

itself if we negate it by stepping on it. Each class has its own natural way of negation, and it is only experience that can teach us what this negation is. (129)

Not only in nature but also in society the nature of the thing negated must be taken into consideration. There must not be utter destruction that in no way provides the possibility of new growth. And just as in nature experience shows us how this negation is to take place, so in society, the negation must take place along the lines of the natural movement of society. Experience and observation will determine the way in which negation is to take place.

The most important implication of the second law of Dialectics of Nature is that the principle of fecundity in matter is negation (or that which it comes down to, privation). Negation offers an explanation for the development of nature and society, so that the existence of an Intelligence transcendent to matter is in no way required. This is another step towards the complete rationalization of the Marxists' positive materialism.

III Law of Marxist Dialectics :

Transformation of quantity into quality.

The third and final law of matter is the law of transformation of quantity into quality. With this the dialectical explanation is complete, for this provides for the emergence of new forms in the universe. According to the first law matter, which exists eternally, is a composite of contradictory elements. Contradiction is necessarily productive of motion, and thus matter is, by its very nature, autodynamic. The second law accounts for the quantitative development of reality, for in the world of reality everything tends towards its own negation in such a way that there will necessarily result a quantitative increase in that which is negated. Finally, the third law of transformation accounts for the emergence of all new realities in the world.

According to this law matter develops quantitatively up to a certain point (called a nodal point in Hegelian terminology) where a sudden break takes place, and a new form qualitatively different from the old comes into being. Contrary to the "metaphysical" outlook, 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. The qualitative

changes take the form of a "leap" from one state to another.

Marxists insist on the difference between gradual evolution and revolution. Marxist dialectics does not neglect gradual change --- this is accounted for in the second law --- but dialectic must be able to explain the arising of new realities. Without the sudden "leap" it would be necessary to assume that nothing new can arise, since everything already exists in an imperceptibly minute form, capable of ~~an~~ subsequent growth. The principle of the old philosophy and of mechanistic materialism was : natura non facit saltus. Their emphasis on this law is just another bit of evidence of their sterile way of thinking. This was a principle which they had worked out in their "armchair philosophy" --- they did not observe reality, for if they had, they would have seen examples of sudden breaks all around them.

Nature is the test of dialectics, and it must be said for modern natural science that it has furnished extremely rich and daily increasing materials for this test, and has thus proved that in the last analysis nature's process is dialectical and not metaphysical, that it does not move in an eternally uniform and constantly repeated circle, but passes through a real history. Here prime mention should be made of Darwin, who dealt a severe blow to the metaphysical conception of nature by proving that the organic world of today, plants and animals, and consequently man too, is all a product of a process of development that has been in progress for millions of years. (130)

But to quiet any suspicion that Engels taught a gradual development of various new species in nature, in his criticism

of Dühring, who had opposed the thesis that the transition from the insentient world to the sentient world, from inorganic matter to organic life is a new leap, Engels says :

~ This, precisely the Hegelian nodal line of measure relations, in which, at certain definite nodal points, the purely quantitative increase or decrease gives rise to a qualitative leap; for example, in the case of water which is heated or cooled, where boiling-point and freezing-point are nodes at which --- under normal pressure --- the leap to a new aggregate state takes place, and where consequently quantity is transformed into quality. (131)

Here, as elsewhere, most of the examples of the Marxists are taken from the writings of Hegel. It was he who formulated the expression "nodal point", to determine the point beyond which a thing cannot vary while remaining the same thing. It was Hegel who first insisted on the difference between dialectical progression and simple evolution. (132)

The most important example of the law of transformation of quantity into quality is the coming into existence of conscious matter --- man. The existence of mind is simply due to a leap which occurred in organic matter after it had evolved to a high degree of organization.

The physical realm existed before the psychical, for the latter is the highest product of the most highly developed forms of organic matter. (133)

And from the first animals were developed, essentially by further differentiation, the numerous classes, orders, families, genera and species of animals; and finally

mammals, the form in which the nervous system attains its fullest development; and among these again finally that mammal in which nature attains consciousness of itself --- man. (134)

The philosophy of Hegel is veritably an "algebra of revolution", but Hegel did not apply his philosophy to the burning questions of the day. Hegel was a conservative in his political views --- as Marx says, he "set an aureola on the existing state of affairs". He became the philosopher of the bourgeoisie German government because he was an optimist at the expense of one of the laws of dialectics which he himself had formulated. He overlooked the intrinsic defects of that government, defects which he should have known would bring about the negation, the destruction, of that political system. The social revolution was coming and a new state would succeed the old one which would pass away through revolution.

