personal ethics. Rather the materialistic status, particularly, the monetary affluence and the quality time derived from such affluence for enjoying arts and music, spending time with peers and opposite sexes and other activities of personal desire play the main role to achieve individual pleasure. According to them the basic difference between materialistic and ethical ideas is, for the first one, individual's monetary standard and desire collectively express his personality and morals. But for the second one, through some undefined and abstract imagination some psychological pleasure has been achieved and thus created some personal stratification. And therefore, Marx from his extremist standpoint stated to clear out other ideas and told that nothing will be meaningful without considering the conditions between the classes, that is, among bourgeois and proletariats (Marx 1958, 317)<sup>5</sup>.

---

<sup>4</sup> [*'..... as soon as there is a commitment, I am obliged to will the liberty of others as the same time as mine.'* (Sartre 1956, 52)

<sup>5</sup> Marx's view about pleasure experience of human has been expressed as *'The connection between the pleasure experiences of individuals .... could not be discovered until the conditions of production and communication of the traditional world had been criticized, and the opposition between the bourgeois view of life and the proletarian socialists and communist point of view created. There with all morality – whether it be the morality of asceticism or that of the philosophy of pleasure – was proved to be bankrupt'* (Marx 1958, 317)



As Marx assimilated individual existence within the socio-economic classes therefore ethics got less importance in respect to the totality of this system. Therefore, in every occasion when Marx tried to explain any social or historical events in the light of dialectic materialism, he tried to establish the ethics in favor of his proposed path of social evolution. The act which was capable of maintaining the path of his ideology had become acceptable and ethical, whether it had been the explanation of French revolution or the discussion of the history of India. Simultaneously, when Marx accepted a process of gradual increment of knowledge of mankind as an obvious process of his 'ism', the increase of moral values of mankind should also be accepted. But he never accepted such things parallel. In contrary he tried to explain morality or ethics as a comparative account on the basis of self-pleasure and class-stratifying index. Analyzing all these Howard Selsam stated ".... *the ethics of the Manifesto is simply an expression of the needs, hopes and desires of the modern working class .... That it alone conforms to the necessary and desirable direction of social evolution.*" (Selsam 1948, 22-23). Therefore, emphasizing on socio-economic class system and their interplay this approach tried to ignore other generally accepted concepts of ethics and put forward a newer dimension of ethics on socio-economic perspective in an inadequate manner. Inadequate because that ethics was predetermined and biased to a specific sect of society and was less logically evolved, rather emotionally supportive to that sect. The concept of ethics, which was deployed from only economic stratification of society, was difficult to achieve the acceptable moral standard in general or through the looking glass of perception. It is comparable like those ethical believes where ethics is completely prejudiced with theism. Here the ethical values were only prejudiced with proletariats and for their benefits.

Marx and Engels discarded the existence of God based on perceptual evidences. Thereby, they wanted to make human free from all awe, superstition and binding to something beyond perception. They challenged all such ongoing ideas and rituals and inspired people to come out from such believe. Thus, they wanted to extend the courage to the socio-economically downtrodden people, basically the large number of farmers and workers, to commit the great revolution. Here both Nietzsche and Marx-Engels discarded God very feverishly, but their way and purpose were different. The first one is to gain individual power or supremacy; whereas the second is for a particular social sect who they believe are the majority and they should be the maximum beneficiary in the societal system and thereby will make the society progressive in proper sense. In contrast, it should be taken into account that if all ethical or moral burdens will be absorbed for the sake of revolution or any unethical act become admissible with an excuse as the need of revolution for the betterment of backwardly socio-economic class, then how would be the consequences? How would be the shape of morals? Isn't it a vicious environment where the unethical acts of a person or group is being legislated in a hide of terms like 'revolution', 'social need' or more frequently used 'class struggle'? It appears to be another version of Sartre's 'bad-faith' where people search for a hide to avoid the responsibility of their 'karma' or acts and also adopt false values under an external circumstantial milieu (Sartre 1993, 160-64).

In contrast, Marx in his 'First International' wrote about all people or groups that they all "... *acknowledge truth, justice and morality as the basis of their conduct towards each other and towards all men without regard to colour, creed or nationality*" (Marx 1933, 443). But the contradiction remained. As revolution ideally destroyed the older system including classes, casts, faiths, existing moralities and values, rule of laws, then how and where from the new 'truth, justice and morality' will come? How would be the structure of such new morality? The shape of ethics and morality of that class less society is not clear and no such in depth discussion was found about such new morality. It is now very clear that Marx had to reintroduce the morality in his new system, where during the phase of antithesis of older system or more directly speaking, during destruction of older system Marx avoided or diluted the moral issue. But he required morality during the synthesis phase of his desired society, hence cannot deny the morality in society. Therefore, in the development of society, for its existence, distribution and progression morality is essential, both individually and collectively.

Thus, in the discussion of morality or ethics from whatever philosophical outlook, be it Nietzsche or Sartre or Marx-Engels, it has become clear that none of them cared for God. From this it has also been clear that ethics or moral has an individual perspective and a collective perspective. In some cases, needs from both standpoints may be same, but also for many instances they are different. There comes the conflict. This conflict is between individual and group. So, to establish moral for both individual and society, where personal interest and societal interest differs, there needs some balance. More technically speaking, a 'tread-off' is needed between these two opposing forces. There are many examples of such trade-offs in different fields which are analogous to the moral verdict or decision in real life. Also, we can conclude with several examples that God believe dose not bring morality neither in person, nor in society or state. So, like Nietzsche if we cannot say that 'God is dead', at least can utter that 'God is removed' from moral. If believe in God and his worship fetch moral standard then we do not need so many jails and police forces, no homicide squad or human bomb on gunmen roam around the world in the name of Allah or Christ or Rama or else, no terror attack in Mumbai, Karachi, Colombo or Auckland took lives of thousands, no Crusade would be there in history, no Shia-Sunni blood-shades would be there and so on.

But if we try to establish moral without God, the fundamental question that we face is about its origin or arrival. In the earlier sections we discussed how Nietzsche's philosophy tried to establish individualistic morals but shortfall in several aspects. One of the major point of criticizing Nietzsche's theory is his emphasize on superman or overman like image in morality which is similar to the concept of messiah of Judeo-Christianity (Tobin 1988, 157)<sup>6</sup>. Also, if Nietzsche's thought has to be accepted, there

---

<sup>6</sup> "At first glance, Nietzsche ..... fought courageously to bestow upon humanity the strength of will and intellect necessary to acquire a knowledge of its own emotions. But Nietzsche's project fell short, not because the search for knowledge necessarily ends in madness but because he was unable to free himself from his resentful desire to imitate Judeo-Christianity. In his imperative to over- come mankind, Nietzsche duplicates the same idea of human inadequacy and weakness held by his rival. Nietzsche's call for an overman

will be conflict between one's desires of moral supremacy versus collective interest of upgraded moral. As inherent nature of Nietzsche's moral upgrading is dominative, so any evolution or upgrading of such moral in mass will obviously increase the conflicts among each other. In contrast, an effort was made in Marxian philosophy to show how collective social morals can be promoted but remained clueless about its advent amidst the social wreckage after a class conflict. If the violent proletariat mass uproots the exploiting bourgeois class how those violence automatically succumb to a peaceful society was not clear. Such incidence was found in the post-revolutionary days in 1790s in France or in between February to October, 1917 in Russia, and continued up to 1922 when a new state with strict law and order were imposed on the territory. So the practical situations and evidences neither show promises for Nietzsche nor for Marx. Even neither of them could properly address the issue of morality in one and many. So we have to search for a suitable explanation about the origin of morality and to find an answer about whether it may spawn as inherent nature or generate spontaneously. In other word "*... mankind may only hope to attain a knowledge of ethics unconsciously, or as a consciousness other than itself. Perhaps the time has come to stop searching for this other consciousness and return to the study of humanity and its ethics.*" (Tobin 1988, 158). Also, with the thinking that how morality can be threaded between one and many we are going to discuss that whether believing in God is at all important for developing such morals, and if not, then how such morals come into existence.

