C O N C L U S I O N :

Like every doctrine that attracts great numbers of men, Marxism, toom, must have some foundation in truth. Just as man, even in doing evil pursues evil as a good, so in clinging to error, he does so because it has the semblance of truth. The notion of conflict in nature is not without foundation. Indeed conflict is deeply embedded in nature, if we understand correctly the meaning of conflict and the meaning of nature. We can say that conflict is the parent of development, and at the same time give this statement almost the universality that dialectical materialism gives to it. We can give it an even broader extension, for we can admit progress through conflict in the purely spiritual order.

Though the Marxists erred in stating that everything in nature is intrinsically contradictory and when they said that privation is the source of fecundity in the natural world, they were not wrong in their observation both of the world of nature and of human society. Pope Leo XIII's two Letters, "Quadragesimo Anno" and "Divini Redemptoris" recognize the fact of conflict in society, and they realize the part that this conflict had in bringing about the present state of society.

> The conflict between good and evil, the sad heritage of original sin, has continued to rage in the world; the tempter of old has never ceased, through his deceiving promisses to triumph over the human race. That is why,

> in the course of the centuries, we have seen one revolution after another, up until the present revolution --- a revolution which is menacing the whole world and one which by its violence surpasses those suffered by the Church in its early days. (197).

Conflict is and always will be the part of man. It is true that conflict in society is due, to a great extent, to the fallen state of man. But even in a purely natural condition conflict would have been necessary, since not only society, but even the individual man is made up of parts that must be coordinated only through effort. This conflict is but evidence of the imperfection of man's nature.

Conflict, which is not, absolutely speaking, a good in itself, can becomo an instrument of good; it can be the condition for great progress in the spiritual, in the intellectual and in the physical life of man.

The conflict between the higher and the lower appetite of man is not an absolute good, but it is the condition for progress in virtue. In the intellectual order there is not great development except through conflict. It is by meeting difficulties and overcoming them that the mind gains strength. This is, indeed, one of the reasons why Aristotle proceeded the way he did in the exposition of his philosophy --- he presented the difficulties of the adversaries so that in overcoming them the student might the more

strongly hold to the true doctrine. Teaching which merely gives the student the end product without going over the rough road to reach the truth is not true education. In the physical growth of man conflict is necessary; and the strenuous training of an athlete is a verification of it.

The constant necessity of conflict for an energetic life is evident wherever we turn. Sometimes, however, the conflict does not result to the benefit of the individual, for the negative element may destroy the good. This is the unfortunate condition of those whom temptation finds wanting. Nor does every conflict in the intellectual or physical order turn always to the greater good of the individual. Marxists recognized that not all negation permits the development of a higher form of being, for they declared that in the application of the law of negation, care must be taken to observe all those conditions of the object which make resurgence possible on a higher plane.

As was pointed out earlier the analysis undertaken in this thesis is not directed against the Historical Materialism of Karl Marx, but against the Dialectics of Nature of his followers. Though involving a conflict of various groups in society, the Historical Materialism of Marx does not involve the

logical confusion upon which the Dialectics of Nature is founded. This latter is open to criticism through purely logical and natural principles, since Marxists have put themselves in a position in which a purely theoretical criticism was possible. They have both declared Dialectics of Nature to be a continuation of the philosophy of the ancient Greeks, and they have claimed that their system is a complete philosophy, as we understand that term.

Through an investigation of the writings of the ancient Greeks we concluded that there could not be anything more than an external similarity between the teaching of the early philosophers and that of the Marxists. And now in this final part we conclude that Marxism, judged from theoretical principles, not only involves contradictions but that it is reducible to a static philosophy.

T H E END.

APPENDIX:

(1) We use the adjective or substantive Marxist and the noun Marxism in reference to the common doctrine of dialectical materialism as taught by such theorists as Engels, Lenin and Stalin. On the other hand we use Marxian and Marxianism to refer to that doctrine that is found in Marx' own writings. This latter can be more properly called Historical Materialism, while the former is designated by Dialectics of Nature.

(2) Lenin, Marx-Engels : Marxism, p. 60. For complete data on all books cf. Bibliography.

(3) J.B.S. Haldane, The Marxist Philosophy and the Sciences, p. 17.

(4) Lenin, Three Sources of Marxism, Lenin's Selected Works, V.XI,p.5.

(5) Stalin, Dialectical and Historical Materialism, p. 21.

(6) Marx, Capital, p. 25.

(7) Marx, Theses on Feuerbach, no. I, quoted in Engels, Ludwig Feuerbach, p. 73.

(8) Ibid., Thesis II, p. 73.

(9) Engels, Ludwig Feuerbach, p. 31.

(10) Plekanov, Questions Fondamentales, p. 11.

(11) Engels, Dialectics of Nature, p. 14.

(12) Engels, Anti-Dühring, p. 7.

(13) Fragment no. 6, quoted by Burnet, Early Greek Philosophy, p. 174.

(14) Cf. Mack, God in Greek Philosophy, p. 60.

(15) Ibid., p. 61.

(16) Ibid., p. 63.

(17) Aristotle, Ethics VI, c. 2, 1139 a 3-15.

(18) Fragment no. 8, l. 37-42, Burnet, op. cit., p. 176.

(19) Fragment no. 8, l. 53-60, Burnet, Ibid., p. 176.

(20) Fragment no. 9, Burnet, Ibid., p. 176.

(21) Fragment nos. 10 and 11, Burnet, Ibid., p. 177.

(22) Fragment no. 12, Burnet, Ibid., p. 177.

(23) John of St. Thomas, Cur. Theol., T. II, disp. 9, art. 3.

(24) Aristotle, Physics I, c. 2, 185 b 17.

(25) Plekanov, Questions Fondamentales, p. 98.

(26) Aristotle, Metaphysics XI, c. 2, 1066 a 8.

(27) Aristotle, Physics III, c. 1, 201 b 20.

(28) Fragment no. 8, l. 42-50, Burnet, op. cit., p. 176.

(29) Fragment no. 6, l. 26, Burnet, Ibid., p. 175.

(30) On the intelligible sphere, cf. Hack, op. cit., p. 87.

(31) Debroglie, Preface to Emile Meyerson's Essais.

(32) Diels, Fragmente der Vorsokratiker, 19 a 2.

(33) Aristotle, Topics I, c. 1, 100 a 30.

(34) Plato, Sophist, 216 a 3.

(35) Lee, Zeno of Elea, p. 120.

(36) Plekanov, Questions Fondamentales, p. 98.

(37) Zeno's arguments against plurality :

1) Aristotle, Meta. II, c. 4, 1001 b 7 :
"Further, if unity-itself is indivisible, it will according to Zeno's principle be nothing. For what does not make greater when added nor smaller when subtracted he denies to have existence at all, on the grounds, clearly, that whatever exists has spatial magnitude. And if it has spatial magnitude it is corporeal; for the corporeal has existence in every dimension. But the other (objects of mathematics), that is plane and line, will make greater if added in one way, but not if added in another; while point and unit do so in no way whatever".

2) Simplicius, 139. 27 : (Quoted by Lee, Zeno of Elea, p. 13)
"Parmenides had another argument which was thought to prove by means of dichotomy that what is, is one only, and accordingly without parts and indivisible. For, he argues, if it were divisible, then suppose the process of dichotomy to have taken place; then either there will be left certain ultimate magnitudes, which are minima and indivisible, but infinite in number, and so the whole will be made up of minima but of an infinite number of them; or else it will vanish and be divided away into nothing, and so be made up of parts that are nothing. Both of which conclusions are absurd. It cannot therefore be divided, but remains one. Further, since it is everywhere homogeneous, if it is divisible, it will be divisible at another. Suppose it therefore everywhere divides. Then it is clear again that nothing remains and it vanishes, and so that, if it is made up of parts, it is made of parts that are nothing. For so long as any part having magnitude if left, the process of division is not complete. And so, he argues, it is obvious from there considerations that what is indivisible, with our parts, and one".

3) Philoponus, 80. 23 : (Lee, Ibid., p. 13-14)
"His disciple Zeno, in support of his master, tried to prove that what is, is of necessity one and unmoved. He rested his proof of this on the infinite divisibility of any continuum. For, he argued, if what is were not one and indivisible, but were divided into a plurality, nothing would be one in the proper sense (for, if the continuum were divided, it would be divisible ad infinitum); but, if nothing is one in the proper sense, there can be no plurality, if plurality consists of a plurality of units. It is therefore impossible for what if to be divided into a plurality; it is therefore one only. Alternatively the argument may run as follows. If there were no indivisible unity, there could be no plurality, for plurality consists of a plurality of units. Each unit then is either one and indivisible, or itself divided into a plurality. Therefore, if each unit is one and indivisible, the whole is built up of indivisible magnitudes; but if the units are themselves divided, we shall again ask the same question about each of these units that are so divided, and so on ad infinitum. And so the whole will be infinitely many times infinite, if there is a plurality of things that are. But, if this is absurd, then what is, is one only, and it is not possible for there to be a plurality of things that are; for it is necessary to divide each unit an infinite number of times, which is absurd".

Zeno's arguments against motion :
1) Aristotle, Physics VI, c. 9, 239 b 5 :
"Zeno's reasoning, however, is fallacious, when he says that

if everything when it occupies an equal space is at rest, and if that which is in locomotion is always occupying such a space at any moment, the flying arrow is therefore motionless. This is false, for time is not composed of indivisible moments any more than any other magnitude is composed of indivisibles.

Zeno's arguments about motion, which cause so much disquiet to those who try to solve the problems that they present, are four in number. The first asserts the non-existence of motion on the ground that that which is in locomotion must arrive at the half-way stage before it arrives at the goal. This we have discussed above. (233 a 13).

The second is the so-called 'Achilles', and it amounts to this, that in a race the quickest runner can never overtake the slowest, since the pursuer must first reach the point whence the pursued started, so that the slower must always hold a lead. This argument is the same in principle as that which depends on bisection, though it differs from it in that the spaces with which we successively have to deal are not divided into halves. The result of the argument is that the slower is not overtaken. But it proceeds along the same lines as the bisection argument (for in both a division of the space in a certain way leads to the result that the goal is not reached, though the 'Achilles' goes further in that it affirms that even the quickest runner in legendary tradition must fail in his pursuit of the slowest), so that the solution must be the same. And the axiom that that which holds a lead in never overtaken is false; it is not overtaken, it is true, while it holds a lead; but it is overtaken nevertheless if it is granted that is traverses the finite distance prescribed. These then are two of his arguments.

The third is that already given above, to the effect that the flying arrow is at rest, which result follows from the assumption that time is composed of moments; if this assumption is not granted, the conclusion will not follow.

The fourth argument is that concerning the two rows of bodies each row being composed of an equal number of bodies of equal size, passing each other on a race-course as they proceed with equal velocity is opposite directions, the one row originally occupying the space between the goal and the middle point of the course and the other that between the middle point and the starting-post. This he thinks involves the conclusion that half a given time is equal to double that time. The fallacy

of the reasoning lies in the assumption that a body occupies an equal time in passing with equal velocity a body that is in motion and a body of equal size that is at rest, which is false".