At a certain stage of their development, the material forces of production in society come in conflict with the existing relations of production, or --- what is but a legal expression for the same thing --- with the property relations within which they have been at work before. From forms of development of the forces of production these relations turn into their fetters. Then begins the epoch of social revolution. With the change of the economic foundation the entire immense superstructure is more or less rapidly transformed.... In broad outlines we can designate the Asiatic, the ancient, the feudal, and the modern bourgeois modes of production as to many epochs in the progress of the economic formation of society. (The) The bourgeois relations of production are the last antagonistic form of the social process of production --- antagonistic not in the sense of individual antagonism, but

of one arising from the social conditions of life of the individuals; at the same time the productive forces developing in the womb of bourgeois society create the material conditions for the solution of that antagonism. This social formation constitutes, therefore, the closing chapter of the prehistoric stage of human society. (135)

With the last of the three laws of dialectics we have the complete rationalization of the Marxist philosophy of revolution. As we said in the Preface, we do not think that this philosophical rationalization is foremost in the minds of Marxists. Primarily they are men of action --- they want social revolution --- and theory is but an instrument that will help them reach their purpose. They are not interested in the dialectical laws of nature because these laws give them a better knowledge of nature. The purpose of modern philosophy is "not so much to know nature, but to change it". The dialectical laws of nature will help them change nature, by showing the naturalness and necessity of such a change.

The same laws of motion govern society. This the abstract philosophers failed to see, and this, though he recognized the dialectical character of society in general, Hegel failed to realize in the practical order. Here, just as in the realm of nature, it was necessary to do away with the artificial, fabricated interconnections of society, in order to discover the real ones : a task which ultimately amounts to a frank admission of the inexorable laws of change that bind all matter, whether in its

lowest state or in its highest condition of consciousness.

In one point, however, the history of the development of society proves to be essentially different from that of nature. In nature --- in so far as we ignore man's reactions upon nature --- there are only blind unconscious agencies acting upon one another. There is no such thing as purpose in nature, for this would presuppose an Intelligence apart from matter directing matter towards particular ends --- or we would have to admit a consciousness in nature, a thing which is impossible. Nothing of all that happens, whether in the innumerable apparent accidents observable upon the surface of things, or in the ultimate results which confirm the regularity underlying accidents, is attained as a consciously desired aim. In the history of society, however, the conflicting elements are endowed with consciousness, for men act with deliberation, acting and working for definite goals. It is this element which sets men off from the rest of nature. (136)

With men we enter history. The more that human beings are removed from the conditions of unconscious nature, the less do uncontrolled forces and unforeseen agents determine what man and nature are to be, and the more does the historical result correspond to the aim laid down by man in advance. Through the development of science and the means of production man gradually attains this mastery over the blind forces of nature. The forces of

nature must be pressed into service for the good of mankind. This is what is meant by "man changing nature". And anyone who studies the Communistic movement in Soviet Russia will see that their emphasis on technical development has the purpose of making the "liberated" man the absolute ruler of the universe. With this in mind, he will also be better able to understand the Soviet's sensitiveness in the face of criticism of their economic system and technical progress --- a good (of) example of this was their violent rebuttal of William L. White's article in Readers Digest of December 1944 and January 1945, "Report on the Russians".

The free will of man changes the course of history, but this must not be understood to mean that men's wills act independently of the circumstances in which they are placed, or independly of the wills of other men. The course of history as well as that of nature is governed by internal laws, the laws of dialectics.

But this distinction between nature operating blindly and men operating consciously, important as it is for historical investigation, particularly of single epochs and events, cannot alter the fact that the course of history is governed by inner general laws. For here, also, on the whole, in spite of the consciously desired aims of all individuals, accident apparently reigns on the surface. That which is willed happens but rarely; in the majority of instances the numerous desired ends cross and conflict with one another, or these ends themselves are from the outset incapable of realisation or the means of attaining them are insufficient. The conflict of innumerable individual wills and individual actions in the domain of history produces a state of affairs entirely analogous to that in the realm of unconscious nature. The ends of the actions

are intended, but the results which actually follow from these actions are not intended; or when they do seem to correspond to the end intended, they ultimately have consequences quite other than those intended. Historical events thus appear on the whole to be likewise governed by chance. But where on the surface accidents hold sway, there actually it is always governed by inner, hidden laws and it is only a matter of discovering these laws.

Men make their own history, whatever its outcome may be, in that each person follows his own consciously desired end, and it is precisely the resultant of these many wills operating in different directions and of their manifold effects upon the outer world that constitutes history. Thus it is also a question of what the many individuals desire. The will is determined by passion or deliberation. But the levers which immediately determine passion or deliberation are of very different kinds. Partly they may be external objects, partly ideal motives, ambition, "enthusiasm for truth and justice", personal hatred or even purely individual whims of all kinds. But, on the other hand, we have seen that the many individual wills active in history for the most part produce results quite other than those they intended --- often quite the opposite; their motives therefore in relation to the total result are likewise of only secondary significance. On the other hand, the further question arises : what driving forces in turn stand behind these motives ? What are the historical causes which transform themselves into these motives in the brains of the actors ? (137)

END OF PART II

PART III : Aristotelian Doctrine of Opposition :

The four kinds of opposition :

In the presentation of the Marxist dialectic the words "opposites", "contradictories", "contraries" were used interchangeably. This was especially true in the consideration of the first law of dialectic : the unity of opposites. The examples of this law were of many kinds : the unity of life and death in living beings; the unity of negative and positive electricity; the identification of motion with rest, and of the circle with polygon; the unity of opposite sexes. All of these examples were to illustrate the one law of opposition.

Now here do any of the Marxists define what they mean by opposition, nor do they define the various kinds of opposition. It is most important to know if all these examples of opposition have the same characteristics. It is important to know if all kinds of opposition cause conflict in beings.