##### 5. THEN WHERE SHOULD WE SEARCH OUR SOURCE OF MORALITY

In modern era the ethical values emerged mainly centering the man. The actual need of human with social requirement and consciousness gradually became the center of gravity of the emergence of modern value system. Denial of the values emerged from religious emotions and metaphysical entities and insemination of humanitarian thoughts first gave birth of 'Secular' and democratic approaches in our society. 'Secular' literally means earthly and rejecting any metaphysical existence. The concept of secular state developed with the idea that where the state affairs including social, economic, political and cultural lives will be independent of any religious interference. This is the basis of the development of religiously independent democratic and humanitarian social state. Karl Marx extended this view and showed that such humanity with detachment of personal wealth evolve into communism. With the ethical development and gaining of its gradually organized shapes showed some resemblance

---

*and the Judeo-Christian belief in a messiah obey the same impulse, the impulse to bring in a conscience other than human to provide ethics with an intelligent foundation. Girard's divine revelation of desire and violence also appears at moments to rely on the tragic labor of human intelligence, but it risks concluding, as does Nietzsche's work, at the point where the self-succumbs to its own scandalous nature. Nietzschean philosophy and Judeo-Christianity are finally inadequate for an un-derstanding of ethics, although they may be necessary to its evolution, because they place ethical models beyond the scope of the human community and its representations." (Tobin 1988, 157)*

with the evolutionary theory of Darwin. Once Marx wrote a letter to Engels after reading Darwin's 'Origin of Species', where he wrote, "...*this is the book which contains the basis in natural history for our view*" (Mayr 1997, 12-15). The famous evolutionary philosopher Ernst Mayr of twentieth century was one of the strongest supporter and elaborator of Darwinian Theory. He showed many reasons about why Marx was so enthusiastic about this theory. One of the main reasons was about the variation issue. At the core of Darwin's evolutionary concept was the presence of variations within population and that is the basic ingredient on which evolutionary mechanisms act. Here Marx found support of his dialectic materialism. But Mayr made it clear that the basis of this for Darwin is variations among each individual of every species including human where their genetic, morphological and behavioral variety counts; and such will be counted for morality also (Mayr 1997, 16-17). Another Darwinian as well as Marxian philosopher J.B.S. Haldane explained that the genetic individuality and variety of each individual in a natural sense and providing social equity are two different issues (Haldane 1949, 405-18).

Darwinian evolutionary thought accepted such individual variations at its core as natural phenomena and then tries to explain the collective moral fiber in evolutionary mechanisms by perceptible and logical approach. In contrary, Marxian thoughts and practices mostly showed an intention to impose equity and even asset allocation to establish socialism rather accepting and allowing variations to evolve, thus tends to achieve a state of lesser variance culminating into communism. Neither of these two philosophies can collaborate from their fundamental positions and proceeds for further development to explain morality. In contrast, Nietzsche criticized Darwin as he felt that Darwinian concept of survival is similar to that of the 'will to life' described by German philosopher Schopenhauer (Schopenhauer 1969)<sup>7</sup>. Nietzsche opined that 'will' might be the elementary principle, but not the 'will to life' or in other word the willingness of survival. As Darwin's major saying was 'struggle for existence' where organisms have to cope with the environment which has been described as adaptation (Ridley 2004, 256-59)<sup>8</sup>, Nietzsche showed it as the submission of individual to the exterior and/or situations. But it can be said that he had not realized and interpreted Darwin's theory properly. We will discuss and explain our standing on this point in the following sections.

---

<sup>7</sup> As per Schopenhauer 'The will to live', forms the inmost core of every living being. Not only that he opined that will exhibits most conspicuously in the higher animals like man, in other term within the cleverer ones. In contrast in lower animals this will is less active, so observed less evidently. In the higher order of animals (in man) reason enters and with reason comes discretion, followed by the capacity of dissimulation, which can veil the operations of the will.

<sup>8</sup> Generally speaking, adaptation is such a feature of an organism which is favored in natural selection and enables it to survive and reproduce better in natural environment. As per Darwinian view, organisms do not change them abruptly to meet the natural environmental requirement but organisms possessing such features among the variations of populations are selected by nature for generations again and again with higher survival rates than others. Thus, in a population individual with such features increases in the expanse of other variations and such feature gains higher precision within those selected individuals over time.

If we look at the moral perspective of survival and struggle for existence, we found that Darwin in his ‘Descent of Man’ mentioned and tried to explain the origin and evolution of human psychology and morals (Darwin 1879, 144-51). His writing on human psyche was also extended and established on his biological evolutionary theory. This is known as ‘evolutionary psychology’ by which he explained the origin and development of human cultural and ethical progression from the dawn of the advent of human species. He and his followers even related this origin of moral thoughts with proto-humans or in other species close to modern humans as Darwinian evolutionary thoughts believe that origin of our species was the outcome of a continuous evolutionary process running in whole living world. This modern approach of evolutionary interpretation of morals, searching its origin and gradual modification in human species has now gained a significant and interesting position. Now we can try to search the reason behind our morality which is spontaneous by discarding God from the business.

It may be an obvious question that if we consider a person as biologically moral (if so at all), then why immorality comes or why the exceptions of ethics are so frequent. This also can be answered from the survival requirements. In the overall organization of society individual persons are the ingredients. There, at any situation, any individual’s personal survival, desire or advancements may not match with collective advancement of the society. Each one is different, so their individual attributes, contributions, needs and desires varies which has been biologically expressed from their genetic to epigenetic makeup and behavioral expressions, and now entangled with symbols, language and knowledge (Jablonka and Lamb, 2014). With the transmittable units of heredity named ‘gene’, the habits, rituals, or behavioral units of ethnic groups can be expressed and carried forward as ‘meme’ with mutability or changeability over time (Dawkins 1982, 209)<sup>9</sup>. These biological traits are inherent and also cultural factors are supposed to possess inherent properties. So, through Darwinian evolutionary approach a search can be envisioned to trace the origin of morality. Before going deep into the search, we have to understand that how Darwin came with his theory, its significance and expanse in this thinking world.