Aristotle, Physics VIII, c. 8, 263 a 4 :
"The same method should also be adopted in replying to those who ask, in the terms of Zeno's argument, whether we admit that before any distance can be traversed half the distance must be traversed, that these half-distances are infinite in number, and that is impossible to traverse distances infinite in number --- or some on the lines of this same argument put the questions in another form, and would have us grant that in the time during which a motion is in progress is should be possible to reckon a half-motion before the whole for every half distance that we get, so that we have the result that when the whole distance is traversed we have reckoned an infinite number , which is admittedly impossible. Now when we first discussed the question of motion we put forward a solution of this difficulty turning on the fact that the period a time occupied in traversing the distance contains within itself an infinite number of units; there is no absurdity, we said, in supposing the traversing of infinite distances in infinite time. And the element of infinity is present in the time no less than in the distance. But, although this solution is adequate as a reply to the questioner (the question asked being whether it is possible in a finite time to traverse or reckon an infinite number of units), nevertheless as an account of the fact and explanation to its true nature it is inadequate. For suppose the distance to be left out of account and the question asked to be no longer whether it is possible in a finite time to traverse an infinite number of distances, and suppose that the inquiry is made to refer to the time taken by itself (for the time contains an infinite number of divisions); then this solution will no longer be adequate, and we must apply the truth that we enunciated in our recent discussion, stating it in the following way. In the act of dividing the continuous distance into two halves one point is treated as two; since we make it a starting point and a finishing point; and this same result is also produced by the act of reckoning halves as well as by the act of dividing into halves. But if divisions are made in this way, neither the distance nor the motion will be continuous; for motion if it is to be continuous must relate to what is continuous; and though what is continuous contains an infinite number of halves, they are not actual but potential halves. If the halves are made actual, we shall get not a

continuous but an intermittent motion. In the case of reckoning the halves, it is clear that this result follows; for then one point must be reckoned as two; it will be the finishing point of the one half and the starting point of the other, if we reckon not the one continuous whole but the two halves. Therefore to the question whether it is impossible to pass through an infinite number of units either of time or distance we must reply that in a sense it is, and in a sense it is not. If the units are actual, it is not possible; if they are potential, it is possible. For in the course of a continuous motion the traveller has traversed an infinite number of units in an accidental characteristic of the distance to be an infinite number of half-distances, this is not its real and essential character".

Cf. also : On the Dichotomy
Simplicius, 1013. 4, ad 239b 10 (Quoted by Lee, Zeno of Elea, p.45).

Simplicius, 947. 5, ad 233 a 21 (Lee, Ibid., p.45).

Philoponus, 802. 31, ad 233 a 21 (Lee, Ibid., p. 47).

Simplicius, 1289. 8, ad 263 a 5 (Lee, Ibid., p. 49).

On the Achilles :
Simplicius, 1013. 31, ad loc. (Lee, Ibid., p. 51).

On the Arrow :
Simplicius, 1015. 19 ad 239 b 30 (Lee, Ibid., p. 53).

Simplicius, 1011. 19, ad 239 b 5 (Lee, Ibid., p. 53).

Philoponus, 816. 30, ad 239 b 5 (Lee, Ibid., p. 55).

On the Stadium :
Simplicius, 1016. 9--1019. 9, ad loc. (Lee, Ibid., p. 57).

(38) Aristotle, Metaphysics III, c. 4, 1001 b 7; and Physics VI, c. d, 232 b 24.

(39) Aristotle, Physics VI, c. 1, 231 b 15.

(40) Ibid., 231 b 16.

(41) Revue Philosophique, XX, p. 385, Tannery (1885) quoted by Lee, Zeno of Elea, p. 34.

(42) Aristotle, Physics VIII, c. 8, 263 a 5.

(43) Aristotle, Physics VI, c. 2., 233 a 13.

(44) Fragments nos. 24 — 104, passim, Burnet, op. cit. p. 136-140.

(45) Mack, op. cit., p. 70.

(46) Ibid., p. 74.

(47) Fragments nos. 1-99, passim, Burnet, op. cit., p. 132142.

(48) Mack, op. cit., p. 77,78.

(49) Mack, Ibid., p. 77.

(50) Engels, Dialectics of Nature, p. 125.

(51) Mack, op. cit., p. 78-79.

(52) St. Thomas In Metaphysics V, l, XI, no. 912.

(53) St. Thomas, Procmium in Metaphysics.

(54) DeBroglie, Preface to Meyerson's Essais.

(55) St. Thomas, In Metaphysics I, no. 43.

(56) Ibid., no. 44.

(57) Ibid., no. 45.

(58) Ibid., no. 46.

(59) Fragments nos. 1-148, passim, Burnet, op. cit. 204-226.

(60) Simplicius, Physics 28, 4, Mack, op cit., p. 119.

(61) Theophrastus, Opinions I, Burnet, op. cit., p. 333.

(62) Aristotle, de Gen. et Corr. A, 8, 324 b 35; 315 a 34, Mack, op. cit., p. 120.

(63) Diogenes Laertius, IX, 31, Mack, op. cit., p. 122.

(64) St. Thomas, I a, q. 47, a. 2, c.

(65) Arist. Meta. II, c. 1, 993 b 5;

"The investigation of the truth is in one way hard, in another easy. An indication of this is found in the fact that

on one hand is able to attain the truth adequately, while, on the other hand, we do not collectively fail, but every one says something true about the nature of things, and while individually we contribute little or nothing to the truth, by the union of all a considerable amount is amassed. Therefore since the truth seems to be like the proverbial door, which no one can fail to hit, in this respect it must be easy, but the fact that we can have a whole truth and not the particular part we aim at shows the difficulty of it. Perhaps, too, as difficulties are of two kinds, the cause of the present difficulty is not in the facts but in us. For as the eyes of bats are to the blaze of day, so is the reason in our soul to the things which are by nature most evident of all.

(66) On the perfection of knowing things in fewer species, cf. Contra Gentes II, 98.

(67) Mack, op. cit., p. 118.

(68) Aristotle, Physics II, c. 4, 193 a 25.

(69) Aristotle, Ibid., c. 6, 198 a 5.

(70) Aristotle, de Anima, 403 b 28.

(71) Sext. Math., VII, 135.

(72) Mack, op., cit., p. 126.

(73) Aristotle, Physics I, c. 4, 187 a 20-b 6.

(75) Fragments nos. 1-17, passim, Burnet, op. cit., p. 250-260.

(76) Fragments nos. 12 and 13, Burnet, Ibid., p. 260-260.

(77) Aristotle, Metaphysics I, c. 4, 985 a 18.

(78) Plato, Phaedo, nos 97-98.

(79) Adoratsky : Dialectical Materialism, p. 43 :

'The mechanists regard themselves as materialists; but, in fact, because of their inability to think dialectically, they are impotent in the face of idealism and are themselves forced to abandon the materialist position. As an example, one may cite the inability of the mechanists to deal with the question of quantity and quality. This in one of the questions on which the limitations and shortcomings and the metaphysical nature of the mechanistic philosophy are particularly revealed... According to the mechanist conception, the explanation of all phenomena

must be sought in the mechanical motion of qualitatively identical and unchanging units (atoms, electrons). All qualitative differences between things are due to the difference in the composition of these units and to the difference in their simple mechanical motion (transplacement in space). Hence, quality does not exist in actual reality but depends entirely on our subjective perceptions".

(80) Ibid., p. 50 :

"This materialism, which denies the reality of higher forms of motion and reduces everything to gross and simple mechanical motion, to transplacement, proves to be absolutely helpless before idealism. For idealism also asserts that thought and the objective world are identical. Mechanical materialism, therefore, paves the way for idealism of the most subjective kind. It leads to the inevitable conclusion that the only reality is one's own sensations, for however much theoretical thinking may be denied, this reality cannot be denied. Moreover, mechanical materialism cannot resist the idealist belief in a creator, in some force external to the world, for the reason that mechanical materialism cannot explain what it is that sets in motion the gigantic mechanism that the world appears to him to be. The world machine of mechanical materialism requires some external impulse, the universal clock requires somebody to wind it up. There is no way out of this dilemma except to acknowledge the existence of God".

(81) Engels : Ludwig Feuerbach, p. 36-37 :

"The materialism of the last century was predominantly mechanical, because at that time, of all natural sciences, mechanics and indeed only the mechanics of solid bodies — celestial and terrestrial — in short, the mechanics of gravity, had come to any definite close.

..... This exclusive application of the standards of mechanics to processes of a chemical and organic nature — constituted a specific but at that time inevitable limitation of classical French materialism.

The second specific limitation of this materialism lay in its inability to comprehend the universe as a process — as matter developing in an historical process. This was in accordance with the level of the natural science of that time, and with the metaphysical, i.e., anti-dialectical manner of philosophising connected with it. Nature, it was known, was in constant motion. But according to the ideas of that time, this motion turned eternally in a circle and therefore never moved from the spot; it produced the same results over and over again".

(82) Engels : Anti-Duhring, p. 6 :

"Cependant à côté et à la suite de la philosophie française du XVIIIe siècle, la philosophie allemande moderne était née et avait trouvé sa conclusion en Hegel. Son plus grand mérite fut le retour à la dialectique comme à la forme supérieure de la pensée. Les philosophes grecs de l'antiquité étaient tous, de naissance, par nature, des dialecticiens et le cerveau le plus universel parmi eux, Aristote, a aussi déjà étudié les formes les plus essentielles de la pensée dialectique. La philosophie moderne, au contraire, bien que la dialectique ait aussi été représentée avec éclat (par exemple par Descartes et Spinoza), fut de plus en plus engagée principalement par une influence anglaise dans le mode de la pensée dite "métaphysique" qui domine aussi presque exclusivement chez les Français du XVIIIe siècle, tout au moins dans leurs travaux spécialement philosophiques".

(83) Plekanov : Essays in the History of Materialism, p. 187-8 :

"And it must be recognised that the latter (Hegelian dialectics) had a great advantage over materialism. It studied thing in their development, in their arising and dying away. If we examine things from precisely this last point of view, the method of thinking characteristic of the encyclopaedists,--- the transformation of a phenomenon into a fossilised thing by abstracting it from all the inner processes of life, the nature and connection of which it is impossible to understand --- must be rejected. Hegel, the Titan of the XIXe th century idealism, never ceased to fight against this method of thinking. For him "This metaphysic was not free or objective thinking. Instead of letting the object freely and spontaneously expound its own characteristics, metaphysic presupposed it readymade." (Encycl. para. 81)

(84) Lenin, Correspondence, Letter to Maxim Gorky, letter no 30, 1909 a. d.

(85) Miasnov, Marx and Engels, p. 55.

(86) Engels, Feuerbach, p. 28.

(87) Plekanov, Questions Fondamentales, p. 16.

(88) Engels, Anti-Dühring, I, p. 44-45.

(89) Marx, Capital, Preface to Edition 2.

(90) Adoratsky, Dialectical Materialism, p. 23.

(91) Hook, From Hegel to Marx, p. 272.

(92) Plekanov, Questions Fondamentales, p. 30.

(93) Marx, Capital, Preface to Edition 2.

(94) Engels, Feuerbach, Appendix D, p. 98.

(95) Riasanov, Marx and Engels, p. 58.

(96) Marx's Theses on Feuerbach : (Jotted down in Brussels in the Spring of 1845.

I. "The chief defect of all hitherto existing materialism — that of Feuerbach included — is that the object, reality, sensuousness, is conceived only in the form of the object or contemplation but not as human sensuous activity, practice, not subjectively. Thus it happened that the active side, in opposition to materialism, was developed by idealism — but only abstractly, since, of course, idealism does not know real sensuous activity as such. Feuerbach wants sensuous objects. Consequently, in the Essence of Christianity, he regards the theoretical attitude as the only genuinely human attitude, while practice is conceived and fixed only in its dirty Jewish form of appearance. Hence he does not grasp the significance of "Revolutionary", of practical-critical, activity.

II. The question whether objective truth can be attributed to human thinking is not a question of theory but is a practical question. In practice man must prove the truth, i.e., the reality and power, the 'this-sidedness' of his thinking. The dispute over the reality or non-reality of thinking which is isolated from practice is a purely scholastic question.

III. The materialist doctrine that men are products of circumstances and upbringing and that, therefore, changed men are products of other circumstances and changed upbringing, forgets that the educator must himself be educated. Hence this doctrine necessarily arrives at dividing society into two parts, of which one towers above society (in Robert Owen, for example).

IV. Feuerbach starts out from the fact of religious self-alientation, the duplication of the world into a religious, imaginary world and a real one. His work consists in the dissolution of the religious world into this secular basis. He overlooks the fact that after completing this work, the chief thing still remains to be done. For the fact that the secular foundation lifts

itself above itself and establishes itself in the clouds as an independent realm is only to be explained by the self-cleavage and self-contradictoriness of this secular basis. The latter must itself, therefore, first be understood in its contradiction and then, by the removal of the contradiction, revolutionised in practice. Thus, for instance, once the earthly family is discovered to be the secret of the holy family, the former must then itself be theoretically criticised and radically changed in practice.

V. Feuerbach, not satisfied with abstract thinking, appeals to sensuous contemplation, but he does not conceive sensuousness as a practical, human-sensuous activity.