In his treatment of opposition Aristotle says that we can speak of four kinds :

With regard to opposites one must say that they are usually opposed in several manners. Indeed, one thing is said to be opposed to another in four ways: as relatives, or as contraries, or as privation and habit, or as affirmation and negation. (138)

Then Aristotle goes on to give an example of each :

An instance of the use (~~of the use~~) of the word 'opposite' with reference to correlatives is afforded by the expressions 'double' and 'half'; with reference to contraries by 'bad' and 'good'. Opposites in the sense of 'privation' and 'habitus' are blindness and sight; in the sense of affirmation and negation, the propositions, 'he sits' 'he does not sit'. (139)

Aristotle starts with the opposition of relation, then considers in turn the opposition of contrariety, of privation, and contradiction. Sometimes it seems that Aristotle's order of presentation as well as his divisions are arbitrary. We should like to see just one instance, however, where either his order or divisions are shown to be merely arbitrary, particularly in his philosophical works that treat of the communia. In our consideration we shall try to show that the order of presentation is logical, and that the division into four kinds of opposition is essential.

On first glance it seems that the four kinds of opposition can be reduced to two : to opposition of correlatives, and to opposition of negation. For the first of the four appears to be distinct from the others in that no incompatibility is present between the terms of the opposition but merely correlation; but in all the other three there is an incompatibility between the terms, and, therefore, they all seem to come under the opposition of contradiction. In order to show that these last three cannot all be grouped simply under one species of opposition, that is, under

contradiction, it will be necessary to show that there are essential differences among the kinds of incompatibility.

There is one order of consideration of opposition which proceeds according to the degree of exclusion of one term of opposition by the other --- that is the order Aristotle has given above. But another order is possible, the order of opposition according to the real existence of the terms. If we consider the opposition from the point of view of being, then the order must be reversed, since it is evident that contradiction denies real being more absolutely than any of the other --- it removes the opposite term completely. But neither privation nor contrariety deny their opposite term absolutely; and instead of denying its opposite term, the relative term demands its existence. (140) Because a treatment of opposition should proceed according to that which is most formal, Aristotle develops his doctrine according to progression toward absolute incompatibility of terms, since what is most formal in the term 'opposition' is the notion of exclusion. (141) The "being" of opposites is in inverse proportion to the degree of opposition.

I. The Opposition of Relation :

The opposition of relation is manifested in Aristotle in two places in the Categories. The first of these logical definitions is :

Those things are said to be relative which are according to their very being said of other things, or which are said in reference to something else in some other way. (142)

And later on he says :

All those things are opposed as relatives which are, according to their very being, said of opposite things, or which are said in reference to opposite things in some other way. (143)

We can look at the terms of relative opposition from a double point of view : a) as terms that mutually complement each other; b) as terms that mutually exclude each other in some degree. In the first respect we consider the terms as the elements which make up that which is called relationship, as in the case of father and son. These two terms constitute the material elements of the relationship (we consider the foundation as the formal constitutive element), so that without both of them the relationship could not exist. Here we do not look upon the terms as excluding each other --- as the term father necessarily excludes the term son --- but rather as parts of a union that is described as a relationship.

If we consider the terms from the point of view of mutual exclusion, as father excludes son, then we consider relationship as participating to some degree in contradiction. For even though the two terms exist simultaneously, they do exclude each other by definition. Therefore, they cannot be identified to the extent that one term is synonymous with the other. Real coexistence

is not destroyed --- it is necessary in a relation that is real --- but formal or essential identification is absolutely impossible. Thus it participates, though in the lowest degree, of contradiction.

Relation differs from the other kinds of opposition because in all the other three the one term negates the other so that co-existence is denied. But in relation only essential identification is denied --- not co-existence. (144) We cannot speak of "son" unless there is a "father". We cannot say one quantity is the double of another, without admitting that the other quantity is half of the double; we cannot speak of a capacity without at the same time acknowledging that for which there is a capacity.

Aristotle, however, says that the co-existence is not necessary in certain cases, and gives as one example, the relation between knower and object known. He says that it is not necessary that the object come into existence simultaneously with the knowing power, just as the disappearance of the knowing power does not destroy the real existence of the object.

Correlatives are thought to come into existence simultaneously. This is for the most part true, as in the case of the double and the half. The existence of the half necessitates the existence of that of which it is half. Similarly the existence ~~of that~~ of a master necessitates the existence of a slave, and that of a slave implies that of a master; these are merely instances of a general rule. Moreover, they cancel one another; for it there is no double it follows that there is no half, and vice versa; this rule also applies to all such

correlatives. The object of knowledge would appear to exist before knowledge itself, for it is usually the case that we acquire knowledge of objects already existing; it would be difficult if not impossible to find a branch of knowledge the beginning of the existence of which was contemporaneous with that of its object. Again, while the object of knowledge, if it ceases to exist, cancels at the same time the knowledge which was its correlative, the converse of this is not true. (145)