## 6. DARWIN AND DESIGN WITHOUT DESIGNER

Darwin’s one of the greatest contributions in establishing evolutionary theory by the process of natural selection is the establishment of the thought of crafting design

---

<sup>9</sup> Dawkins explained the concept of ‘meme’ as ‘*The phenotypic effects of a meme may be in the form of words, music, visual images, styles of clothes, facial and hand gestures, skills ..... They are the outward and visible manifestations of the memes within the brain. They may be perceived by the sense organs of other individuals, and they may so imprint themselves on the brains of receiving individuals that a copy (not necessarily exact) of the original meme.... The new copy of the meme is then in a position to broadcast its phenotypic effects, .....*’ (Dawkins 1982, 209). Dawkins defined ‘meme’ as ‘*a unit of cultural inheritance, hypothesized as analogous to the particular gene, and as naturally selected by virtue of its ‘phenotypic’ consequences on its own survival and replication in the cultural environment*’ (Dawkins 1982, 290).

without designer in contrast to William Paley's concept of intelligent designer (Paley 1828). Paley's argument on 'Natural Theology' was an elaborative attempt to argue that definite adaptive features of animals, whose design and functional precision is astonishing and be fitting to the requirement, are the creation of an intelligent designer or almighty. He exemplified the adaptive supremacy of our eyes or eyes of an eagle. According to him such supreme organs can never be developed or evolved spontaneously without some creator or designer. His argument was if someone found some watch within the pebble on a deserted path, we must admit that the watch was placed by someone else earlier on that path, so it has a creator and owner. His seminal comment was that 'There cannot be design without designer...' and through this approach he augmented for creator for all our biological sophistications in human and other organisms. He described the complex anatomy and functional steps of eye and eliminated the chance of development of such a complex structure of its own in the natural evolutionary process utilizing chances.

But Darwin had taken Paley's arguments seriously and wanted to realize the emergence and development of complex biological or anatomical structures in his own way. When he started sailing in his five years voyage in HMS Beagle in 1831, he was influenced by a book named 'Principles of Geology' written by Charles Lyell where he found the evidences and arguments on changeability of earth's crust. He realized that even every man-made monumental structures changes and decay over time and so also our earth's surface which can either be realized in short observable time or manifested with long time intervals (Lyell 1830). During his voyage Darwin observed several evidences of volcanic and catastrophic events; collected many fossils and a huge number of animal specimens throughout the coasts and islands of new world or America continent. Analyzing all the evidences and observing pattern similarities among the organisms he realized two things. Firstly, animal world and designs are not fixed, it changes over time and secondly, they are interrelated and can be traced the designed variations through some trajectories of changeability or evolution. According to Darwin, this evolution of animal world is mediated through the process of 'Natural Selection' and developed the complex structures of the body of organisms without the designer (Darwin 1859).

To understand the natural selection as the basic of Darwinian evolutionary theory, we first have to take the account of variations. Basically, variations of forms and designs of this living world, how small or big it might be, is the ingredient of natural selection to act. We all can observe that such variations always exist among different species and also within same species and their magnitude varies at different levels of kinship. As for example, same apparatus for feeding with a mouth, alimentary tube and associated organs ended with an anus exists in a toad or in a chameleon or in a pigeon or within a monkey, but it differs in their details sufficiently. Again, having the similar digestive system anatomically in a close group, much closer than the above-mentioned groups, we have observable variations in digestive capacity. As for example, though having similar digestive anatomy, chameleon, garden lizard and house lizard have different food habits and digestive capacity. Not only internal, there are so many external anatomical structures like the structure of forelimbs in tetrapodes, i.e.,

amphibians, reptiles, birds and mammals, which show variations on a basic plan as well as the changing trajectory as per the need. Darwin's basic idea was that nature acts on such variations or options from a group of individuals to select the best suitable choice as per the need of the individual to survive in such environmental condition (Darwin 1859).

He showed that how nature balances between numbers of surviving individuals within the limiting resources connecting the Malthusian theory to explain the nature (Malthus 1798). The coining of the term 'survival of the fittest' in Darwinian Theory depicts actually the balance between options and requirements purely determined by nature and it never meant that only stronger individuals have better chances. Say, in a situation some people are imprisoned under the enemy behind strong enclosure. There no bodily strength will work, rather mental strength and tricks may work to make someone free. Again, in devastating catastrophic conditions such as in earth quake many of the large animals are usually found most affected, rather than smaller creatures. Such situations were actually observed in last event of mass extinction on earth at the Tertiary-Cretaceous period transition phase at about 60-70 million years ago when big dinosaurs ruling the earth got extinct and small predecessors of modern mammals utilized that vacancy in nature to achieve today's dominance (Zimmer 2002, 159-69). That means in that particularly difficult world those small proto-mammals were fitter than the robust, strong and dominant dinosaurs and managed to survive within that phase of massive mass extinction. Gradually they occupied the vacancy on earth created by the huge extinction event and became the dominant genera in the course of evolution. Even for sexual selection, as a part of natural selection, mate choice occurs and a trade-off between the elaborate attractive structures and specific behaviors of animals with their survival opportunity occurs to continue the next generation successfully. There are so many evidences at morphological, anatomical and behavioral levels showing such variations to excel for a particular adaptive feature to gain supremacy for a particular function which may help them survive directly and if not or compromised, a tradeoff for survival always occurs which ultimately act as add-on special characters directly or indirectly supporting survival for now or future. Peacocks' fascinating display feathers or antlers of stags or predator-prey arms races are various examples of such evolutionary display of natural selection in complex forms where a critical interplay and balance occurs between options or choices and needs or requirements in that particular natural situation for the survival benefit, which if fails leads to extinction or elimination of the species (Cronin 1991).

The greatest contribution of Darwin in philosophical sphere is to establish not only that life evolves from simplest forms to complex human beings through several hundred million years, but in establishing that, complex life forms are designed such intelligently without any intelligent designer. Therefore, isolating God's grace from the creation of such complex, well adapted and advanced creatures disproves the existence of creator for this natural world and also established human being not as the special organism created by almighty, rather as a resultant advanced and intelligent form of a continuous process of evolution. Even they showed that intelligence is not primarily for human only, other animals also have different degrees of intelligence and learning

abilities including primates to dolphins and beyond. In the arguments against natural theology for the complex designs of organs like eye, present day Darwinian Prof. Richard Dawkins, in his book 'The Blind Watchmaker', put forward a fine example of how a blind-fold typing of alphabets by a monkey can generate a meaningful sentence within an acceptable timeframe or a random run of simple lines in computer program can generate very complex design within such timeframe – when 'natural selection' in each steps can act for a specific need-based determinant (Dawkins R 2006, 46-50). Therefore, cumulative effect of step wise natural selection to meet some specific demand in an artificial evolutionary environment also proves the Darwinian concept of evolution.

The theory of 'natural selection' and 'survival of the fittest' impacted as Copernican Revolution in the human intellectual and philosophical sphere since the last phase of 19<sup>th</sup> Century and still inculcating the intellectuals in different issues. Darwin in his own language designated it as the 'confessing a murder' in a letter to Bentham Hooker in 1840s as he realized that publication of his theory would bring the end of the notion that human being is the creation of God and none in this world is made by him (Darwin 1958). He, for nearly two decades, deposited this work in a hide, but a letter from a young naturalist named Wallace working in Malayan archipelago forced him to publish his work because Wallace also independently realized the force of natural selection with the concept of evolving world (Zimmer 2002, 44-46). Whatsoever, now questions are how ethics has been generated in human, is it a natural phenomenon and if so, why we have different ethical and unethical inclinations and judgments? Is it similar to variations in nature? Whether absence of God in creating organism means his non-existence in determining or shaping ethical or moral values? So, the fundamental question is whether Darwinian Theory can explain the emergence and diligence of ethics in human and if so, then how it approaches to satisfy the moral questions.