VI. Feuerbach resolves the religious essence into the human. But the human essence is no abstraction inherent in each single individual. In its reality it is the ensemble of the social relations. Feuerbach, who does not attempt the criticism of this real essence, is consequently compelled : 1) to abstract from the historical process and to fix the religious sentiment as something for itself and to presuppose an abstract -- isolated -- human individual. 2) The human essence, therefore, can with him be comprehended only as "genus", as a dumb internal generality which merely naturally unites the many individuals.

VII. Feuerbach, consequently, does not see that the "religious sentiment" is itself a social product, and that the abstract individual whom he analyses belongs in reality to a particular form of society.

VIII. Social life is essentially practical. All mysteries which mislead theory to mysticism find their rational solution in human practice and in the comprehension of this practice.

IX. The highest point attained by contemplative materialism, i.e., materialism which does not understand sensuousness as practical activity, is the outlook of single individuals in "civil society".

X. The standpoint of the old materialism is "civil society", the standpoint of the new is human society or socialised humanity.

XI. The philosophers have only interpreted the world in various ways; the point however is to change it".

(97) Engels, Feuerbach, p. 38-40.

(98) Marx, letter to Engels, Gesamtausgabe, Abteil. II, Bd. 2, p. 553, 1934.

(99) Marx, letter to Lassale, Selected Correspondance, London, p. 125.

(100) Marx, letter to Engel, Gesamtausgabe, Abteil. II, Bd. 3, p. 396.

(101) Engels, Feuerbach, p. 52, Footnote.

(102) Engels, Anti-Dühring, I, preface to II edition, p. xxi.

(103) Sidney Hook : From Hegel to Marx, p. 75.
There cannot be a dialectics of nature :

"Upon the foregoing interpretation, the attempt to apply the dialectic to nature must be ruled out as incompatible with a naturalistic starting point. Marx himself never speaks of a Natur-Dialektik, although he was quite aware that gradual quantitative changes in the fundamental units of physics and chemistry result in qualitative changes. Engels, however, in his Anti-Dühring and in his posthumously published manuscript Dialektik und Natur openly extends the dialectics to natural phenomena. His definition of dialectic, however, indicates that he is unaware of the distinctive character of the dialectic as opposed to the physical concept of "Change" and the biological concept of "development". "Dialectic", he writes, "is nothing more than the science of universal laws of motion and evolution in nature, human society and thought". (Anti-Dühring, 12 edit. p. 144) Practically all of knowledge, therefore, falls within its scope: and every thinker from Thales down could claim to have in some sense advanced the science of dialectic. Only an idea list can adhere to the distinctive connotation of dialectic expounded above and still believe that nature, independent of man, is an illustration of it.

Galileo's laws of motion and the life history of an insect have nothing to do with dialectic except on the assumption that all nature is spirit. Here as elsewhere, Engels allowed more of Hegel than, as a naturalist, he could properly digest; and one is tempted to say that it kept coming up throughout his work.

Some marxists have so generalised the meaning of dialectics that it refers to the sudden emergence of new qualities in any field. Plechanov, e.g., holds that the transition from 9 to 10, or 90 to 100. in the process of counting is evidence of dialectic at work. (Cr. Fundamental Problems of Marxism, English trans. p. 97). Confusion has arised because of the multiple and ambiguous references to the term "Natur-Dialektik". Sometimes it means no more than the common place fact that change is

observable in all fields of thought and activity. Sometimes it means that every account of physics must operate with contrasting and complementary principles in order to do justice to the polarities and the oppositions in the structures of nature. But in these senses it is foreign to Marx's conception of dialectic, which is historical and restricted only to a consideration of the causes, nature and effects of human activity that destroys the equilibrium of a polarised society and redetermines the direction of the movement of society. In this last sense, the dialectic is the principle of social activity, its medium is the class struggle. There is no need to show that there are sudden leaps and jumps in nature to justify revolution in society. Whether natural phenomena are continuous at all points or discontinuous at some is an empirical question. It is strictly irrelevant to the solution of any social problem. The mistaken conception that they are relevant is bound up with a cognate confusion between the truth-character of the findings of science and the social motives and conditions of scientific investigations. The results of physics may be used by the bourgeoisie but there is no such thing as bourgeois physics. To read the class struggle back into science and nature is to imply that all nature is conscious —— a proposition which only an Hegelian idealist can accept".

In an article in The Marxist Quarterly, April-June, 1937, p. 263-283, Mr. Hook gives an analysis of a Dialectic of Nature. Though it is not done exactly along the lines of the analysis we shall make in the final part of this dissertation, the analysis is logical and worth while. He concludes his article with what he considers to be the only possible application of Dialectic to Nature : It has use as a scientific method :

"If we have established anything so far, we have shown that the only sense in which the dialectics is applicable to nature is the sense in which it is an abbreviated synonym for scientific method. And as a confirmation of this conclusion we need only ask of those who deny it, to point to a single case of knowledge discovered by, or explicable in terms of, the dialectic method which cannot be more simply certified by the canons of scientific method. As an additional task we might challenge them to translate the finding of modern science into the language of dialectic and compare the structure of propositions so derived with those of science in respect to verificability, simplicity, systematic connection, and fruitfulness for the acquisition of new knowledge. If the fundamental laws of dialectic, analysed in the preceding section, are held to be integral to the conception of dialectic,

than it is doubtful whether any translation can be made, for we have seen that these laws violate the fundamental principles of logic, scientific method, and in places, of coherent syntax.

..... We conclude, then, that the dialectic method can claim to have meaning and validity only when it is understood to be synonymous with scientific method; that since its traditional formulation is burdened with many misleading and mistaken conceptions, it would be more conducive to clear thinking if the phrase were dropped ; that its retention engenders a mystical philosophy of nature, prepares the way for a doctrine of "two truths", one ordinary, scientific and profane, the other esoteric, "dialectical" and higher; and finally, that it encourages an attitude which easily leads to censorship, dictation, and persecution of scientists."

(104) Engels, Dialectics of Nature, p. 26.

(105) Ibid., p. 6.

(106) Ibid., p. 13-14.

(107) Engels, Feuerbach, p. 56 :

"But above all, there are three great discoveries which had enabled our knowledge of the inter-connection of natural processes to advance by leaps and bounds : first, the discovery of the cell as the unity from whose multiplication and differentiation the whole plant and animal body develops.....

Second, the transformation of energy, which has demonstrated that all the so-called forces operative in the first instance in inorganic nature — mechanical force and its complement so-called potential energy, Heat, radiation (light or radiant heat), electricity, magnetism and chemical energy — are different forms of manifestation of universal motion, which pass into one another in definite proportions so that in place of a certain quantity of the one which disappears, a certain quantity of another makes its appearance and thus the whole motion of nature is reduced to this incessant process of transformation from one form into another. Finally, the proof which Darwin first developed in connected form that the stock of organic products of nature surrounding us today, including mankind, is the result of a long process of evolution from a few original unicellular germs, and that these again have arisen from protoplasm or albumen which came into existence by chemical means".

Cf. Also : Dialectics of Nature, Engels, p. 206; p. 163, Feuerbach, p. 54.

(108) Engels Feuerbach, p. 56.

(109) Stalin has summed up the differences between the two ways of thinking. Stalin : Dialectical and His materialism, p. 7. The essence of the dialectical method :

"The principal features of the Marxist dialectical method are as follows :

a) Contrary to metaphysics, dialectics does not regard nature as an accidental agglomeration of things, of phenomena, unconnected with, isolated from, and independent of, each other, but as a connected and integral whole, in which things, phenomena, are organically connected with, dependant on, and determined by each other.

The dialectical method therefore holds that no phenomenon in nature can be understood if taken by itself, isolated from surrounding phenomena, inasmuch as any phenomenon in any realm of nature may become meaningless to us if it is not considered in connection with the surrounding conditions, but divorced from them; and that, vice versa, any phenomenon can be understood and explained if considered in its inseparable connection with surrounding phenomena, as one conditioned by surrounding phenomena.

b) Contrary to metaphysics, dialectics holds that nature is not a state of rest and immobility, stagnation and immutability, but a state of continuous movement and change, of continuous renewal and development, where something is always arising and developing, and something always disintegrating and dying away.

The dialectical method therefore requires that phenomena should be considered not only from the standpoint of their interconnection and interdependence, but also from the stand point of their movement, their change, their development, their coming into being and going out of being.

The dialectical method regards as important primarily not that which at the given moment seems to be durable and yet is already beginning to die away, but that which is arising and developing, even though at the given moment it may appear to be not durable, for the dialectical method considers invincible only that which is arising and developing.....

c) Contrary to metaphysics, dialectics does not regard the process of development as a simple process of growth, where quantitative changes do not lead to qualitative changes, but as a development which passes from insignificant and imperceptible

quantitative changes to open, fundamental changes, to qualitative changes; a development in which the qualitative changes occur not gradually, but rapidly and abruptly, taking the form of a leap from one state to another; they occur not accidentally get as the natural result of an accumulation of imperceptible and gradual quantitative changes.

The dialectical method therefore holds that the process of development should be understood not as movement in a circle, not as a simple repetition of what has already occurred, but as an onward and upward movement, as a transition from an old qualitative state to a *new* qualitative state, as a development from the simple to the complex, from the lower to the higher.

d) Contrary to metaphysics, dialectics holds that internal contradictions are inherent in all things and phenomena of nature, for they all have their negative and positive sides, a past and a future, something dying away and something developing; and that the struggle between these opposites, the struggle between the old and the new, between that which is dying away and that which is being born, between that which is disappearing and that which is developing, constitutes the internal content of the process of development, the internal content of the transformation of quantitative changes into qualitative changes.

The dialectical method therefore holds that the process of development from the lower to the higher takes place not as a harmonious unfolding of phenomena, but as a disclosure of the contradictions inherent in things and phenomena, as a "struggle" of opposite tendencies which operate on the basis of these contradictions.

> In its proper meaning' Lenin says, 'dialectics is the study of the contradiction within the very essence of things.' (Philosophical notebooks, Vol I, p. 263 of Russian edition).

(110) Engels, Anti-Dühring, I, p. 11.

(111) Lenin, On dialectics, Vol. XI, Selected Works, p. 81.

(112) Engels, Anti-Dühring I, p. 131; cf. also Plekanov, Questions fondamentales, p. 98.

(113) Adoratsky, Dialectical Materialism, p. 28.

(114) Engels, Anti-Dühring, p. 103;
cf. also : Engels, Dialectics of nature, p. 164 :
"Already no physiology is held to be scientific if it does not consider death as an essential factor of life (Note : Hegel, Ency. I, p. 152-5). The negation of life as being essentially contained in life itself, so that life is always thought of in

relation to its necessary result, death, which is always contained in it in germ. The dialectical conception of life is nothing more than this. But for anyone who has once understood this, all talk of the immortality of the soul is done away with... Here therefore by means of dialectics, simply becoming clear about the nature of life and death suffices to abolish an ancient superstitution. Living means dying".

(115) Engels, Anti-Dühring, p. 74 :
"Le mouvement est le mode d'existence, la manière d'être de la matière. Jamais et nulle part, il n'y a eu et il ne peut y avoir de matière sans mouvement. Mouvement dans l'espace céleste, mouvement mécanique de masses plus petites sur chacun des corps célestes vibration moléculaire sous forme de chaleur, de courant électrique ou mathétique, analyse et synthèse chimiques, vie organique, c'est dans l'une ou l'autre de ces formes du mouvement ou dans plusieurs en même temps que se trouve chaque atome de matière dans le monde à chaque instant donné. Tout repos, tout équilibre n'est que relatif, et n'a de sens que par rapport à telle ou telle forme déterminée de mouvement. Un corps peut, par exemple, se trouver à la surface de la terre en équilibre mécanique, être au point de vue mécanique en état de repos : cela ne l'empêche aucunement de participer au mouvement de la terre ainsi qu'à celui du système solaire tout entier, pas plus que cela n'empêche ses particules physiques les plus petites d'accomplir les vibrations conditionnées par sa température, ou ses atomes matériels d'effectuer un processus chimique. La matière sans mouvement est tout aussi inconcevable que le mouvement sans matière. Le mouvement ne peut par conséquent, pas plus être créé ou détruit que la matière elle-même, ce que l'ancienne philosophie (Descartes) exprime en disant que la quantité de mouvement existant dans le monde est toujours constante".