In the example of knowledge, however, there is not a perfect relationship set up between the terms : the relationship is not mutual. And this accounts for the fact that simultaneity is not required. In the knower there is a real relationship towards the object, since the knowledge is caused by the object. But on the part of the object, the real existing thing, there is no real relationship towards a knowing power. There is but an extrinsic denomination of relationship on the part of the real being. We hesitate to call this being "object", for in its entitative existence, the being is not an object. It is formally object only when related to a knowing power. Wherever there is a real relationship set up in both terms, there must be simultaneous existence. Strictly speaking, therefore, we can say that even in the case of knowledge there must be simultaneous existence, since a being receives the attribution "object" only because it is known : as long as there is knowledge, there must be an "object". Considered in its entitative being, however, the thing known does not have to exist simultaneously with the knowing power. (146)

In all opposition except relation, one of the

terms is a non-ens or participates in non-ens. The one term negates the other, so that one term is opposed to the other as perfection to imperfection. Contradiction and privation are negation of forms in themselves, while contrariety, which necessarily participates in privation, is the negation of a simultaneous existence of the form in the same subject. This is fundamentally the reason why according to Catholic doctrine, the only possible opposition in God is the opposition of relation : because neither of the terms of relation denote imperfection. (147) There is no imperfection that results from the negation by the opposite term. (148)

As was already indicated in the difficulty about the coexistence of the relative terms, there are several kinds of relation. The relation between knower and object was, from one point of view, a real relation, but only logical i.e. an extrinsic denomination --- from the side of the object known. This shows that we must distinguish at least two kinds of relation : real relation, and logical relation. There is in addition to these a relation called transcendental. Among these three kinds of relation there is but a unity of analogy. Let us now see what is the primary division of relation, for the term "real relation" as well as the terms "logical" and "transcendental" appears to be generic.

The first division of relation is into proper and improper. (149) The proper relatives are those whose whole being

consists in relationship --- they do not belong primarily to any other category of being. These are defined by Aristotle : "Those things are relatives whose very being it is to stand in reference to something else in some way." Because their very being or essence is constituted by relationship, they constitute a special category. (150) This category is distinguished both from substance, which has self existence, and from the other accidents which has existence in substance. Relation, according to its strict or proper definition, is apart from all of these, since its essence consists neither in being in itself as substance is, nor in another, but solely in relationship toward. It consists solely in the bond between distinct terms.

The relatives improperly so called are those which, while having the correlation of terms, does not exist primarily as relation, but as one of the nine other categories --- either as substance (or principles of substance), or as one of the categories that inhere in substance. These are called transcendental relations, because they transcend the limitations of one category : in so far as they are relatives they partake in the characteristics of the category relation, but they belong essentially and primarily to one of the other categories, or to several or to all. Thus potency and act constitute a relation that belongs to all the categories; matter and form constitute a relation, belonging primarily to corporeal substance, and secondarily to the other natural accidents; the relationship of creature to God is present in all the categories --- but in each

instance it is not the relationship which is that which is primary, but it is in each case the substance, or quantity, or quality, etc..

Transcendental relations are included in the essence of something belonging to one of the absolute categories, but the relationship is secondary to the entitative character of the essence. But relation in the strict sense (secundum esse as contrasted with the above, secundum dici) is one whose essence consists in the relation of terms, and one which is not essentially bound up with something absolute, but fixes itself upon two absolutes in such a way as to impart a relationship that did not formerly exist there. Thus, it is impossible to abstract the notion or relation from the transcendental, but the relation secundum esse can always and must always be distinguished from the beings that make up its terms. It is impossible, for example, to abstract from the relationship when we consider the principles of substantial being, matter and form. But the notion of paternity or of filiation is distinct from the notion of rational animal which is at each term of the relationship of father to son and vice versa.

The second division of relation is into real and logical. Transcendental relation is, of course, a real relation, for it exists independently of any consideration of the mind. But the relation secundum esse is divided into real and logical relation. The real relation in this case is called predicamental, because it constitutes one of the ten predicaments that specify real being.

Praedicamental relation is distinguished from logical by the following characteristics : the subject (first term of relative opposition) is a real entity; the terminus (second term of relative opposition) is also real entity and distinct from the first term; the foundation of the relation must be real. The relatives must be of the same order. Any relation that lacks any of those conditions is to that extent a logical relation. Thus, the relation in cognition is not praedicamental, because the one term of the opposition is merely logical, i.e., on the part of the object known, since the object is not affected in any way by being known. Likewise the relationship between God and creatures is not praedicamental, because no real relationship is set up in God by the fact of creation, though there is real relation of causality looking from creatures to God.

Both praedicamental relation as well as logical has genera with diverse species under them.

The predicamental relation is divided into three species according to the three kinds of foundations upon which the relation is based. The relation can have as its foundation either quantity, or quality, or measure, or action and passion. And this foundation is the cause of the relation.

The logical relation, also, is divided into species according to the foundation. And thus we have a certain group

of logical relations which are called second intentions; and we have others in which the reason arbitrarily unites two concepts.

In the three genera of relation, namely, transcendental, predicamental, and logical there is one thing in common, the correlation. The term correlation, however, is analogous and, so, is said in different ways of the three kinds of relation.

The statement that all relatives have correlatives is acceptable as such and is not conflicting with the statement that correlation is a property of the relatives. *proper. /* All relatives have correlatives, that is, the relatives proper have determined correlatives and the relatives improper have undetermined correlatives. This distinction is not a manufacture of our own, it is found literally in the Metaphysics. There Aristotle himself distinguishes between determined and undetermined relations, between the relation of the double to the one and the relation of the many to the one... (151)

This kind of opposition cannot give rise to the intrinsic conflict of which the Marxists speak. If there is conflict, it must come from some other kind of opposition.