## 7. EMERGENCE OF PROTO-MORAL BEHAVIOR WITHOUT DESIGNER

As per Darwinian thoughts human is not the only rational and intelligent living being in this world, rather he is the product of evolutionary process like other animals including his near relatives of higher primates like chimpanzee, gorilla, orangutan and so on. Such idea of Darwin gained severe criticism at the onset the publication of his thought on human origin in his book 'The Descent of Man' in 1871 (Darwin 1871). Not only that, some interpreted his idea as Darwin stated that human came from gorilla or chimpanzees, that is, our forefathers were those primates. That was mimicked in several cartoons on Darwin in the media at that time. That idea was harshly shocking to the European society in that age. They even were not prepared to accept that African or Australian aborigines were even human of same strata as the Europeans were and those black or brown races were much more inferior to the so-called whites (Desmond and Moore 2010). What Darwin wanted to say in this theory that we all humans had a common predecessor with that of higher apes and none of us are special or preferred creation of anyone. So, we must have some common behavioral ancestry and all



possess at least some degrees of intelligence, consciousness and conscience among us. Citing different examples from the primates Darwin also wanted to furnish their cooperative and altruistic behavior as the precursor state of development of human moral faculty. Darwin produced his view about rise of morality in human. “[A]s man gradually advanced in intellectual power .... as he regarded more and more not only the welfare, but the happiness of his fellow-men; as ...his sympathies became more tender and widely diffused, so as to extend to men of all races, to the imbecile, maimed, and other useless members of society, and finally to the lower animals – so would the standard of his morality rise higher and higher.” [Darwin 1871, 103]

Now what we call conscience or ethics and how could it be present in animals is the most enigmatic question. May be that was the most objectionable area to both theist and atheist philosophers of that time as nearly all of them believed that as a creature human is special and different from others. In giving the explanation of development of human moral gradually by Darwin some influence of Orientalist philology might be possible. Though ‘gradualism’ was one of the pivotal ideas of Darwinism, which had been applied to develop human morality, the cycle of ‘karma’ and ‘reincarnation’ to attain higher state of ethical attainment and liberation (*nirvāṇa*) in Buddhism might be familiar already [Dasgupta 2015, 107-9]. The positive reception of Buddhism and a wave of influence from the East spearheaded by Max Müller and translation of Sanskrit texts started to show impacts from 19<sup>th</sup> century as evidenced from deliberations of Schopenhauer to T.H. Huxley, the close follower of Darwin. Even Nietzsche’s consideration on Buddhism were pronounced in his writings, but his difference of opinion was also prominent as he positioned differently in ethical issues from Darwinism. Catherine Wilson pointed out that “*He [Nietzsche] rejects...Darwinian postulate that altruism and self-abnegation are human traits acquired in the course of evolution and further refined in the highest forms of civilization,...*” [Wilson 2013, 367]. The major concern for the Darwinian model of moral emergence depending on cooperation, altruism and sympathy was merely a hypothesis and needed to be grounded with some amicable biological evidence or logical explanations. In contrary, biology also makes a lot of sense with citation of evidences from the living world in the emergence of altruistic behavior and development of primordial group living and society (superficially contradicting ‘intraspecific competition’ of Darwinian evolutionary theory) which deserved to be explained sufficiently.

Simply speaking, ‘ethics’ is the principle of doing right or wrong. Now this doing of right or wrong can be implied only in respect to others. So, ethics is always a societal attribute and social formation is not the only property of human. Though with the term ‘society’ we predominantly visualize a particularly structured human aggregation in a particular geographic territory, but the fundamental component of a society is a group of individuals with some relationship among them. This is a collaborative assembly which offers some level of benefit that cannot be obtained at individual level. As per Cambridge Dictionary, ‘Society’ is ‘a large group of people who live together in an organized way, making decisions about how to do things and sharing the work that needs to be done.....’. So, another very important aspect of being societal is to accept the distribution or sharing of work in an organized fashion. Now in the E.O. Wilson’s

classic ‘Sociobiology: The New Synthesis’ the society is defined as ‘A group of individuals belonging to the same species and organized in a cooperative manner’. He also added that ‘The diagnostic criterion (of a society) is reciprocal communication of a cooperative nature, extending beyond mere sexual activity (from the biological perspective)’ (Wilson 2000, 509). Thus, when we need society or aggregation of individuals, we have the option to assign different roles of those individuals for achieving greater goal which cannot be possible at individualistic level. Therefore, the individuals will be interacting and communicating to distribute the roles, monitoring the outcome, gathering the results, judging performances for further steps for future. In any civilized society this array of things occurs in a structured manner in orderly fashion. For this, authorities and rules are there in our modern society. Now we can start to walk back to the extent where we can designate an assembly as a society. For savage society, the so-called rules or authority may be acquired by some powerful individual who may be assisted by some elderly wise person carrying the rituals and cultural signs of that primitive social assembly. In many cases, such cultural signs or rituals which were being carried forward, might have some significance in maintaining order and unity or may have some communicative importance. If we cross the boundary of human, many of such primitive features can be found in the group assemblage of many primates, such as, monkey and ape community. That was observed by Wilson when he was supervising the work of one of his first doctoral students working on rhesus macaques in 1960s (Levallois 2018, 419-444). Further observing the biological phenomena of several animals including lions to bees and ants, he and other experts in animal behavior extracted so many features which resemble the social structure and order of human society and a new branch called ‘sociobiology’ is now highly active. As these are also societies, so doing right or wrong must be an active force there. But the question that, where from the ethical conscience emerge there, is also a big puzzle. If the ethics or moral is also applicable in these quaci-societies, then does the ethical sense have some instinctive part? If so, then how? So, there are some very serious questions to modern philosophy regarding the origin of ethics when God and creationism has been discarded from the issue.

The origin of cooperation in living world can be traced back with the origin of multi-cellular organisms about one and half billion years back when living individual cells began to cooperate each other in a form of primitive colonization with the traces of division of labor among the cells (Remane 1963, 23-32). Such division or specialization of work within different groups of cells in a larger cellular association gradually evolves and well organized to develop different animal and plant forms over millions of years on earth (Bonner 1988, 260; Grosberg and Strathmann 2007, 621-54). As it is multi-cellular assemblage of higher order, which needs very well controlled structure-function relationship, must be controlled by some rules. This evolution of simple unicellular to complex multi-cellular organism is, in Darwinian logic, governed by the force of natural selection and the volumes of research and articles on evolutionary biology are producing the evidence highlighting the mechanisms behind it since 20<sup>th</sup> century. Now in the next level, individuals aggregate to organize into a structure of cooperative relationship named society. It requires some laws to function

in an organized fashion between individuals. Actually, ethics or morals are those fibers which form the ropes as law to bind individuals in a societal structure. Then in such a society why such ethics cannot be generated naturally to form the rules, where for multi-cellular organization it is true? How does such ethics of cooperation generate in this conflicting world of survival? When the most eminent truth of living is ‘struggle for existence’ and outcome arise from such severe conflict of living and competing for resources is ‘survival of the fittest’, how such phenomena of cooperation arise?