(116) Engels, Dialectics of Nature, p. 125.

(117) Ibid., p. 251.

(118) Engels, Feuerbach, p. 54: cf. also Lenin, Empirio-Criticism, Vol. XI of Selected Works, p. 215 seq.

(119) Hegel, The Science of Logic, p. 204, n. 145 :
"When narrowly examined, free choice is seen to be a contradiction, to this extent that its form and content stand in antithesis. The matter of choice is given, and known as a content of dependent not on the will itself, but on outward circumstances. In reference to such a given content, freedom

lies only in the form of choosing, which, as it is only a freedom in form, may consequently be regarded as freedom only in supposition. On an ultimate analysis it will be seen that the same outwardness of circumstances, on which is founded the content that the will finds to its hand, can alone account for the will giving its decision for the one and not the other of the two alternatives".

Ibid., p. 282, n. 158 :

"Necessity, indeed qua necessity is far from being freedom: yet freedom pre-supposes necessity, and contains it as an unsubstantial element in itself. A good man is aware that the tenor of his conduct is essentially obligatory and necessary. But this consciousness is so far from making any abatement from his freedom, that without it real and reasonable freedom could not be distinguished from arbitrary choice, --- a freedom which has no reality and is merely potential. A criminal, when punished, may look upon his punishment as a restriction of his freedom. Really the punishment is not foreign constraint to which he is subjected, but the manifestation of his own act ; and if he recognises this, he comports himself as a free man. In short, man is most independent when he knows himself to be determined by the Absolute Idea throughout".

(120) Engels, Anti-Dühring, I, p. 128, English Edition.

(121) Engels, Dialectics of Nature, p. 182 :

"The law of identity in the old metaphysical sense is the fundamental law of the old outlook : A equals A. Each thing is equal to itself. Everything was permanent, the Solar system, stars, organisms. This law has been refuted by natural science bit by bit in each separate case, but theoretically it still prevails and is still put forward by the supporters of the old in opposition to the new : a thing cannot simultaneously be itself and something else. And yet the fact that true, concrete identity includes difference, change, has recently been shown in detail by natural science. Abstract identity, like all metaphysical categories, suffice for everyday use, where small scale conditions or brief periods of time are in question ; the limits within which it is usable differ in almost every case and are determined by the nature of the object".

(122) Plekhanov, Questions Fondamentales, p. 98.

(123) Marxists, think they have found in what they call "higher mathematics" a verification of the fundamental law of dialectics, the unity of opposites. Engels compares higher mathematics to simple computation as dialectical logic is compared to Aristotelian logic. The reason for the application of dialectical

principles to mathematics is that higher mathematics, using the principles of calculus, works with progressions towards mathematical infinity. This progression is a movement. No movement can be accurately described in terms of Aristotelian logic, for this logic abstracts from movement.

Just as Engels considered real movement in nature a contradiction, so he considers the mathematical movement or progression towards infinity a contradiction. Just as in real movement in Nature he considered the terminus a quo to be identical with the terminus ad quem, to be identical because they were found in the one real, concrete being, so here he considers the terminus a quo of the mathematical progression towards infinity to be identical with the terminus ad quem. In nature such an identification is a contradiction : so it is here.

Engels does not distinguish the real movement of things in Nature from the logical progression towards infinity in mathematics — both are considered equally real, at least for the purposes of exemplifying the dialectical laws. As in Nature there is a real identification and simultaneous presence of contradictory elements, so in the mathematical progression the limit is actually considered to be reached during the progression, and so the terminus a quo and the terminus ad quem are simultaneously verified.

In the following quotations the character of mathematical dialectics will be brought out.

Engels, Anti-Dühring, p. 207 :

"La mathématique élémentaire, la mathématique des grandeurs constantes, se meut dans les cadres de la logique formelle, au moins en général et en gros; la mathématique des grandeurs variables, dont la partie la plus importante est le calcul infinitésimal, n'est pas essentiellement autre chose que l'application de la dialectique aux questions mathématiques. La simple préoccupation de prouver s'efface ici décidément devant les applications multiples de la méthode à de nouveaux domaines de recherche".

Ibid., p. 183 :

"Nous avons déjà noté que les mathématiques supérieures ont eu nombre de leurs bases fondamentales la contradiction selon laquelle droite et courbe doivent être en certains cas identiques. Elles réalisent cette autre contradiction que des lignes qui se coupent sous nos yeux doivent pourtant, des cinq ou six centimètres à partir de leur intersection, passer pour des parallèles,

pour des lignes qui, même prolongées à l'infini, ne peuvent se couper. Et pourtant les mathématiques supérieures fournissent avec ces contradictions et avec d'autres encore plus fortes, des résultats non seulement exacts mais tout à fait impossibles à atteindre pour les mathématiques inférieures.

Mais celles-ci même fournissent déjà des contradictions. Par exemple, c'est une contradiction qu'une racine de A doive être une puissance de a : et pourtant $A = \sqrt{A}$. C'est une contradiction qu'une grandeur négative soit le carré d'elle-même, donne un carré positif. La racine carrée de moins un est donc, non seulement une contradiction, mais même une contradiction absurde, un véritable non-sens. Et pourtant $\sqrt{-1}$ est de beaucoup de cas le résultat nécessaire d'opérations mathématiques exactes; bien plus, ou en seraient les mathématiques, les inférieures aussi bien que les supérieures, s'il leur était interdit d'opérer avec $\sqrt{-1}$.

Les mathématiques elles-mêmes pénètrent, en opérant sur les grandeurs variables, sur le terrain dialectique, et, chose significative, c'est un philosophe dialecticien, Descartes, qui a introduit ce progrès chez elles. Ce que la mathématique des grandeurs variables est à celle des grandeurs invariables la pensée dialectique l'est, en somme, à la pensée métaphysique. Ce qui n'empêche aucunement la grande majorité des mathématiciens de ne reconnaître la légitimité de la dialectique que dans le domaine mathématique, et un assez bon nombre d'entre eux de se servir des méthodes obtenues par voie dialectique pour opérer ensuite selon la vieille manière bornée et métaphysique".

An example from another Marxist :
Plekhanov, Essays in the History of Materialism, p. 160 :
"In lower mathematics conceptions are strictly limited and separated from one another as though by an abyss : a polygon is a polygon and nothing else : a circle is a circle and nothing else. But even in plane geometry we are compelled to apply the so-called method of limits which shakes our respected and immovable conceptions and in the most astonishing way brings them into proximity with one another. How can it be proved that the area of a circle is equal to the product of the circumference and half the radius. It is said : the difference between the area of a true polygon inscribed in a circle and the area of this circle can be made an arbitrarily small quantity on condition that the number of its sides is sufficiently increased. If the area of the circle, the circumference, the diameter of a true polygon inscribed in a circle are consecutively known by, a, p, and r, then a equals $\frac{1}{2}$ p times $\frac{1}{2}$ r; while a and p times $\frac{1}{2}$ r are quantities which change together with the number of sides but are

always equal between themselves; their limits will therefore also be equal, if we consecutively name the area, circumference and radius of a circle A, C and R. then A is the limit of a ; C the limit of p; and R the limit of r; therefore A equals C times ½ r. Thus the polygon is transformed into a circle; so the circle is examined in the process of its becoming. This already represents a remarkable revolution in mathematical conceptions. Higher analysis takes this revolution for its starting point. Differential calculus has to do with infinitely small quantities or, in Hegels' words, "It has to do with quantities which are in the process of disappearing, not before their disappearance, for then they would be finite quantities, and not after their disappearance, for then they would not exist".

Plekanov has quoted from Hegel's Wissenschaft der Logik, Nürnburg, 1812, 1, Bd. 1. p. 42.

The error of the Marxists consists in presupposing that the limit of a variable can actually be reached, and that the infinitely small is a pure actuality or a pure negation.

(124) Plekanov, Metaphysical Foundations of Communism, p. 60.

(125) Adoratsky, Dialectical Materialism, p. 26.

(126) Engels, Anti-Dühring, p. 204 :

Marx démontre simplement et résume ici brièvement ceci : "De même que la petite industrie engendra par sa propre évolution les conditions de sa destruction, c'est-à-dire, de l'expropriation des petits propriétaires, et cela nécessairement de même aujourd'hui le mode de production capitaliste a lui-même engendré les conditions matérielles dont il doit mourir. Ce processus est un processus historique, et s'il est en même temps un processus dialectique, ce n'est pas la faute de Marx, quelque désagréable que cela soit à M. Dühring.

C'est seulement après avoir mené à bonne fin sa démonstration historique et économique que Marx continue : "Le système d'appropriation capitaliste découlant du mode de production capitaliste, et par suite la propriété privée capitaliste, constituent la première négation de la propriété privée individuelle fondée sur le travail personnel. Mais la fatalité d'un procès naturel, la production capitaliste engendre sa propre négation. C'est la négation de la négation..."

Ainsi quand Marx qualifie cette suite de faits de "négation de la négation", il ne songe pas à en prouver par ce moyen la nécessité historique. C'est le contraire : quand il a prouvé par l'histoire qu'en fait la chose s'est en partie produite et en

période doit se produire encore, il le désigne en même temps comme un phénomène qui s'accomplit selon une loi dialectique déterminée. C'est tout".

Cf. Ibid., p. 214 seq.

(127) Ibid., p. 213.

(128) Ibid., p. 300.

(129) Ibid., p. 220.

(130) Engels, Socialism : Utopian and Scientific, International Publishers, p. 40.

(131) Engels, Anti-Dühring, p. 54, International Publishers Edition cf. also : Plekhanov, Essays in History of Materialism, p. 176 Lenin, Karl Marx : Dialectics, Vol. XI, p. 16.

(132) Hegel, Science of Logic, p. 312-314, S. W., Nürnberg, 1812.
"Quand on veut se représenter l'apparition ou la disparition de quelque chose, on se les représente ordinairement comme une apparition ou une disparition graduelles. Pourtant les transformations de l'être sont non seulement le passage d'une quantité à une autre, mais aussi le passage de la quantité à la qualité et inversement, passage qui, entraînant la substitution d'un phénomène à un autre, est une rupture de la progressivité....

A la base de la doctrine de la progressivité se trouve l'idée que ce qui surgit existe déjà effectivement, et reste imperceptible uniquement à cause de sa petitesse. De même, quand on parle de disparition graduelle d'un phénomène, on se représente que cette disparition est un fait accompli, et que le phénomène qui prend la place du phénomène précédent existe déjà, mais qu'ils ne sont encore perceptibles ni l'un ni l'autre.... Expliquer l'apparition ou la disparition d'un phénomène donné par la progressivité de la transformation, c'est tout ramener à une tautologie fastidieuse, car c'est considérer comme prêt d'avance (c'est-à-dire comme déjà apparu ou bien comme déjà disparu) ce qui est en train d'apparaître ou de disparaître".
(Quoted by Plekanov, Questions fondamentales, p. 82.

(133) Engels, Anti-Dühring, I, . . 94.

(134) Engels, Dialectics of Nature, p. 13-17.

(135) Marx, Critique of political Economy, Selected Works I, p. 356.

(136) Engels, Feuerbach, p. 58.

(137) Ibid., . . 38-39.

(138) Aristotle, Categories, c. 10, 11 b 16.

(139) Ibid., c. 10, 11 b, 12.

(140) The order of opposition according to being :
Cajetan in Praedicamenta : de postpraedicamentis, p. 85 :
"Si autem in ordine entium colloqandae sunt, sic contrarius ordo est quoniam relativae oppositioni primus debetur locus, contrariae secundus, privativae tertius et contradictoriae quartus; et ratio est quia in his quae imperfectionem important, opposito ordine attenditur magis et minus eorum in illo genere et in genere entis, in illo siquidem genere attenditur magis et minus secundum accessum ad summam illius generis vel quod idem est secundum maiorem recessum ab opposito. In genere autem entis attenditur magis secundum minorem recessum ab entis positione, ita quod illud est perfectius quod minus ab entis positione recedit, verbi gratia infirmitas quae imperfectionem sonat, dupliciter aliter dici potest vel in genere infirmitatis, et sic illa erit perfectior infirmitas, quae magis approximat morti seu magis recedit a sanitate, vel in genere entis, et sic infirmitas minus remotrens sanitatis perfectior est.
Constat autem quod oppositio in allastogia malorum est, sicut non ens et distinctio ut ex oppositis eorum apparent, scilicet convenientia et unitate quae in coordinatione bonorum sunt : et ideo consequens est quod quanto aliqua oppositio magis recedit ab enti positione, posteriorem inter entia locum teneat, et ea quae minus entitatis removet, priorem locum obtineat. Clarum vero est quod convenientia ens ponit, sicut et unum esse, et consequenter quod quanto aliqua oppositio minus convenientiae habet, tanto magis ab ente recedit; ac per hoc contradictio ultimum entium enter oppositiones erit et aliae praecedent ipsam secundum recessum minorem a convenitia, qui supra declaratus est".