The Opposition of Contrariety :

The second kind of opposition may be manifested by Aristotle's various attributions of the term "contrary" :

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. (152)

These specifications seem to contradict each other in some respects, for example, when he says in the first instance that the contraries are in different genera, and in the second that they belong to the same genus. We shall try to see what characteristics are peculiar to contrariety, so that we can give a proper definition of it.

The definition is made more complete further on in the Metaphysics, where Aristotle says :

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....

And the other commonly accepted definitions of contraries 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). (153)

This gives us a more complete description of contrariety, for it tells us that contraries are 1) the extreme differ-

ences, 2) of a common genus, 3) referring to a common subject. With this as a foundation, and with the additional difference Aristotle gives in his distinction between contraries and privatives, we can proceed to give a complete definition of the opposition of contrariety.

The contraries are extreme differences. It is possible for things to differ from one another more or less, but they are called contraries only when the maximum distance separates them. If there were no maximum distance or fixed limit beyond which they could not go, then it would be possible for the two terms to differ ad infinitum --- this, however, would take away any real distinction between the two, for we could not strictly speak of two.

Now the maximum difference consists in a specific difference, for all within the one species is simply one. For example, we cannot speak of a diversity within any substantial species, for no man is more man than another. Likewise we cannot speak of a diversity within an accidental species, for if a color is white (and not merely a mixture) we cannot say there is any diversity in the white itself. If there is diversity within something of one species, it is because it is not merely one species, but is the combination of the two extremes, for example, when we say one thing is more white than another. This is due to the combination of the two extremes which are specifically distinct. Thus, the contraries, which are the extreme differences, are the specific differences of a common genus.

There must be a common genus, otherwise we

could not make any comparison between the limits. Comparison always needs a common genus, just as all measurement needs a common unit of measurement. And unless there is a common genus, the extremes can be called contraries only in the improper sense. (154) The contraries are of two kinds, univocal and equivocal (or proper and improper). The univocal contraries are those which are specifically different in a proximate genus, as are black and white; or those which are in diverse genera, but have a common remote genus, for example, virtue and vice are distinct genera, yet they have a common genus, which is the first species of quality. If there is no common genus whatever, they are contraries in the improper sense. Thus the transcendentals do not have a common genus, since they are co-extensive with being, which is above all genera. Good and evil therefore cannot be contraries in the proper sense, since good is one of the transcendentals, while evil is its negation.

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. (155)

Contraries must not only be in the same genus but must also have reference to the same subject, otherwise there cannot be opposition, except by definition --- there would not be mutual exclusion which is had between contraries. To this can be reduced the statement of Aristotle, that the word 'contrary' is

applied "to the most different of the things that fall under the same faculty". (156) The contraries have the same subject matter, and it is for that reason that there can be movement from the one to the other, and the one is engendered from the other. Things which differ the most under one faculty, as art or science, are contraries --- contraries are always studied under the one science. Disease and health must have a common subject, the human body; black and white have a common subject, and real quantity; justice and injustice require as their subject the human soul. (157) Thus, we find a second common characteristic of the contraries, they have in addition to a common logical subject (genus) a common physical subject.

From the fact that contraries have a common genus as well as a common physical subject we can conclude that contraries are both positive terms, that is, that both terms can have real entitative existence. One of the terms is not merely a negation of the other. Since they have a common genus, it means that they have a common entitative determination : thus black is not merely the negation of white, but is a color in the common genus. Disease is not merely the negation of health, but is a positive condition, a real qualitative form, of an animal body; vice is not merely the negation of virtue, but it is a positive habitus in the soul.

According to Aristotle, there are two kinds of proper contraries : one kind has a medium between its opposite



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term, while the other kind does not have a medium. If one or other of the contraries which are naturally present to a subject must be present in the subject, those contraries are without a medium. There cannot be an intermediate condition. Thus, disease and health are naturally present in the body of an animal, and it is necessary that either the one or the other should be present in the body of an animal. Odd and even, likewise, are predicated of number, and it is necessary that the one or the other should be present in numbers. The reason for this absence of medium is the necessity of the inherence of one or the other forms, otherwise it would be possible to have an intermediate form. But certain forms seem not to permit of intermediate predication.

On the other hand, among those contraries whose predication is not necessarily demanded by the subject, there is always an intermediary. It is not necessary that a body be black or white, even though the body is the subject for contraries under the genus color. It is possible for a body to be red, or green, each of which is an intermediary color. We do not always have a proper name for each of the intermediaries --- that is indeed, impossible, because the medium is divisible ad infinitum --- but for some of the intermediaries we choose arbitrary names, to indicate degrees of difference.