The simplest form of answer of it is the interest of ‘group’ where group living emerges as evolutionary strategy showing much beneficial edges over individual survival success. In many cases group living bring benefits in terms of capturing prey or gathering foods, protection and bringing down the rate of being predated and become beneficial for the nurturing the next generations and many more (Wilson 2000, 106-16). As for example, even top predator like lions have a group living which helps them to capture prey and protect cubs to bring up in harsh competitive environment. In opposition, the wild African buffalos have a group living for protective benefit reducing the chances of being predated. In many such group activities the animal individual who raise the alarm call shows much more chance of being predated, but sacrifice its hide and even life for the sake of its group (Zuberbühler 2006, 143). When we observe the V formation of birds during flight, it is also a group activity which helps all of them to migrate for a long distance with increased efficiency. In this formation the aerodynamic benefit given by the bird flying in front in the expanse of its own energy has been enjoyed by the following bird and they rotate their positions to distribute flight fatigue among flock members. Thus, none actually clinches the benefit for its individual interest, rather works for group interest with the record of giving relaxation to elder and younger or weaker members (Cutts and Speakman 1994, 251-61). Such a highly organized and moral act behind the distribution of functional roles and overall cooperation does not require any training on ethics or law, but emerges into the behavioral domain of animals, may be instinctively or may involve some degree of behavioral learning in the animal world.

## 8. WHY AND HOW BE ETHICAL

The reason behind such interest in cooperative behavior has been related with the phenomena of altruism, which was superficially defined in Wilson’s ‘Sociobiology’ in 1975 initially as the self-destructive behavior performed for the benefit of others. But such has been changes now to ‘Helpful behavior that rises the recipient’s direct fitness while lowering the donor’s direct fitness’, where fitness in evolutionary perspective means the chance of reproductive success for now or future (Wilson 2000, 117-29; Gadagkar 1997, 70-76)<sup>10</sup>. This reproductive benefit actually helps to propagate the

---

<sup>10</sup> The inclusive fitness is the concept where basically the logical explanations of Hamilton and Haldane established that producing offspring is merely a way to increase participation of one’s gene in population. Aiding genetic relatives by supporting, caring and cooperating is also another way to increases one’s genes partial participation without losing its own energy in reproduction. This may be the basic interest

genes into the next generations, thus proceeding through the evolutionary course and time. The issue of self-less behavior in animals was initially raised by JBS Halden in 1953 in a now defunct magazine named 'Penguin New Biology', later WD Hamilton explained the altruism in mathematical viewpoint showing how it facilitates the transmission of genes of its own kind of donor. This in technical term showed to increase the 'inclusive fitness' in group and who is sacrificing actually contributing its life to increase group fitness where its own genes are included partially (Hamilton 1964, 1-52; Hamilton 1970, 1218-20). So, the behavior is not totally selfless, it possesses the interest of extending donor's own gene, at least in some part, to the successors to live in the process of evolution for future. In such a process of help, kinship or genetic relatedness and sometimes group benefit may play very important role in determining the degree of help offered to others.

Social interactions create two extreme possibilities of either conflict or cooperation. If competition for survival is ultimate, then conflict is supposed to be the only outcome. But social circumstances with 'actor' and 'recipient' may generate several situations – selfish situation where actor gains benefit but recipient is harmed, cooperative situation where both gain benefit, altruistic situation where actor is harmed and recipient gains benefit and spiteful situation where both harmed. In such scenario when two individual interacts, the situations where allele (the unit of genetic inheritance) receives safer passage to next generation will be accepted and thus gain evolutionary advantage for survival. Hamilton's rule clearly demonstrated that altruistic behavior is capable to provide such evolutionary edge to alleles/genes of the altruistic individual (Hamilton 1964, 1-52; Freemann and Herron 2016, 466-68).<sup>11</sup> This has provided theoretical explanation of altruism despite individual conflict and how conflicts can be converted to complementary benefits to gain reproductive fitness to stride forward in evolutionary process. Therefore, Robert Trivers commented that "*the most important advance in evolutionary theory since the work of Charles Darwin and Gregor Mendel*" [Trivers 1985, 47].

The binary of interactions between individuals in the evolutionary perspective therefore yields intermediates and levels of 'complementarity' with bi-directional significance in 'fitness'. This is much related with the 'concordant (harmonious) complementarity/cooperation' as illustrated by the Yin-Yang model to interpret contraries/conflicts with admissible and constructive gesture [Bo Mou 2020, 197-222].

---

of close relatives or elder offspring to support a breeding pair to take care of younger offspring. Genetic gain of such behavior had been calculated by Hamilton.

<sup>11</sup> In 1964, William Hamilton developed the mathematical model on it where he introduced the 'coefficient of relatedness' i.e., ' $r$ ' between two individuals depicting the probability of being identical of the homologous alleles by descent, or it may be considered as the relatedness between the actor and the recipient. If ' $B$ ' is the benefit of recipient and ' $C$ ' is the cost to actor which are measured by the surviving offspring, Hamilton's rule stands for  $Br - C > 0$  [Freemann and Herron 2016, 466-68]. This shows that altruism may work prominently when the benefit is great, but the cost is low and the participants are closely related. Therefore, with direct reproductive success, indirect reproductive success may be achieved by spreading related genes through rising offspring of close relatives rendering the concept of 'inclusive fitness'.

Reciprocal altruism has been found to be frequent in mammals like bat, lions and primates like baboons, chimpanzees and need not to be intelligent like human to practice this. To prevent loss of 'reproductive fitness' in altruist individuals or 'helpers', punishment to the 'cheater' i.e., who fails/ignores to reciprocate, is also evident [Trivers 1985; Packer and Pusey 1997, 52-59]. This scorekeeping mechanism has been analyzed between actor and recipient where different situations may arrive in a dualistic conflict-cooperation model as mentioned already. Such situations were applied in a specific game theory model based on humanized situation of reward and punishment called '*Prisoner's Dilemma*' and extensive analysis in animal experiments documented that repeated interactions among individuals in social milieu are capable of producing a generalized '*evolutionary stable strategy*' (*EES*) of mutual supportiveness and complementarity which can be analogically compared with the moral [Milinski 1996, 458-461]. Therefore, the contraries, via interactive courses under evolutionary determinants, lead to develop a different level of cooperation/complementarity state, often as *EES* and hence the situations show the matching with the Hegelian dialectic model also, as with Yin-Yang model [Bo Mou, 2020, 197-222]. Therefore, fitness strategy of an individual emerges as the basis of complementarity or cooperation where moral appears primarily as the biological balance sheet for future success of the progeny and therefore, combined with the idea of sustainability of the self, group, race, species or community.

#### 9. ETHICS – THE BIOLOGICAL SCORESHEET TO PROPAGATE FOR LONG

In this respect 'Eusociality' meaning 'truly social' or higher social behavior used for studying social insects, has become instrumental. According to Wilson it is a condition of group living where individuals display cooperation for caring young collectively, shows reproductive division of labor with some sterile individuals working for the benefit of reproductive individuals and with overlaps of generations contributing in colony labor (Wilson 2000, 584). Here the most notable thing is the existence of specialized non-reproductive casts in the group who work for the reproductive members. Therefore, they do not have direct benefit in evolutionary process but shows the inclusive fitness for their own genes. Not only that, in such a eusocial colony we found different behavioral expressions with cooperation and conflicts. In Hamilton's word about social wasps, "*It is a world human in its seeming motivations and activities far beyond all that seems reasonable to expect from an insect: constructive activity, duty, rebellion, mother care, violence, cheating, cowardice, unity in the face of a threat – all these are there.*" (Hunt 2007, 187), we found such higher societal attributes as expressed in our society. There ethics or rules to behold the social and group structure does not arise from any 'Old (or New) Testament' or 'Gita' or from any school or constitution, it has emerged purely from instinct and from their survival interest for future, either directly or indirectly.