(141) Cajetan in postpraedicamente, p. 84 :
Circa illud verbum "quadrupliciter opponi dicitur" advertendum est quod sufficiens ratio numeri oppositionum habetur ex hoc quod oppositio aut attenditur inter ens et non ens, aut inter entia. Si primo modo dupliciter contingit vel inter ens et non ens in tali subjecto, et sic est privativa oppositio. Si secundo modo dupliciter etiam; vel inter entia repellentia se mutuo ab eodem subiecto et sic est contrarietas; vel inter entia ad invicem contraposita, et sic est relativa oppositio.
Circa ordinem harum oppositionum notandum est quod dupli-

citer ordo inter eas considerari potest, primo in latitudine oppositionis, secundo in latitudine entis. Si ordinandae sunt in ordine oppositionum, sic contradictio primum tenet locum, deinde privatio, tertio contrarietas, et ultimo relativa oppositio remanet, quia tanto priorem inter oppositionem locum obtinet oppositio quanto minus frigoris compatitur, et universaliter quanto minus unum extremum pompatitur aliquid alterius, tanto magis perfectius secundum illud est. Constat autem contradictionis extrema in nullo convenire, quia alterum ens, alterum nihil est. Privative autem opposita etsi in nullo formaliter conveniant, in subiecti tamen positione conveniunt quoniam utrumque eorum ens ponit, formaliter illius generis tertium merito sibi locum vindicant. Relative autem opposita ultimo restant, quoniam in genere formaliter conveniunt, utpote naturas positivas illius dicentia, nec se ex hoc quod relative opposita sunt expellunt, ut infra patebit, sed quia opposita, id est contraposita, sunt inter opposita numerantur".

(142) Aristotle, Categories c. 7, 6 a 35.

(143) Ibid., c. 10, 11 b 26.

(144) St. Thomas de Potentia, q. 7, art. 8, ad 4 :
"Ad quartum dicendum quod oppositio relationis in duobus differt ab aliis oppositionibus: quorum primum est quod in aliis oppositis unum dicitur alteri opponi, in quantum ipsum removet : negatio enim removet affirmationem, et secundum hoc ei opponitur; oppositio vero privationis et habitus et contrarietatis includit oppositionem contradictionis, ut IV Meta. dicitur. Non autem est hoc in relativis".

(145) Aristotle, Categories, c. 7, 7 b 15.

(146) John of St. Thomas, Logic II, q. 2, art. 1, p. 289 a 15.

(147) St. Thomas, De Potentia, q. 8, art. 1, ad 15 :
"Dicendum quod in aliis oppositionibus semper alterum est ut imperfectum vel non ens, vel ut habens aliquid de non ente : negatio enim est non ens, et privatio est quaedam negatio, et duorum contrariorum alterum semper habet aliquid privationis; unde aliae oppositiones in Deo esse non possunt sicut oppositio relationis, quae ex neutra parte importat imperfectionem".

(148) In the transcendental relationship of matter to form, it seems that the two terms of the relation limit each other, so that it is not true to say that the limitation of the terms of opposition of relation comes only from the definition of the term, and not from a negation imposed on it by its opposite. It is commonly said that form is limited by matter, hence there seems to be a

negation on the part of the matter. This would be valid if the definition of form could abstract from matter, but as a matter of fact it is absolutely impossible to define any natural form except in relation to matter. Every natural form is always a corporeal form by essence. Therefore the limitation is present in the very definition of natural form. There is a natural limitation on the part of signified matter --- matter under quantity --- according to which the numerically distinct natural forms are limited. The natural forms of one and the same species are limited by the number of quantitative subjects that can receive these forms --- but this is not a limitation of form as form, but only a limitation as to real existence of this form. In other words, there is no essential limitation of form by matter, but only an accidental limitation, i.e., according to existence --- which is accidental.

(140) John S. Thomae, Cursus Philosophicus, Logic II, q. 17, art. 2, p. 678 a 25 :

"Ex his non erit difficile discernere inter relationes secundum dici et secundum esse, reales et rationis. Relativa enim SECUNDUM ESSE et SECUNDUM DICI discriminantur ex ipso exercitio, quia in relativis secundum esse tota ratio seu exercitium est respicere terminum in ratione puri termini, Exercitium vero seu ratio relationis secundum dici non est pure respicere terminum, sed aliquid aliud exercere, unde sequatur relatio; ideoque dixit bene S. Thomas in II dist., i q. 1, art. 5 ad 6, primo loco positum, quod ista relativa important fundamentum et relationem, relativa vero secundum esse tantum relationem dicunt, quia videlicet relationem dicunt, quia videlicet relativa secundum dici potius erga germinum se habent fundando relationem quam actu respiciendo, et ideo non in ratione puri termini ipsum respiciunt, sed secundum aliam rationem, puta causae vel effectus aut obiecti, aut quid simile. Quapropter relatio secundum dici in hoc perpetuo distinguitur a relatione secundum esse ex D. Thoma, quod principale significatum relationis secundum dici non est relatio, sed aliquid aliud, ad quod sequitur relatio. Quando autem principale significatum alicuius est relatio ipsa et non aliquid absolutum, tunc est relatio secundum esse, ut constat ex I, q. 13, art; et in I dest., 30, a; et opusc. 48 tract. de praedicamant :..."

(149) Ex hoc etiam constat, quod relatio transcendentalis, quae non est alia a relatione secundum dici, non importat ex principali significato relationem, sed aliquid absolutum, ad quod sequitur vel sequi potest aliqua relatio. Nam si absolutum non importat, transcendentalis non erit, id est vagans per diversa genera, sed ad unum praedicamentum tantum spectabit. Unde relatio transcendentalis non est forma advenians subiecto seu rei absolutae,

sed illi inhibita, commotans tamen aliquid extrinsecum, a quo pendet vel circa quod versatur, ut materia ad formam, caput ad capitum, creatura ad Deum, sicque relatio transcendentalis coincidit cum relatione secundum dici. Et male ab aliquibus relatio secundum esse dividitur in transcendentalem et praedicamentale, cum transcendentalis sit in ipsa entitate absoluta nec ab eius esse differat, et sic non sit totum suum esse ad aliud, quod requiratur ad relationem secundum esse".

(150) John of St. Thomas, Curs. Phil., Logic II, q. 17, art. 2, p. 679 a 5 :

"Relationes autem reales et rationis, quae divisio solum in relatione secundum esse invenitur, discriminantur penes earentiam alicuius ex conditionibus requisitis ad relationes reales. Requiruntur autem quinque conditiones a D. Thoma, Opusc. 48, tract. de Relativis, cap. 1 : duae ex parte subiecti, duae ex parte termini, una ex parte relatorum. Ex parte subiecti, quod subiectum sit ens reale et fundamentum seu rationem fundandi realem habeat. Ex parte termini, quod terminus sit res aliqua realis et realiter existens, et secundo, quod sit distincta realiter ab alio extremo. Ex parte vero relativorum, quod sint eiusdem ordinis, defectu cuius Dei ad creaturam non est relatio realis nec mensurae ad mensuratum, si sit diversi ordinis... Formaliter tamen et principaliter reducitur tota differentia inter relationem realem et rationis, quod relatio realis habet fundamentum reale cum co-existentia termini, relatio rationis caret fundamento, ut ex D. Thoma sumitur, I ad Annibaldum, dist. 30, quaes. unica, art. 1.... Ad hoc ut relatio aliqua sit praedicamentalis, requiritur, quod habeat illas conditiones, quibus distinguatur a relatione rationis et transcendentali sive secundum dici, ideoque definitur relatio praedicamentalis, quod sit formal realis, cuius totum esse est ad aliud. Per primam particulam distinguitur a relatione rationes, quae realis forma non est, per secundum a relatione transcendentali et quolibet absoluto, cuius totum esse non est ad aliud, cum in se etiam absolutum aliquid sit. Colliguntur vero tres conditiones relationis praedicamentalis : Prima, quod sit relatio secundum esse; secunda, quod sit realis, ubi includimus omnes conditiones requisitas ad relationem realem; tertia, quod sit finita".

(151) Babin, Theory of Opposition in Aristotle, p. 20.

(152) Aristotle, Metaphysics V, c. 10, 1018 a 20:

"The term 'opposite' is applied to contradictories, and to contraries, and to relative terms, and to privation and possession, and to the extremes from which and into which generation and dissolution take place; and the attributes that cannot be

present at the same time in that which is receptive of both, are said to be opposed — either themselves or their constituents. Gray and white colour do not belong at the same time to the same thing; hence their constituents are opposed.

The term 'contrary' is applied 1) to those attributes differing in genus which cannot belong at the same time to the same subject, 2) to the most different of the things in the same genus, 3) to the most different of the attributes in the same recipient subject, 4) to the most different of the things that fall under the same faculty, 5) to the things whose difference is greatest either absolutely or in genus or in species".

(153) Each contrary has only one contrary, because the contraries are those terms which are separated by the greatest difference. But contraries admit of degrees in between these extremes, for they have a medium, since they are generically the same, though not specifically.

Aristotle, Metaphysics X, c. 4, 1055 a 5 :

"Since things which differ may differ from one another more or less, there is also a greatest difference, and this I call contrariety. That contrariety is the greatest difference is made clear by induction. For things which differ in genus have no way to one another, but are too far distant and are not comparable; and for things that differ in species the extremes from which generation takes place are the contraries, and the distance between extremes — and therefore that between the contraries — is the greatest....
This being so, it is clear that one thing cannot have more than one contrary (for neither can there be anything more extreme than the extreme, nor can there be more than two extremes for the one interval), and, to put the matter generally, this is clear if contrariety is a difference, and if difference, and therefore also the complete difference, must be between two things.

And the other commonly accepted definitions are also necessarily true. For not only is 1) the complete difference the greatest difference (for we can get no difference beyond it of things differing either in genus or in species; for it has been shown that there is no 'difference' between anything and the things outside its genus, and among the things which differ in species the complete difference is the greatest); but also 2) the things in the same genus which differ most are contrary (for the complete difference is the greatest difference between species of the same genus); and 3) the things in the same receptive material which differ most are contrary (for the matter is the

same for contraries); and 4) of the things which fall under the same faculty the most different are contrary (for one science deals with one class of things, and in these the complete difference is the greatest)".

(154) St. Thomas, Comm. in V Meta., no. 925 :

"Deinde cum dicit "contraria dicuntur", hic ostendit quot modis contraria dicuntur; et circa hoc tria facit. Quorum primum est, quod assignat modos, quibus aliqua principaliter dicuntur contraria; inter quos ponit unum primum improprium; scilicet quod aliqua dicuntur contraria, quae non possunt simul ad esse eidem, licet differant secundum genus; propria enim contraria sunt quae sunt unius generis, sicut si diceretur, quod gravitas et motus circularis non sunt in eodem subiecto".

(155) Aristotle, Categories, c. XI, 14 a 15 :

"It is plain that contrary attributes must needs be present in subject which belong to the same species or genus. Disease and health require as their subject the body of an animal; white and black require a body, without further qualification; justice and injustice require as their subject the human soul".

Cf. also Cajetan in Post. Praed. p. 102 :

"Hic ponitur quinta conditio contrariorum talis; omnia contraria aut sunt in eodem genere aut in contrariis generibus, aut sunt genera contrariorum; et declarat singulas particular singulis exemplis, ut clare patet. Loquitur autem non de genere physico, id est subiecto, de quo locutus est in quarta conditione, sed de genere logico, id est praedicabili in quid.