In those contraries which do not admit of a

medium, we must have either the one form or the other. The combination of the two forms is impossible. Thus sickness and health absolutely exclude each other, according to Aristotle. This point is still obscure for us, because it seems that even here we do have an intermediary condition possible. If we can speak of a person's sickness becoming worse it means that there is some kind of medium in which there is a measure of health and sickness. Calling a person 'sick' seems to be an arbitrary predication, for it is not possible to indicate the precise moment when a healthy man is said to become a sick man --- it is rather a gradual process. Just as there is no precise moment when we can say a person has tuberculosis, for everyone has a certain number of these germs in his system at all times, we cannot say that the one contrary is present absolutely alone, to the absolute exclusion of the other. A medium always seems necessary wherever there are contraries. If either health or sickness absolutely must be present in an animal, then it is practically impossible for anyone to say that he is healthy, for there is always some degree of better health possible than that which is actually possessed. All this would seem to indicate that there is an intermediate state between all contraries, wherever it is question of a real being.

In mathematics, however, where we deal only with formal causes, one or other of the contraries must be present absolutely --- to the total exclusion of the other. The reason for

this is that medium, intermediary is said only of real existing bodies. Mathematical entities are not real. One form absolutely excludes the other. There is no real becoming of one thing from the other in mathematics. Even though mathematicians speak of the generation of one mathematical form from another, real generation is absolutely out of the question, for real movement is out of the question. Only in mathematical contraries, it seems to us, do we exclude the intermediaries between contraries.

Intermediaries are in the same genus as the things (things) between which they stand, for we reach intermediaries in our passage from one of the contraries to the other. The intermediaries are composed of the extreme terms of contrary opposition. They share in each of the contraries to a greater or lesser degree, depending how far they are from the one extreme and how near to the other. (158)

Contraries are always qualitative forms, or forms of action and passion, or forms of position. Aristotle calls all of these contraries, if they verify the above-named conditions for contrary opposition. Outside of these categories there are no contrary forms in the proper sense. And in the examples of each of these, Aristotle admits a variation of degree, thereby indicating that all contraries have a medium. He is not certain, however, about certain qualities.

One quality may be the contrary of another; thus justice is the contrary of injustice, whiteness of blackness, and so on ... Qualities admit of variation of degree. Whiteness is predicated of one thing in a greater or less degree than of another. This is also the case with reference to justice. Moreover, one and the same thing may exhibit a quality in a greater degree than it did before : if a thing is white, it may become whiter.

Though this is generally the case, there are exceptions. For if we should say that justice admitted of variation of degree, difficulties might ensue, and this is true with regard to all those qualities which are dispositions. There are some, indeed, who dispute the possibility of variation here. They maintain that justice and health cannot very well admit of variation of degree themselves, but that people vary in the degree in which they possess these qualities, and that this is the case with grammatical learning and all those qualities which are classed as dispositions. However that may be, it is an incontrovertible fact that the things which in virtue of these qualities are said to be what they are vary in the degree in which they possess them; for one man is said to be better versed in grammar, or more healthy of just, than another, and so on. (159)

The other two categories that admit of contraries are action and passion, and position.

Action and affection both admit of contraries and also of variation of degree. Heating is the contrary of cooling, being heated of being cooled, being glad of being vexed. Thus they admit of contraries. They also admit of variation of degree : for it is possible to heat in a greater or less degree; also to be heated in a greater or less degree. Thus action and affection also admit of variation of degree. So much, then, is stated with regard to these categories.

We spoke moreover, of the category of position when we were dealing with that of relation, and stated that such terms derived their names from those of corresponding attitudes. (160)

Substantial forms are not contraries. Even though Aristotle calls the principles of substance contraries in one part of the first book of the Physics, later in the book he identifies

them as form and privation. Privation and form are not distinguished as contraries, for one of the terms is negative --- both terms must be positive in the contraries, since both are in the same genus and in the same physical subject. Likewise, in substantial generation or passing away it is impossible to have a medium in the strict sense, for substantial forms are "sicut numeri". They change from the one to the other without movement or progression in the form. Substantial form gives first being to a thing, or esse simpliciter, so that we cannot speak of a common genus for diverse substantial forms, even though they have a common physical subject.

Nor is destruction movement; for the contrary of movement is movement or rest, but the contrary of destruction is generation. Since every movement is a change, and the kinds of change are the three named above, and of these those in the way of generation and destruction are not movements, and these are the changes from a thing to its contradictory, it follows that only change from positive to positive is movement....There is no movement in respect of substance (because there is nothing contrary to substance).
(161)

Finally, Aristotle excludes quantities from the opposition of contrariety. Quantitative oppositions are relative: they do not exclude each other, but rather are explained one through the other, which is characteristic of relative opposition.

Again whether we define them as quantitative or not, they have no contraries; for how can there be a contrary of an attribute which is not to be apprehended in or by itself, but only by reference to something external. Again, if 'great' and 'small' are contraries, it comes about that the same subject can admit contrary qualities at one and the same time, and that things will themselves be contrary

to themselves. For it happens at times that the same thing is both small and great. For the same thing may be small in comparison with one thing, and great in comparison with another, so that the same thing comes to be both small and great at one and the same time, and is of such a nature as to admit contrary qualities at one and the same moment. Yet it was agreed, when substance was being discussed, that nothing admits contrary qualities at one and the same moment. For though substance is capable of admitting contrary qualities, yet no one is at the same time both sick and healthy, nothing is at the same time both white and black. Nor is there anything which is qualified in contrary ways at one and the same time. (162)

Contraries exclude simultaneous existence in the same subject. Every opposition has terms one of which excludes the other in some way. We saw that relatives exclude each other from their definition, though co-existence in the same subject is by no means excluded. The next degree of opposition, that of contrariety, both excludes one term from the other by definition (for contraries are specifically distinct), but it also prevents the two terms from having simultaneous existence in the same subject. Experience is sufficient to show this :for black excludes white from the same subject; heat excludes cold; virtue excludes vice.