These evidences indicated that group cooperation is for achieving the gene-centric privilege for the groups than others. Therefore, with different behavioral attributes of

goods or bads among individuals, the ultimate assemblage works with some common interest. So, to hold and carry forward such biological interest, the behavioral acts develop which we can designate as ethics or moral. Thus, in terms of evolutionary biology, there are two conflicting interests. One is to find the means to extend or propagate self-genes, and the other is to allow similar genes of similar individuals with self-genes. In the second case, there are many benefits with some costs also. If anyone finds that living in a group with some cooperative behavior and allowing other's similar genes (where some portions from its own genes also exists as others of the group are relatives) to extend forward to next generation and thereby it is getting many protective and other strategic advantages for its own gene to persist (fully or partially) with less costs in the run of evolution, it may choose the societal option for biological interest. In many occasions these options are also beneficial from bioenergetics point of view for the individuals who are extending support to group members and relatives without expense of their energy directly in reproductive activities of their own (Wilson and Hölldobler 2005, 13367-13371; Markham and Gesquiere 2017, 20160239). Quasi languages like alarm calls, and activities observed by the workers in a bee colony are the evolutionary expression of those proto-behaviors which seems to have morals and self-sacrificing attitude, but actually balancing and protecting their gene's interest.

Such gene centric evolutionary view of group behavior which encodes several moral acts, now has been extended for 'meme', a new terminology coined for culturally transmitting units which we have defined earlier. Meme may be some cultural act or behavior or even ritual or taboo of a particular group of individuals, which that group or society is intended to carry forward in future and tries to percolate in other groups or societies also. Observation of such cooperation among society members and similar cultures, and conflicts of different groups to establish, percolate and dominate others has shaped the human socio-cultural evolution today and it is still evolving actively (Wilson and Sober 1994, 585-608; Dennett 1990, 127-35). Therefore, in Darwinian evolutionary view, ethical behaviors and acts emerged from group living and development of social assemblage through cooperation and conflicts where the interest of species genes to persist and push forward through evolution keep the balance between individual and group interest. We know that in developing ethics or morals, conflicts also have a very serious role in contrast with cooperation, and such is very much true in animal world like human. In other words, Morality may be explained as the collection of biological and cultural solutions to the recurrent problems of cooperation and conflict observed in human social life (Curry 2016, 27-51). With so many conflicts, morals develop in its proto-social forms to enhance cooperation and harmony in a very remarkable extent which, in many cases, are educating and astonishing us. So as per Tomasello and Vaish, "*Human morality arose evolutionarily as a set of skills and motives for cooperating with others, and the ontogeny of these skills and motives unfolds in part naturally and in part as a result of sociocultural contexts and interactions.*" (Tomasello and Vaish 2013, 231-55).

## 10. NATURAL ETHICS REVISITED

In the early phase of the development of socio-biological ideas after the introduction of Darwinian Theory, Harbert Spencer and others during the late 20<sup>th</sup> Century tried to synthesize the evolutionary theory with the social development of human and beyond. But they emphasized on ‘natural selection’ and survival of the fittest’ in a superficial manner where they accepted that ‘mother nature’ is immensely powerful who select the powerful and fittest for survival. As per their view, all natural and social development reflects the ‘universality of law’ and morals emerged to achieve pleasure which is the underlying cause of cooperation. The phrase ‘survival of the fittest’, used by Spencer extrapolated to draw inference that those on the top and bottom of the society deserved to be there in natural way and hence good for society (Claeys 2000, 223-240). Their conclusion in nutshell was that powerful defeats less powered or rich exploits poor in natural way. Such an idea later gradually converted in the eugenic movement where artificial genetic selection in human society had ultimately imposed by states developing into a fierce form of racial and social conflict ending into a devastating war (Zimmerman 2005, 566–567; Ghosh 2010, 227-32). All these previous views were contradicted in the later synthesis of sociobiology by Wilson and followers who became able to explain the origin of social cooperation and association from the point of evolutionary interest accepting the conflict between self-interest and group interest. They explained how the conflict and cooperation is keeping balance to preserve group and self interest in evolution maintaining a dynamic relationship. Thus, the ethical requirements are originating from within to proceed in evolution keeping such balance for own interest. So, everyone is running to preserve their genes and for doing so some are keeping their hands together, punishing the cheaters who focused for their own interest damaging group interest and become moral for maintaining their gene from individual to group levels depending on their kinship. This underlying cause becomes many folds higher and complex in the human society where evolution of language from simple behavioral expressions and signs has become instrumentally a big leap for complex and detailed communication.

In this respect Nietzsche’s ‘will to power’ is merely a crazy philosophical invention and never be the primary. Rather ‘will to exist’ may be the fundamental driving force in evolutionary sense and sounds similar with basic existentialist dictum. If will to power has been accepted, the evolution will become directive, which is not possible. Evolution is ‘blind’ and random where variations are the ingredients and nature act as sieve for selection. From this point Nietzsche criticized Darwin linking him with Sopenhauer’s ‘will to live’ as we mentioned earlier. Organism’s adaptability is one of the major evolutionary mechanisms where it has to modify its morpho-functional activities within its permissible limits (Ridley 2004, 255-89). But Nietzsche interpreted it as the submission to nature. He shouted that survival is not the submission to nature but fight against odds of nature. As per him survival is not a spontaneous process, rather who has strong will to dominate and win over nature, they can survive only. In contrary, Darwinian evolution and survival is a spontaneous process where among variable options the most suitable options are being sieved through natural selection who show

the capability to perform better in that environmental situation. There everyone is willing to survive, but the better ones have been able to carry forward with the next generations by outcompeting others in a particularly given condition. And obviously in this process, genes or individuals or groups may act as the unit of selection (Mayr 2001, 126-34) where at each level actions and counter-actions are ensuing to ensure the existence of the competing units in the course of evolution.

In some respect, Nietzsche is a Darwinian when he admits that history of humanity is a part of natural history, but differed sufficiently from Darwinian explanation of evolution and development of new 'race' and ultimately new 'species'. Nietzsche determined the mechanism of progress by applying the vitalistic force (will to power) to increase the quality of life form and our species (human) is the arrow-head of evolution. The idea was much similar to Aristotle's '*great chain of being*' or Lamarck's '*transformism*' opposed to the pattern of '*branching tree*' of evolution of life in Darwinism and is an obvious misconception. Other major objection on altruism by Nietzsche has been refuted in our discussion where evolutionary conflict for life has been shown to be negotiated with cooperative strategies leading to the birth of societal moral for the evolutionary interest. Everyone has the intention to push its genes in next phase and in doing this where cooperation is preferred, ethics wins and where conflict is preferred, ethics loses. It occurs in natural evolutionary process. But to maintain the harmony and sustainability in a societal structure rules have developed based on the ethics or morals, which emerges from within as described earlier. Though in very recent development of biology, Lamarckian idea of evolution has regained some importance with the gaining importance of epigenetic, some may find substances in 'will to power' (Carey 2012; Jablonka and Lamb 2014). To counter them the essay entitled '.....A critique of the adaptationist programme' by SJ Gould and RC Lewontin of 1979 contain enough arguments showing that any organism can never deviate from its original structural plan, but can ornament it to a certain permissible extent (Gould and Lweontin 1979, 581-98). Every organism is embedded in such basic genetic plan and morpho-anatomical framework constrains with a possible extent of variations on which natural sieve may play. Epigenetic regulations only enhance or manipulate the frequency of such variations to play with, hence affecting the options just to a limited extent. But we always have to keep in mind that such overemphasizing of human will or intension to divert evolution to a specific direction like the view of Nietzsche's 'transvaluation of values' were found in the eugenic movement where an attempt of pseudoscientific artificial human selection culminated into a devastating end with world war II showing the ultimate breaching of ethics and morals in humanity.