Quod vero dixit : bonum et malum esse genera contrariorum, ut S. Thomas in I quae. de Malo ex Simplicio refert, quadrupliciter exponitur. Primo a quibusdam sic : bonum et malum sunt genera contrariorum scilicet virtutis et vitii, et non sunt in genere, scilicet contrario, id est non sunt in contrariis generibus, sed in qualitate. Sed haec expositio non videtur consona textui, in quo fiunt tria membra, quam tertium coincideret cum primo nisi aliqua limitatio ibi addatur. Propter quod Porphyrius distinxit contraria in univoca et aequivoca, et dixit univoca aut esse in eodem genere proximo, ut album et nigrum sub colore, aut esse in contrariis generibus proximis, ut castitas et impudicitia sub virtute et vitio, cum tamen sint in uno genere remoto, scilicet prima specie qualitatis. Aequivoca vero nec esse in uno genere nec in pluribus, sed omnia genera circuire, et propterea aliorum genera esse eo modo quo transcendentia genera vocantur; et haec sunt bonum et malum."

(156) Aristotle, Metaphysics V, c. 10, 1018 a 30.

(157) Aristotle, Categories, c. 11, 14 a 15.

"That the contrary of a good is an evil is shown by induction : The contrary of health is desease, of courage, cowardice, and so on. But the contrary of an evil is sometimes a good, sometimes an evil. For defect, which is an evil, has excess for its contrary, this also being an evil, and the mean, which is a good, is equally the contrary of the one and of the other. It is only in a few cases, however, that we see instances of this : in most, the contrary of an evil is a good.

In the case of contraries, it is not always necessary that if one exists the other should also exist : for if all become healthy there will be health and no desease, and again, if everything turns white, there will be white, but no black. Again, since the fact that Socrates is ill is the contrary of the fact that Socrates is well, and two contrary conditions cannot both obtain in one and the same individual at the same time, both these contraries could not exist at once : for if that Socrates was well was a fact, then that Socrates was ill could not possibly be one.

It is plain that contrary attributes must needs be present in subject which belong to the same species or genus. Disease and health require as their subject the body of an animal; white and black require a body, without further qualification; justice and injustice require as their subject the human soul.

Moreover, it is necessary that pairs of contraries should in all cases either belong to the same genus or belong to contrary genera or be themselves genera. White and black belong to the same genus, colour; justice and injustice, to contrary genera, virtue and vice, while good and evil do not belong to genera, but are themselves actual genera, with terms under them".

(158) Aristotle, Metaphysics, c. 7, 1057 a 18 :

"Since contraries admit of an intermediate and in some cases have it, intermediates must be composed of the contraries. For 1) all intermediates are in the same genus as the things between which they stand. For we call those things intermediates, into which that which changes must change first; e.g. if we were to pass from the highest string to the lowest by the smallest intervals, we should come sooner to the intermediate notes, and in colours if we were to pass from white to black, we should come sooner to crimson and grey than to black; and similarly in all other cases. But to change from one genus to another genus is not possible except in an incidental way, as from colour to figure. Intermediates, then, must be in the same genus both as one another and as the things they stand between.

But 2) all intermediates stand between opposites of some

kind; for only between these can change take place in virtue of their own nature (so that an intermediate is impossible between things which are not opposite; for then there would be change which was not from one opposite towards the other). Of opposites, contradictories admit of no middle term; for this is what contradiction is — an opposition, one or other side of which must attach to anything whatever, i.e. which has no intermediate. Of other opposites, some are relative, others privative, others contrary. Of relative terms, those which are not contrary have no intermediate; the reason is that they are not in the same genus. For what intermediate could there be between knowledge, and knowable ? But between great and small there is one.

3) If intermediates are in the same genus, as has been shown, and stand between contraries, they must be composed of these contraries. For either there will be a genus including the contraries or there will be none. And if a) there is to be a genus in such a way that it is something prior to the contraries, the differentiae which constituted the contrary species of a genus will be contraries prior to the species; for species are composed of the genus and the differentiae... But, again, the species which differ contrarywise are the more truly contrary species. And the other species, i.e., the intermediate, must be composed of their genus and their differentiae. (E.g. all colours which are between white and black must be said to be composed of the genus, i.e. colour, and certain differentiae. But these differentiae will not be the contraries that are primary; otherwise every colour would be either white or black. They are different, then, from the primary contraries; and therefore they will be between the primary contraries...

All the other intermediates also, therefore, are composite; for that which has more of a quality than one thing and less than another is compounded somehow out of the things than which it is said to have more and less respectively of the quality. And since there are no other things prior to the contraries and homogeneous with the intermediates, all intermediates must be compounded out of the contraries. Therefore also all the inferior classes, both the contraries and their intermediates, will be compounded out of the primary contraries. Clearly then, intermediates are 1) all in the same genus, and 2) intermediate between contraries, and 3) all compounded out of the contraries".

(159) Aristotle, Categories, c. 8, 10 b 12-25.

(160) Ibid., c. 9, 11 b 1.

(161) John of St. Thomas, Cur. Phil., Vol. II, p. 310 a 35 :
"Ut autem ex his constare possit, quomodo in formis substantialibus non inveniatur contrariotas proprie dicta, est no-

tandum, quod ista transmutatio est duplex : alia sine motu, sicut quae fit in materia prima, ut est pura potentia ad formas substantiales ;alia cum proprio motu, quando scilicet potest inveniri inter formam et formam aliqua continuatio, vel secundum magis et minus vel secundum additionem aut minorationem formae, quae illam variare facit. In formis enim substantialibus fit variatio sicut in numeris, in quibus quaelibet additio variat speciem, in qualitatibus autem contrariis et physicis fit variatio ad modum continuitatis. Ex eo enim una forma transmutatur in aliam, quia aliqua additione vel deminutione fit alia, sicut album degenerando in pallidum et in viride fit nigrum et calidum diminuendo gradus caloris fit tepidum et transit in frigidum.

Prima ergo transmutatio non pervenit ad contrarietatem propriam, sed est principium contrarietatis, quia quaelibet forma substantialis habet adiunctam privationem alterius, privatio autem est principium contrarietatis, et sic principia naturalia dicuntur esse contraria contrarietate inchoata, quae est privatio et forma, ut diximus I Phy. q. 2, art. 2, 44 ad 1. Secunda vero contrarietas est formalis et propria. Ratio est, quia prima transmutatio non fit secundum distantiam determinatam vicendam per motum et per modum cuiusdam continuitatis, sed per modum mutationis. Et hoc ideo est, quia quaelibet forma substantialis hoc ipso, quod substantialis est, dat primum esse, quod est esse simpliciter, et sic excludit aliam per incompossibilitatem, quia repugnat in eodem subiecto duas formas esse aequas primas et dare primum esse, quod est esse simpliciter. Et sic non opponuntur penes aliquam distantiam maximam et positivam sub eodem genere, sed penes primum et totale esse, et non primum seu non totale, inter quae non est latitudo nec distantia divisibilis, sed indivisibilis oppositio".

Cf. also : Aristotle Metaphysics, XI, c. 11-12, 1068 a 1.

(162) Aristotle, Categories, c. 6, 5 b 30.

(163) John of St. Thomas, Curs. Phil., Vol. II, p. 812:

"Quando ergo primo modo se habet contrarietas in formas cum privatio seu expulsio alterius sit effectus secundarius post informationem formae, non repugnat de potentia absoluta impediri, quia est privatio secundario consecuta, non pertinens ad essentialem informationem formae, sicut etiam stat bene duas quantitates penetrari et non se expellere a loco, quia expulsio illa est effectus secundarius quantitatis. Deinde, nisi aliud obstet, bene poterit talis effectus impediri in formis contrariis, etiam si sit privativus et expulsivus alterius formae, quia videlicet ipsa privatio formae non est requisita antecedenter et ex parte subiecti ad hoc, ut aliud contrarium recipiat. Ratio huius est,

quia omnis expulsio aliquorum a subiecto nascitur ex aliquo, quod per se est expulsio. Per se autem primo expulsio est inter esse et non esse, quae est prima ratio omnium oppositionum, non ex aliquo praesupposito consecuta, et ideo contradictoria oppositio est radix et principium ceterarum oppositionum. Ergo in his, in quibus per se primo et essentialiter invenitur ipsa ratio exclusionis, nullo modo potest etiam de potentia absoluta esse coniunctio, eo quod essentia unius in ipsa exclusione consistit. Ubi autem unum essentialiter non est exclusio alterius, poterit unum esse cum alio etiam si naturaliter sequatur ad alterum ad modum propriae passionis, quia potest impediri ista resultantia. Si autem antecedenter praerequiratur ex parte subiecti negatio alicuius, ut recipiatur forma opposita, non poterit tunc coniungi in tali subiecto, quia ipsa negatio, quae praesupponitur, essentialiter est exclusio.

(164) John of St. Thomas, Curs. Phil., Vol. II, p. 315 a 44 :

"In gradibus remissis naturaliter possunt esse qualitates contrariae si alias inter illas non sit essentialis oppositio et praerequisita ex parte subiecti ut recipiatur quaelibet illarum formarum. Sumitur haec conclusio ex Divo Thoma, q. 8 de Veritate, art. 14 ubi inquit, quod quando sint formae in fieri, possunt esse simul, ut dum aliquis delabatur, adhuc est in nigredine. Dum autem est in gradibus remissis, adhuc est in fieri, quia adhuc deest aliquid acquirendum. E I pars, q. 76, art. 4, inquit, quod in mixto sunt qualitates contrariae; constat autem illas esse temperatas et remissas. Ratio autem sumitur a priori et a posteriori; a priori quia istae formae habent latitudinem in crescendo, ergo etiam in expellendo. Ergo aliquid contrariae formae potest esse, antequam alia opposita sit totaliter expulsa, et sic nisi aliquid obstet ex parte subiecti per modum incapacitatis et repugnantiae, ut diximus, quantum est ex vi formae habentis latitudinem, non repugnat, quod contraria forma paulatim et cum aliqua latitudine entret, et sic non totaliter excludat aliam, sed in aliquo gradu cum illa compatiatur".

(165) John of Saint Thomas, Curs. Phil., Vol. II, p. 316 a 37 :

"Respondetur, quod contraria includunt oppositionem contradictoriam aut privativam non primo et per se, sed consecutive et secundario, quia sequitur ex informatione unius exclusio alterius. Et ad probationem ex Aristotele (Meta. IV textu 27 : quod cum fieri non possit, quod contradictoria de eodem simul sint vera, perspicuum est neque contraria simul in eodem esse posse). Respondetur, quod intelligitur de contrariis secundum effectum secundarium, qui est expulsio secundum quam bene sequitur, quod non possunt contraria simul inesse, quia includunt in se contradictoria, mediate scilicet et secundario, non primario, ut dictum est. Unde subdit ibi Aristoteles, "quod impossibile"

est contraria simul eidem inesse, sed aut ambo secundum aliquid, aut alterum secundum aliquid, alterum simpliciter". Fatetur ergo, quod secundum aliquid, id est secundum gradus remissos, possunt simul inesse, licet non perfecte et secundum gradus intensos".

(166) The example preferred by the Marxists as testimony of the identification of contraries in nature is movement. But even Aristotelians admit the union of contraries in the same subject when it is question of movement : in fact, that is a descriptive definition of movement. But this is not an identification of the contraries themselves. It is impossible to classify motion, because it is an imperfect state of actuality; and only what is in act purely and simply can be accurately classified, or what is simple potency to act --- in which case the potency is classified by reference to the act.

Aristotle, Physics III, c. 2, 201 b 25 :

"The reason why they put motion into these genera is that it is thought to be something indefinite, and the principles in the second column are indefinite because they are privative: non of them is either 'this' or 'such' or comes under any of the other modes of predication. The reason in turn why motion is thought to be indefinite is that it cannot be classed simply as a potentiality or as an actuality --- a thing that is merely capable of having a certain size is not undergoing change, nor yet a thing that is actually of a certain size, and motion is thought to be a sort of actuality, but incomplete, the reason for this view being that the potential whose actuality it is, is incomplete. That is why it is hard to grasp what motion is. It is necessary to class it with privation or with potentiality or with sheer actuality, yet none of these seems possible. There remains then the suggested mode of definition, namely that it is a sort of actuality, or actuality of the kind described, hard to grasp, but not incapable of existing".