Contraries exclude each other because they are founded on a higher degree of opposition, namely, privation. And the privation in the subject is due ultimately to the natural limitation of the subject. The subject has a natural capacity for all contrary forms of one genus, but it is limited in actual condition of possession to one of them. Thus, we consider the exclusion of the
contrary

form as the effect that follows upon the reception of the other form, rather than as a privation which existed prior to the reception of the contrary.

Now only positive and negative absolutely exclude each other. All opposition is based ultimately on contradiction, because there we have absolute opposition between being and non-being. Wherever the opposition is between positive and negative, as in the last two kinds of opposition (privation and contradiction), the forms absolutely exclude each other. And in these the exclusion is not merely an effect following upon the reception of a different form, but prior to the reception there must be in the subject an absolute negation of one form. (163)

Contraries, however, are not opposed as positive and negative, for both terms of contrariety are positive. Therefore, they exclude each other by reason of the subject. The subject is incapable of possessing both for^Ms simultaneously, for it has a real capacity for only one form.

In speaking of contraries we must always remember that the contraries are the extreme differences of a common genus, and not any difference whatsoever within the genus. It is only the extremes of the genus which completely exclude each other. Wherever there is a medium between the contrary terms, then it is possible for

contraries to exist simultaneously to a limited degree in the same subject. It is our opinion that all contraries in the strict sense have these intermediates. Whenever there is a progression from one contrary term to the other, there is a mixture of the contraries, and so simultaneous existence in their lesser degrees. As long as we are in the condition of intermediaries we are in movement (the generation of the new contrary form is still in fieri), and there is not yet the actual possession of one contrary in its perfect form. Hence there is no complete opposition, unless we speak of the term in its condition of actual, perfect existence. (164)

The denomination of the quality in its state of fieri is according to the predominant quality. It is evident that this is more or less arbitrary. Thus, we call a thing white, if it is more white than black; or we call something hot, if it seems more hot than cold. (Examples are not always clear, for it is difficult at times to say whether we are treating of real contraries, or rather of opposition of privation). Privation, which absolutely excludes its opposed form, does not allow an intermediary state. Change but not movement is possible where privation is involved; only absolute denomination is possible.

The contraries, therefore, include the opposition of privation and contradiction non primo et per se, sed consecutive et secundario. The exclusion of one form results from the presence of the contrary. (165)

Therefore, when the Marxists speak of the identification of contrary qualities, they can mean only a simultaneous existence of contraries in their lesser degrees, when the contraries are in a state of becoming. It is absolutely impossible to have identification of contraries in their perfect state of actuality. And when there is a certain identification of contraries in the state of movement because of the common subject (and not because of real identification of the forms), there is no conflict in this movement. It is natural that in a progression from one contrary to another there be a union of the two contraries in their lesser degrees, for there is an intermediary state which must be passed. In the opposition of contrariety as in the opposition of relation there is neither conflict, nor identification of opposites. There is a union of contraries in the state of motion --- this is the closest approach we have in the first two kinds of opposition to the fundamental law of Hegelian and Marxist dialectics. (166)

Opposition of Privation :

The third kind of opposition is that of privation. More correctly, it is the opposition between the possession of a certain form and the privation of that form. The two terms of opposition cannot, therefore, both be positive, since the one term is essentially the negation of the other.

Now there are various ways of speaking of the opposition between the possession and the negation of the form in a subject. Aristotle first gives the various meanings of the word 'privation', and then determines the special sense in which he understands it.

We speak of 'privation' 1) if something has not one of the attributes which a thing might naturally have, even if this thing itself would not naturally have it; e. g., a plant is said to be (deprived' of eyes ---; 2) If, though either the thing itself or its genus would naturally have an attribute, it has it not; e.g., a blind man and a mole are in different senses 'deprived' of sight; the latter in contrast with its genus, the former in contrast with his own normal nature. --- 3) If, though it would naturally have it, and when it would naturally have it, it has it not; for blindness is a privation, but one is not blind at any and every age, but only if one has not sight at the age at which one would naturally have it. Similarly a thing is called blind if it has not sight in the medium in which, and in respect of the organ in respect of which, and with reference to the object with reference to which, and in the circumstances in which, it would naturally have it. --- 4) The violent taking away of anything is called privation. (167)

Privation in the most proper sense is the third of these. It is the absence of a form in a subject that has a

natural capacity for that form at the time and under the circumstances that are determined by nature.