## 11. CONCLUSION

Therefore, there is no God who develops our ethics. In search of its origin we proceed through an atheist track where existentialists showed some logic for being ethical but made us unclear to show its origin. So, it has been tried to find out where from our conscience grow. In this quest, one of the most prominent and pronounced existentialist, Nietzsche, showed lack of fundamental logic in support of spontaneity of



appearance of moral and fall short in explaining ethics from collective societal perspective, where Marxian approach remain insufficient to identify the origin of collective moral and basis of ethical society. In contrast Darwinian evolutionary approach is providing a wider opportunity to find the origin of moral and its instinctive foundation. During discussion we found some hints of influence and thought-provoking engagements of different philosophical schools which may have been drawn from both east and west. We continued our odyssey to unfold the origin of moral in human society where we considered the post-darwinian progress in the field. It shows that ethics is not solely a human attribute but have proto-human roots. The search on how animals instinctively can become cooperative in this competing world, actually instigate to unearth that as an evolving creature how it can be applied on us. In this course it is found that our origin of ethics and conscience are embedded deep into our evolutionary past accepting the conflicts for survivals and need of cooperation at different degrees according to the situation for the same survival to carry forward our existence in selected trajectory of evolution. These ethics and conscience are now expressed into multiple levels of complexities with complexly developed relationships and communicative abilities in present day human society as 'morals' which gradually developed the law system emerging from such instinctive origin of core moral attributes. Such complexities of ethical and unethical actions can be resolved into basic components of evolutionary interest for survival, either overpowering any one between conflicts and cooperation, or balancing these two. Contrary to any of the attempts to present nature religiously as hinted in the title *The Moral Meaning of Nature* [Woodford 2018], origin and evolution of ethics has been the truth of nature and survival strategy for future. The underlying 'divine purpose' of life is to survive sustainably for self, and not only for present, but for future progeny and therefore, negotiate with contraries for the purpose. The Conscience or Moral is also an evolving process of natural history for the interest of 'self' in the societal environment. Therefore, 'selflessness' is not selfless into its deep history but is concealed under well-articulated individual and social layers of engagements. Now, Darwinian school and its subsequent development equipped us to think over our origin of moral or the call of conscience from our predecessors and our evolutionary past.

#### ACKNOWLEDGEMENTS

Malabika Chakrabarti is grateful for valuable guidance and suggestions from Prof. Kumar Mitra of Rabindra Bharati University, Kolkata, India during the preparation and evaluation of doctoral thesis that partially contained the topics discussed in this article. Also, the authors appreciate the valuable feedbacks from Dr. Sambhu Nath Chakrabarti, scholar, editor and writer of Indian philosophy for some comparative accounts with Indian or oriental philosophy. Anirban Ghosh is also thankful to his teachers and senior colleagues from University of Calcutta and other universities of West Bengal, India who made thoughtful and critical discussions on evolutionary biology and philosophy at different occasions and inspired him to think on different

perspectives of evolutionary biology. Both the authors also thank the great philosophers and writers whose works actually provided the raw materials for thinking in the area, provide supports during critical and intense discussions between them and ultimately shaped the whole argument to find the way of emergence of ethics atheistically as a natural process. Authors would like to thank the reviewers of *Comparative Philosophy* for their comments and constructive suggestions to refine the article and present properly.

## REFERENCES

- “Bārhaspatya Sūtra. 85”, in Bhattacharya. A. (ed.) (2005), *Cārvāk Darśan*, (Kolkata: Sanskrit Pustak Bhandar).
- Bonner, John Tyler (1988), *The Evolution of Complexity* (Princeton, NJ: Princeton Univ Press).
- Carey, Nessa (2012), *The Epigenetics Revolution: How Modern Biology Is Rewriting Our Understanding of Genetics, Disease and Inheritance* (London: Icon Books).
- Claeys, Gregory (2000), “The ‘Survival of the Fittest’ and the Origins of Social Darwinism”, *Journal of the History of Ideas* 61.2: 223-240 <DOI: 10.1353/jhi.2000.0014>.
- Cronin, Helena (1991), *The Ant and The Peacock: Altruism and Sexual Selection from Darwin to Today* (New York: Cambridge University Press).
- Curry, Oliver Scott (2016), “Morality as Cooperation: A Problem-Centred Approach”, in Shackelford TK and RD Hansen (eds.), *The Evolution of Morality, Evolutionary Psychology* (Springer: Switzerland).
- Cutts, Christopher J. and Speakman, John R. (1994), “Energy savings in formation flight of pink-footed geese”, *Journal of Experimental Biology* 189: 251-61 <DOI: 10.1242/jeb.189.1.251>.
- Darwin, Charles (1859), *On the Origin of Species by Means of Natural Selection, or The Preservation of Favored Races in the Struggle for Life*, (London: John Murray).
- Darwin, Charles (1871), *The Descent of Man: And Selection in Relation to Sex* (London: Penguin Classics, 2004).
- Darwin, Charles (1879), *The Descent of Man, and Selection in Relation to Sex*, 2<sup>nd</sup> Ed (London: John Murray) Intro by Moore, J. and Desmond, A. (2004) (London: Penguin Books).
- Darwin, Charles (1958), *Autobiography and Selected Letters*, Darwin F (ed.) (New York: Dover).
- Dasgupta, Surendra Nath (2015), *A History of Indian Philosophy*, Vol-I (1<sup>st</sup> Ed. Cambridge 1922) (Delhi: Motilal Banarsidass).
- Dawkins, Richard (1982), *The Extended Phenotype: The Gene as the Unit of Selection* (Oxford: Freeman).
- Dawkins, Richard (2006), *The Blind Watchmaker* (London: Penguin Books).