In a later book of the Physics Aristotle says that motion does not destroy the principle of contradiction --- this may be quoted directly against the Marxists :

Physics VI, c. 9, 240 a 20 :

"Nor in reference to contradictory change shall we find anything unanswerable in the argument that if a thing is changing from not-white say to white, and is in neither condition, then it will be neither white nor not-white: for the fact that it is not wholly in either condition will not preclude us from calling it white or not-white. We call a thing white or not-white not

necessarily because it is wholly either one or the other, but because most of its parts or the most essential parts of it are so : not being in a certain condition is different from not being wholly in that condition. So, too, in the case for being and not-being and all other conditions which stand in a contradictory relation; while the changing thing must of necessity be in one of the two opposites, it is *never* wholly in either".

This passage is the basis of the refutation of the Marxist dialectics of nature. It indicates the logical confusion upon which the dialectics is constructed. This will be seen more fully in the last part of the thesis where the Aristotelian doctrine of becoming is treated.

Cf. The following quotation from St. Thomas on the nature of motion.

(166) Continued: St. Thomas in III Physics, lect. 2, no. 5 :
On the Definition of motion :

"Considerandum est igitur quod aliquid est in actu tantum, aliquid vero in potentia tantum, aliquid vero medio modo se habent inter potentiam et actum. Quod igitur est in potentia tantum, nondum movetur, sed iam motum est: illud igitur moventur, quod medio modo se habet inter puram potentiam et actum, quod quidem partim est in potentia et partim in actu; ut patet in alteratione. Cum enim aqua est solum in potentia calida, nondum movetur; cum vero est iam calefacta, terminatus est motus calefactionis: cum vero iam participat aliquid de calore sed imperfecto tunc movetur ad calorem; nam quod calefit, paulatim participat calorem magis ac magis. Ipse igitur actus imperfectus calorisin calefactibili existens, est motus; non quidem secundum id quod actu tantum est, sed secundum quod iam in actu existens habet ordinem in ulteriorem actum; quia si tolleretur ordo ad ulteriorem actum, ipse actus quantumcumque imperfectus esset terminus motus et non motus, sicut accidit cum aliquid semiplene calefit. Ordo autem ad ulteriorem actum competit existenti in potentia ad ipsum. Et similiter, si actus imperfectus consideretur tantum ut in ordine ad ulteriorem actum, secundum quod habet rationem potentiae, non habet rationem motus, sed principii motus; potest enim incipere calefactio sicut a frigido, ita et a tepido. Sic igitur actus imperfectus habet rationem motus, et secundum quod comparatur ad ulteriorem actum ut potentia, et secundum quod comparatur ad aliquid imperfectius ut actus. Unde neque est potentia existentis in potentia, neque est actus existentis in actu, sed est actus existentis in potentia; ut per id quod dicitur actus, designatur ordo eius ad alteriorem actum. Unde convenientissime Philosophus definit motum, dicens quod motus est entelechia, idest actus, existentis in potentia secundum quod huiusmodi".

(167) Aristotle, Metaphysics V, c. 22, 1022 b 22.

(168) Aristotle, Categories, c. 10, 12 a 27.

(169) St. Thomas, in Metaphysics X, c. 5, nos. 2052, 2053.

(170) Aristotle, Categories, c. 10, 12 b 16.

(171) Ibid., c. 10 12 b 26.

(172) Aristotle, Metaphysics X, c. 4, 1055 b 3.

(173) St. Thomas, Comm. in meta. X, nos 2046-2048 :

2046 : "Sed quod non sit contradictio absoluta, sed contradictio quaedam patet ex hoc quod contradictio de sui ratione non requirit neque aptitudinem, neque etiam existentiam alicuius subiecti. Verificatur enim de ente et de non ente quocumque. Dicimus quod animal non videt, et lignum non videt, et quod non ens non videt. Sed privatio de necessitate requirit aliquod subjectu, et quandoque etiam requirit aptitudinem in subjecto : quod enim est omino non ens non dicitur privatum.

2046 : "Et ideo dicit quod privatio aut est in determinata potentia, scilicet cum aptitudine ad habitum, aut saltem "concepta cum susceptivo", idest cum subjecto, licet non habet aptitudinem ad habitum. Sicut si dicemus vocem indivisibilem, aut lapidem rem mortuam.

2047 : "Et ideo contradictio non potest habere medium : sed privatio aliquo modo medium. Necesse est enim omne aut aequale aut non aequale esse, sive sit ens sive non ens. Sed non necesse est dici de omni, quod sit aequale aut inaequale; sed solum hoc necesse est in susceptivo aequalitatis.

2048 : "Sic igitur oppositio contradictionis omino est immediata; oppositio vero privationis est immediata in determinato susceptivo; non autem est immediata simpliciter. Ex quo patet quod contrarietas quae nata est habere medium, propinquior est privationi quam contradictioni. Nondum tamen habetur, quod privatio sit contrarietas".

(174) Aristotle, Categories, c. 10 13 b 1.

(175) Ibid., c. 10, 13 b 6.

(176) Ibid., c. 10, 13 b 12.

(177) Ibid., c. 10, 13 b 26.

(178) Ibid., c. 10, 13 b 5; cf. also: Aristotle, Meta. IV, c. Topics, II, 2, 109 b 118.

(179) S. Thomas, Comm. in Physics I, lect. 14, no 2 :

"Dubitatio autem et error antiquorum philosophorum hic fuit. Primi qui secundum philosophiam inquisierunt veritatem et naturam rerum, diverterunt in quandam aliam viam a via veritatis, et a via naturali : quod accidit eis propter infirmitatem intellectus eorum. Dixerunt enim quod nihil neque generatur neque corrumpitur: quod est et contra veritatem et contra naturam... Et ad hoc ponendum eos infirmitas intellectus coegit; quia nescierunt hanc rationem solvere, per quam videbatur probari quod ens non generatur. Quia si ens fit, aut fit ex ente: et utrumque horum videtur esse impossibile, scilicet quod ens fiat ex ente et quod fiat ex non ente. Quod enim ex ente aliquid fieri sit impossibile, et hoc manifestum est, quia id quod est non fit; nihil enim est antequam fiat; et ens eum est eum est; ergo non fit. Quod etiam ex non ente aliquid fieri sit impossibile, ex hoc manifestum est, quia semper oportet aliquid subjici ei quod fit, ut supra ostensum est, aut ex nihilo nihil fit. Et ex hoc concludebatur quod entis non erat generatio neque corruptio."

No. 4 : "Et hanc distinctionem antiqui non percipientes, in tantum peccaverunt, quod nihil opinati sunt fieri; nec opinati sunt quod aliquod aliorum praeter id quod ponebant primum principium materiale, haberet esse substantiale. Puta, dicentes aerem esse primum accidentale; et sic excludebant omnem generationem substantialem, solam alterationem relinquentes: ex eo scilicet quod, quia non fit aliquid per se vel ex non ente vel ex ente, opinabantur quod nihil possit fieri ex ente vel non ente".

(180) S. Thomas, Comm. in Physics I, lect. 7, no. 3:

"Platonici vero utrique rationi acquieverunt, concedendo impossibilia ad quae deducunt. Acquieverunt ergo primae rationi, quae ducebat ad hoc quod non-ens esset ens, si aliquis diceret quod ens significet unum, vel substantiam tantum vel aliquid tantum, et per hoc vellet dicere quod omnia sunt unum: - huic rationi dico, acquieverunt quod non ens esset ens. Dicebat enim Plato, quod accidens est non ens: et propter hoc dicitur in VI Meta. Quod Plato posuit Sophisticam circa non ens, quia versatur maxime circa ea quae per accidens dicuntur. Si ergo Plato, intelligens per ens substantiam, concedebat primam propositionem Parmenidis, dicentis quod quidquid est praeter ens est non ens; quia ponebat accidens, quod est praeter substantiam, esse non ens. Non tamen concedebat secundam propositionem, hanc scilicet: quidquid est

non est nihil, licet enim diceret accidens esse non ens, non tamen dicebat accidens esse nihil, sed aliquid. Et propter hoc secundum ipsum non sequebatur quod sit unum tantum....Sed alteri rationi, quae ducebat ad hoc quod magnitudo esse indivisibilis, assentiebat faciendo magnitudines esse indivisibiles ex decisione, idest dicendo quod magnitudinum divisio ad indivisibilia terminatur. Ponebat enim corpora resolvi in superficies, et superficies in lineas, et lineas in indivisibilia, ut patet in III de Caelo et Mundo".

(181) Aristotle, Physics I, c. 5, 188 b 22.

(182) John of S. T. Curs. Phil., Vol. II, p. 46 a 30 to 46 b 24 :
"Secundo speciali modo dicitur prima contrarietas illa, quae invenitur in genere substantiae qualiscumque illa sit, eo quod sustantia est primum genus inter omnia praedicamenta, ideoque oppositio, quae in illa invenitur, dicitur prima contrarietas. Et hac ratione dixit Aristoteles in hoc libro textu 56 principia esse prima contraria, quia est in eis contrarietas primi generis, id est substantiae.
Tertio modo adhuc specialius dicuntur prima contraria, quae privative opponuntur, eo quod privatio est principium contra rietatis, ut probatur in lo Meta., textu 14 et seq. et a D. Thoma ibi lect. 5. Omnis enim contrarietas includit privationem, non tamen omnis privatio contrarietas est. Unde dicit S. Thomas opus. 57 cap. 2, quod "privatio et habitus faciunt contrarietatem, et dicitur I phy. Et ideo contrarietates reducuntur in habitum et privationem tamquam in primam oppositionem, quae est in genere". Cum ergo in substantia non detur proprie contrarietas, sed privativa oppositio, quatenus una forma importat privationem, alterius, manifestum est dari primam contrarietatem, id est principium contrarietatis, quae est privativa oppositio".

(183) John of S. T. Cur. Phil., Vol. II, p. 44 a :
"Respondetur in principiis rei naturalis non posse dari contrarietatem propriae et stricte dictam sicut in accidentibus, sed largo modo pro privative oppositis, vel si inter ipsas formas substantiales attendatur oppositio, potius est incompossibilitas quaedam contrarietas. Imo in hoc deficiebant antiqui philosophi, quia ponebant principia esse contraria more accidentium, quia ipsi formas substantiales non agnoscebant, sed pro principiis contrariis assignabant calidum et frigidum, vacuum et plenum, litem et amicitiam et aliqua similia, ut notavit philosophus in hoc I libro cap. 5, textu 49. Ipse autem in textu 52 docet substantiam nullius rei esse contrarium. Quare non potest poni in principiis rerum naturalium contrarietas proprie dicta, nisi cum antiquis ponamus non dari formas substantiales, sed solum accidentales, secundum quas fit generatio.

Cur autem in substantia non inveniatur contrarium, cum videamus formas substantiales esse positivas et mutua se expellere et repugnare ? Respondet optime S. Thomas II Meta. Lect. 12, explicans dictum philosophi ibidem, quod secundum substantiam non est motus, quia substantiae nihil est contrarium. "Formae", inquit, "substantiales non possunt esse contrariae, quia contraria sunt extrema quaedam cuiusdam determinatae distantiae et quodammodo continuae, Cum sit motus de uno contrario in aliud contrarium. Unde in illis generibus, in quibus talis distantia continua et determinata non invenitur, non potest contrarium inveniri. Unde numerus numero non est contrarius neque figura figurae. Eodem autem modo est in substantiis, quia ratio cuiuslibet speciei constituitur in quodam determinato indivisibili".

(134) Aristotle, Physics I, c. 7, 190 a 32.

(135) Ibid., c. 7, 190 b 27.

(136) John of S. T. Cur. Phil. Vol. II, p. 51:

"Ex his ergo manifeste deducitur verissimam esse sententiam Aristotelis, quod dantur duo principia naturalia quoad compositionem et in facto esse, et tria quoad mutationem et in fieri.

Primum patet quia ea sunt principia compositionis, in quae resolvitur quidditas et ratio rei naturalis; unumquodque enim resolvitur in sua componentia. Quidditas autem rei naturalis composita est, non entitas simplex sicut angelus; homo enim ex corpore et anima constat et in illa resolvitur, et sic reliqua entia naturalia resolvuntur in materiam et formam. Ergo partes seu principia compositionis sunt materia et forma, et sunt partes per se, quia quidditas ipsa rei naturalis in illa resolvitur tamquam in partes componentes quidditatem, nec alia partes assignabiles sunt, ex quibus quidditative res naturalis componatur. Quod vero distinguantur forma et materia inter se, quod aliqui voluerunt negare, q. 3 et 4, se. ostenditur.