- Dennett, Daniel C. (1990), “Memes and the Exploitation of Imagination”, *The Journal of Aesthetics and Art Criticism* 48.2: 127-135.
- Desmond, Adrian and Moore, James (2010), *Darwin’s Sacred Cause: Race, Slavery and the Quest for Human Origins* (London: Penguin Books).
- Freeman, Scott and Herron, Jon C. (2016), *Evolutionary Analysis* (4<sup>th</sup> Ed.) (Noida: Pearson India Education Services Pvt. Ltd.).
- Gadagkar, Raghavendra (1997), *Survival Strategies: Cooperation and Conflict in Animal Societies* (Hyderabad: Universities Press).
- Ghosh, Anirban (2010), “Charles Darwin and World War II: an evolution towards darkness”, *Science and Culture* 76.7-8: 227-232.
- Gould, Stephen Jay and Lweontin, Richard C. (1979), “The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme”, *Proceedings of the Royal Society London series B* 581-98 <DOI: 10.1098/rspb.1979.0086>.
- Greaves, Richard L. (ed.) (1997), *Civilizations of the World: The Human Adventure* (New York: Longman).
- Grosberg, Richard K. and Strathmann, Richard R. (2007), “The Evolution of Multicellularity: A Minor Major Transition?” *Annu Rev Ecol Evol Syst* 38: 621–54.
- Haldane, John B.S. (1949), *Human Evolution: Past and Future –Genetics Paleontology and Evolution* (USA: Princeton University Press).
- Hamilton, William Donald (1964), “The genetical evolution of social behavior”, I, II. *Journal of Theoretical Biology* 7.1:1-52 <DOI: 10.1016/j.jtbi.2023.111430>.
- Hamilton, William Donald (1970), “Selfish and spiteful behavior in an evolutionary model”, *Nature* 228.5277: 1218-1220 <DOI: 10.1038/2281218AO>.
- Hunt, James H. (2007), *The Evolution of Social Wasps*, (New York: Oxford University Press).
- Jablonka, Eva, and Lamb, Marion J (2014), *Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral, and Symbolic Variation in the History of Life* (Cambridge, Massachusetts. USA: A Bradford Book, The MIT Press).
- Levallois, Clement (2018), “The Development of Sociobiology in Relation to Animal Behavior Studies”, 1946–1975. *Journal of the History of Biology* 51.3: 419-444 <DOI:10.1007/s10739-017-9491-x>.
- Lyell, Charles (1830), *Principles of Geology*, Vol 1 (London: John Murray).
- Malthus, Thomas (1798), *An essay on the principle of population as it affects the future improvement of society* (London: J. Johnson).
- Markham, A. Catherine, and Gesquiere, Laurence R (2017), “Costs and Benefits of Group Living in Primates: An Energetic Perspective”, *Philosophical Transactions of The Royal Society Biological Sciences* 372: 20160239 <DOI:10.1098/rstb.2016.0239>.
- Marx, Karl (1933), “Address and Provisional Rules of the Working Men’s International Association”, in *Selected Works, Vol-II* (New York: International Publishers).
- Marx, Karl (1958), “Die deutschu zdeologic”, in *Hegel to Marx, Tr by Sidney, H.* (New York: Humanities Press).

- Marx, Karl (1969), "Thesis of Feuerbach", in. *Marx-Engels Selected Works, Vol-I* (Moscow: Progress Publishers).
- May, Simon (1999), *Nietzsche's Ethics and his 'War on Morality'* (Oxford: Clarendon Press).
- Mayr, Ernst (1997), "Roots of dialectical materialism", in. *На переломе: Советская биология в 20-30-х годах*, (ed.) Kolcinskij, E.I. (St. Petersburg: СПбФ ИИЕТ РАН).
- Mayr, Ernst (2001), *What Evolution Is* (New York: Basic Books).
- Milinski, M. (1996), "By-product mutualism, tit-for-tat reciprocity and cooperative predator inspection: A reply to Connor", *Animal Behaviour* 51: 458-461 <DOI: 10.1006/anbe.1996.0044>.
- Mou, Bo (2020), "Yin-Yang and Hegelian Models of How to Look at Contraries: An Over-Complementarity-Seeking Account", in *Cross-tradition Engagement in Philosophy: A Constructive-Engagement Account* (Routledge).
- Nietzsche, Friedrich (1954), "Twilight of the Idols", in *The Portable Nietzsche* (ed. & tr.) Kaufmann, W. (New York: Viking).
- Nietzsche, Friedrich (1956), *Beyond Good and Evil* (tr.) Golffing, F. (New York: Anchor Books).
- Nietzsche, Friedrich (1998), *On the Genealogy of Morality* (tr.) Clark, M, and Swensen, A. (Indianapolis: Hackett).
- Packer, Craig and Pusey, Anne E. (1997), "Divided we fall: Cooperation among lions", *Scientific American* 276: 52-59 <DOI: 10.1038/SCIENTIFICAMERICAN0597-52>.
- Paley, William (1828), *Natural Theology or Evidences of the Existence and Attributes of Deity* (Oxford: J. Vincent).
- Remane, A. (1963), "The evolution of the Metazoa from colonial flagellates vs. plasmodial ciliates", in Dougherty, EC (ed.) *The Lower Metazoa* (Berkeley, CA: Berkeley Univ Press).
- Ridley, Mark (2004), "Adaptive Explanation (Ch.10)", in *Evolution. 3<sup>rd</sup> Ed* (Oxford: Blackwell Publishing).
- Sartre, Jean-Paul (1956), *Existentialism and Humanism* (tr.) Mariet, P. (London: World Publishing Co).
- Sartre, Jean-Paul (1993), *Essays in Existentialism* (New York: Citadel Press).
- Schopenhauer, Arthur (1969), *The World as Will and Representation, Vol I and II* (tr.) Payne, E.F.J. (New York: Dover Publications).
- Selsam, Howard (1948), "The Ethics of the Communist Manifesto", in *Centenary of Marxism*, (ed.) Bernstein, S. (New York: Science and Society Inc).
- "Shrīmadbhagavad Gītā, Verse No. 4/8", in Ghosh, J. (ed.) (1992), *Shrīmadbhagavad Gītā* (Kolkata: Presidency Library).
- Tobin, Siebers (1988), "Resentment and Genealogy of Morals: from Nietzsche to Girard", in *The Ethics of Criticism* (New York: Cornell Univ Press).
- Tomasello, Michael, and Vaish, Amrisha (2013), "Origins of Human Cooperation and Morality", *Annual Reviews of Psychology* 64: 231-55 <DOI: 10.1146/annurev-psych-113011-143812>.

- Trivers, Robert L. (1985), *Social Evolution* (Menlo Park, CA: Benjamin Cummings).
- Wilson, Catherine (2013), “Darwin and Nietzsche: Selection, Evolution, and Morality”, *Journal of Nietzsche Studies* 44: 354-370 <DOI:10.5325/jnietstud.44.2.0354>.
- Wilson, David S. and Sober, Elliott (1994), “Re-introducing Group Selection to the Human Behavior Sciences”, *Behavioral & Brain Sciences* 17: 585-608.
- Wilson, Edward O. (2000), *Sociobiology: The New Synthesis, 25<sup>th</sup> Anniv Ed (1<sup>st</sup> Ed 1975)* (Cambridge, Massachusetts: The Belknap Press of Harvard University Press).
- Wilson, Edward O. and Hölldobler, Bert (2005), “Eusociality: Origin and Consequences”, *Proceedings of the National Academy of Sciences USA* 102:13367-13371 <DOI: 10.1073/pnas.0505858102>.
- Woodford, Peter J. (2018), *The Moral Meaning of Nature: Nietzsche’s Darwinian Religion and Its Critics* (Chicago: University of Chicago Press).
- Zimmer, Carl (2002), *Evolution: The Triumph of an Idea*, (London: William Heinemann).
- Zimmerman, Andrew (2005), “Richard Weikart. From Darwin to Hitler”, *The American Historical Review* 110.2: 566–567 <DOI: 10.1086/ahr/110.2.566>.
- Zuberbühler, K. (2006), “Alarm Calls – Evolutionary and Cognitive Mechanisms”, in Brown, Keith (ed.) *Encyclopedia of Language & Linguistics* (Elsevier).