Quod vero dentur tria principia pro generatione seu fieri rei naturalis, scilicet materia, forma et privatio, probatur ex ipsa natura mutationis. Et quidem supponimus non dici esta tria principia intrinseca generationis, quia generationem intrinsece componant, sed quia generatio ab illis essentialiter dependet. Etenim omnis mutatio positiva essentialiter est transitus de aliquo non esse ad aliquod esse; facit enim aliquid de novo, aliquin non mutarret, si nihil novi faceret, sed id, quod antea erat, permaneret. Si autem aliquid de novo ponitur, oportet, quod antea non fuerit et nunc sit. Ergo necessario debet fieri ex privatione seu ex non esse, et sic privatio principium mutationis est. Quod vero requiratur materia, constat manifeste, quia mutatio non fit, nisi transmutetur aliquid de uno ad aliud,

ita quod ipsi termini mutationis accedant in aliquo subiecto. Successio enim unius ad aliud extra omne subiectum nihil transmutat de uno ad aliud. Subiectum autem mutationis materiam dicimus. Denique quod requiratur forma manifestum est, cum sit terminus intentus, ad quem tendit mutatio. Et sic dicitur principium mutationis, quia est primo et per se intentum, et sic est primum in intentione, licet in executione sit ultimum, ubi consummatur totus motus".

(187) Aristotle, Physics I, c. 8, 191 b 18-30.

(188) Ibid., c. 9, 192 a 3-25.

(189) This identification of matter and privation is the fundamental error of the marxists dialectic.

(190) S. Thomas, De Potentia, q. 3, art. I. ad 16 :

"Dicendum quod si ly ex nominet causam, non fit aliquid ex opposito nisi per accidens, ratione scilicet subiecti. Si vero nominet ordinem, tunc fit aliquid ex opposito etiam per se; unde et privatio dicitur principium esse fiendi, sed non essendi".

Cf. John of Saint Thomas, Cur. Phil. II, p. 41 a 35-42 a 8 :

"Respondetur quod illa particula "ex aliis", solum importat ea, a quibus res essentialiter pendet, sive in facto esse sive in fieri, ut a componentibus vel inchoantibus, eo quod principium et principiatum ita se habent, quod principiatum resolvitur in principium. Principium autem in quantum tale non resolvitur in aliud, nisi etiam sit principiatum; et ita in quantum principium, non est ex alio. Causa autem efficiens et quaecumque alia extrinseca non includitur in definitione ista principiorum naturalium, ut dictum est art. 3,. Haec enim causae extrinsecae sunt principia, ex quibus natura ipsa rerum constat sive in fieri sive in facto esse, sed efficiens dicitur "id, quo incipit motus"; finis, "propter quem incipit"; exemplar, "id cuius similitudinem fit"; nulla vero causa extrinseca dicitur, ex quo aliquid fit.

Ad id vero, quod opponitur contra privationem. Ad primam replicam dicitur, quod sola privatio sumitur ex parte termini a qu formaliter loquendo et communiter ad omnem mutationem, formaliter quidem, quia ex aliis entibus non potest dici, quod aliquid fiat per se et formaliter, sed solum materialiter et per accidens, ut D. Thomas dicit in hoc libro lect. 10, sicut ignis, v. g. potest generari materialiter ex pluribus rebus, ut ex ligno, ex papyro, ex aqua, etc. Formaliter autem fit ex illis omnibus quatenus convenient in privatione ignis. Quod vero aliqua non possunt fieri ex quolibet, non ideo est, quia formaliter non fiant ex

privationem, sed quia non semper materia est proxime disposita, ut ex illa forma educatur vel uniatur, sicut ex lapide non potest immediate fieri equus. Communiter autem se habet privatio aliarum mutationum, quia in omni mutatione et motu, etiam quando fit ex contrario in contrarium, invenitur ex parte termini a quo privatio; non contrarietas non excreetur sine privatione".

(191) Aristotle, Physics I, c. 8, 191i, b 10.

(192) Engels, Dialectics of Nature, p. 125, 1930 edition.

(193) Physics I St. Thomas comm. lect. 15, n. 10:
The natural appetite of matter; does not have to possess intellection in itself. This in against philosophers like Avicenna who says that matter does not have a natural appetite for form :
"Sciendum est enim quod omne quod appetit aliquid, vel cognoscit ipsum et se ordinat in illud; vel tendit in ipsum ex ordinatione et directione alicuius cognoscentis, sicut sagitta tendit in determinatum signum ex directione et ordinatione sagittantis. Nihil est igitur aliud appetitus naturalis quam ordinatio aliquorum secundum propriam naturam in suum finem. Non solum autem aliquid ens in actu per virtutem activam ordinatur in suum finem, sed etiam materia secundum quod est in potentia; nam forma est finis materiae. Nihil igitur est aliud materiam appetere formam, quam eam ordinari ad formam ut potentia ad actum. Et quia, sub quacumque forma sit, adhuc remanet in potentia ad aliam formam, inest ei semper appetitus formae; non propter fastidium formae quam habet, nec propter hoc quod quaerat contraria esse simul; sed quia est in potentia ad alias formas, dum unam habet in actu..."

(194) The appetite of matter for forms : compare this with the evolution theory of the Marxists.
John of S. Th. Curs. Phil. Vol. II, p. 78 a 5 :
"Duo possumus considerare in appetitu materiae; primum, quid sit; secundum, ad quid sit et ad quae se extendat. Quantum ad primum supponenda est illa vulgaris distinctio appetitus innati et elicitii. Primus est appetitus ab ipsa natura certus sine media cognitione, ut in lapide pondus ad centrum. Elicitus est, qui procedit ab aliquo mediante cognitione, sicut cum animal appetit cibum vel potum. Quod si appetitus iste oriatur ex cognitione intellectiva, sicitur appetitus rationalis seu voluntas et si ulterius sequatur ad cognitionem opponentem obiectum cum indifferentia non adstringente neque coarctante tantum ad unum, erit appetitus li er. Unde aliud est appetitus innatus, qui est sine cognitione et opponitur elicito, aliud naturalis seu necessarius, qui opponitur libero et potest esse elicitus. Pertinet autem ad

appetitum tendere ad rem, quando caret illa, et quiescere in re, quando habet illam, ut S. Thomas dicit I p. q. 19, art. 1. Sed tamen proprie dicitur et denominatur appetitus ab illo primo actu, quando tenditur in rem non habitam; rem enim quam habemus, non dicimur tantum appetere, sed frui, quod est aliquid plus quam mere appetere.

Dicimus ergo, QUOD APPETITUS MATERIAE EST APPETITUS INNATUS QUI NON DISTINGUITUR AB EJUS ENTITATE.

Non stat hoc ex philosopho I phy. textu 81, quem ibi declarat D. Thomas contra Avicennam lect. 15. "Nihil" inquit, "est aliud materiam appetere formam, quam eam ordinari ad formam. Ideo inest ei semper appetitus formae, non propter fastidium formae, quam habet, nec propter hoc, quod pugnarat contraria esse simul, sed quia est in potentia ad alias formas, dum unam habet actu". Videri etiam potest I. q. 59 art 2, ubi inquit, "quod inclinatio, quae est ad esse rei, non est per aliquid superadditum essentiae, sed per materiam, quae appetit esse, antequam habeat, et per formam, quae tenet rem in esse, postquam fuerit".

Ratio autem est, quia appetitus naturalis non est necesse, quod sit aliquis actus vel impetus activus ad aliquid, sed solum habitudo et ordo ad sibi conveniens. Maxime autem materiae est conveniens forma, per quam perficitur et actuatur. Ergo ordo et habitudo ad formam maxime est inclinatio connaturalis materiae. Quod autem dici solet, quod inclinatio sequitur formam, ut inquit D. Thomas I p. q. 80 art. 1, non tollit, quod materia habeat inclinationem ad formam, quia non dicit, quod ad solam formam sequitur inclinatio, et ita inquit I Phy. lect. 15, quod non solum aliquod ens actu per virtutem activam, sed etiam materia secundum quod in potentia ordinatur in suam finem".

(196) John of S. T. Curs. Phil. Vol II, p. 824 b 11.

"Hoc tamen non dicimus semper ita contingere, quod ex quolibet elemento fiat aliud immediate, sed quod potest ita fieri, neque ex vi suae dispositionis repugnat. Atque ita non se habet sicut animalia, quae naturaliter ad sui transmutationem exigunt transire per diversas formas et generationes, ut advertit S. Thomas q. 3, De Potentia art. 9. Hoc enim elementa non exigunt ex natura, sua, sed potest immediate fieri transitus de uno elemento ad aliud, nisi per accidens ex debilitate agentis aut ex alio impedimento oppositum contingat, sed ex se potest esse tanta activitas elementi supra aliud, quod immediate illud in se convertat, sicut si in maximum ignem inijciatur gutta aquae".

Note that in the above they are speaking of elements of the physical world as they understood them.

(196) Continued John of S. T. Curs. Phil. II, p. 79:

"Dicimus secundo, quod materia appetit omnes formas sub unica ratione formali. Et haec ratio in materia sublunari est id, in quo conveniunt omnes formae corruptibiles, scilicet esse substantiale, corruptibile et generabile. Et ita sumitur ex D. Thoma opus.15, c. 6 in fine et Ip. q. 66, art. 2. Nec est putandum, quod materia versetur circa unam formam, quam primo et per se appetat, et quae in omni materia invenitur, v.g. formam corporeitatis; hoc enim improbat S. Thomas Cit. locis, quia materia solum appetit formas propter perfectionem, quam ab illis habet. Et licet a diversis formis diversae perfectiones proveniant, tamen cum materia sit capax omnium illarum, omnes illas dicitur appetere et ab illis perfici, et ita appetit omnes, quatenus conveniunt in modo perficiendi et actuandi materiam. Sicut visus recipit omnes colores, quatenus conveniunt in una ratione visibilis et in uno modo immutandi potentiam, sic materia appetit omnes formas, in quantum conveniunt omnes in tali modo et ratione informandi materiam, scilicet modo corruptibili.

Ex quo colligitur, quod materia quantumcumque informetur ab aliqua forma perfecta, semper appetit alias, quia hic appetitus non est aliud quam ipsa naturalis capacitas materiae ad formas, quae tali modo. Scilicet corruptibili, informare possunt. Et licet una forma sit perfectior altera, non tamen una informat perfectiori modo quam alia, sed omnes eodem modo, scilicet corruptibili. Et ideo finis et perfectio materiae non sistit in perfectione alicuius determinatae formae sed in adaequatione et collectione omnium. Unde habita forma perfectissima, melius est ipsi materiae ad aliam transire quantumcumque vilioren, ut suam adaequationem impleat, quam sub illa forma perfectissima manere, non implendo talem adaequationem, sicut visus quantumcumque videat perfectissimum, adhuc est in potentia ad videndum alios, quia ab omnibus eodem modo immutatur et perficitur.
Nec tamen ex hoc inferas dari in materia appetitum ad plures formas simul habendas, quia licet ex parte subiecti simul detur in eo appetitus omnium, non tamen ex parte obiecti ad habendas omnes simul in sensu composito, sed diviso, propter incompossibilitatem unius formae cum altera et privationis, quam una habet adiunctam alterius, sicuti in me est simul potentia ad standum et sedendum, non tamen ad sedendum et standum simul".

(196) John of St. Thomas, Cur. Phil., II, p. 101 b 23 :

"Respondetur omnem materiam esse capacem cuiuscumque formae mediate vel immediate, totaliter vel partialiter, sicut materia formicae vel lapidis sub illis dispositionibus non est capax formae hominis vel elephantis, sed sub aliis dispositionibus, quarum dispositionum capax est. Quod si tam parva quantitas ut granum non est capax totius formae elephantis, est tamen capax, ut sit pars illius, et sic informari potest ab eius forma".

(197) Pius XI, Encycl. Divini Redemptoris, paragraph 2.

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