We say that that which is capable of some particular faculty or possession has suffered privation when the faculty or possession in question is in no way present in that in which, and at the time at which, it should naturally be present. We do not call that toothless which has not teeth, or that blind which has not sight, but rather that which has not teeth or sight at the time when by nature it should. For there are some creatures which from birth are without sight, or without teeth, but these are not called toothless or blind. (168)

The terms in the opposition of privation both refer to the same real subject, even though one of the terms is itself not a reality, but is rather a negation. But this reference to the same subject depends on the nature of the privation. One kind of privation has immediate reference to the subject of the form, as darkness has immediate reference to the atmosphere. And in this there can be a mutual change from light to darkness, and from darkness to light. But there is a second kind of privation, wherein there is not an immediate reference to the subject, but rather to the form immediately and to the subject secondarily. Thus, blindness has reference immediately to the form 'sight'; death immediately refers to life, and both secondarily to the subject in which those forms exist. Between the terms of this kind of opposition there is no mutual change. (169)

In our consideration of contraries we said that they are founded immediately upon a privation. The distinction

just made determines what kind of privation contraries are founded upon. Contraries with a medium can mutually change one into the other, therefore they are founded upon the privation that looks immediately to the subject in which the form inheres. The opposition which is founded immediately upon the negation of a form, as blindness and death are opposed to sight and life, does not permit a mutual change. Therefore, contraries which are generated one from the other cannot be founded immediately on this kind of privation.

Privation in the most strict sense is that in which the order from the one term to the other is not reversible. And for that reason Aristotle added the word 'order' in speaking of the opposition of privation. The terms of opposition both have reference to the same real subject, but there is a certain order between the terms. Thus it is impossible for death to take place unless there has previously been life --- the change is only in one direction.

Wherever the terms of opposition are related immediately towards a common subject, there can be mutual change from one to the other. And this is the kind of privation spoken of in the first book of the Physics of Aristotle, where privation is called one of the principles of becoming. Privation here means simply the negation of a form in a subject that is capable of possessing that form at the time and under the circumstances in which it now is. Wherever there is a coming to be of one form in the subject this kind of privation

must precede, and for that reason privation is called a principle of movement or becoming.

The opposition of privation differs from that of relation as well as that of contrariety.

It differs from relation because the terms of relation mutually perfect each other; because they are both positive; because they are necessarily present in the same subject simultaneously. But the terms of privative opposition negate each other entirely; only one is a positive term; consequently they cannot exist simultaneously in the same subject, because one of them is by definition the absence of the positive form. In reality, we cannot speak of the real existence of the privative at all, since only real forms exist in reality --- the privative is but the negation of a form for which the subject has a capacity here and now. (170)

Privative opposition differs from opposition of contrariety, both where there is a medium and where there is not. The terms of contrary opposition are both positive : they indicate a positive determination of the real subject; they are at least in the same remote genus. But privatives are not both positive, as we have just seen. Consequently, it is impossible that they both be in the same genus, for a genus has under it only positive determinations. All the differences that Aristotle points out between the privatives and the contraries are based on this fundamental difference --- that

both terms of contrariety are positive, while one term of privation is negative. (171)

Privation is a kind of contradiction. It is, within certain limits, the opposition between being and non-being, since the possession of the form can be called being, while its absence is non-being. But it is contradiction within certain limits, for it is restricted to a particular subject and to a particular form.

But privation is a kind of contradiction; for what suffers privation, either in general or in some determinate way, is either that which is quite incapable of having some attribute or that which, being of such a nature as to have it, has it not; here we have a variety of meanings, which have been distinguished elsewhere. Privation, therefore, is a contradiction or incapacity which is determinate or taken along with the receptive material. (172)

Privation is not a contradiction absolutely, since a contradiction by definition does not require a certain capacity or aptitude for the form that is negated, nor does it even demand the existence of a real subject. Contradiction can be applied to any kind of being whatsoever. But privation requires a definite subject, in which there is a definite capacity for the form that is absent. The opposition of contradiction is absolute and universally extensive, but the opposition of privation is limited to a certain subject and to a determined form. (173)

Privation has this twofold aspect : on the one hand, it is a negation, and within the limits of the subject it has the

same force as the opposition of contradiction, since it is founded immediately on the opposition of being and non-being. On the other hand, from the aspect of the subject, privation delineates something positive --- a positive capacity or aptitude in the subject for a form which is absent. In speaking of privation as something positive, however, there must be no confusion of privation and the capacity. The privation of the form is not the capacity or potency of the subject for the form. The potency is something positive, while the privation is negative. The potency is one term of the opposition of relation, having a transcendental relationship to the form which will actualize it. The potency is a per se principle of real being, but privation is not.

From this analysis of the opposition of privation, we cannot find any ground for the Marxist laws of dialectics. The fundamental law, that of unity of opposites, cannot arise from the opposition of privation. It is absolutely impossible for the terms of opposition to be present simultaneously, since by very definition the one is the negation of the other. Conflict can come only when two positive forces existing simultaneously act upon each other. The terms of privative opposition are neither both positive nor simultaneously present in the same subject.

Opposition of Contradiction :

The last of the four kinds of opposition is

that of contradiction. Aristotle immediately sets it off from the other three kinds.

Statements opposed as affirmation and negation belong manifestly to a class which is distinct, for in this case only, it is necessary for the one opposite to be true and the other false. (174)

The terms of contradictory opposition differs from the former kinds in that one of the opposites is necessarily true, and the other necessarily false.

Neither in the case of contraries, nor in the case of correlatives, nor in the case of 'possession' and 'privation' is it necessary for one to be true and the other false. Health and disease are contraries : neither of them is true or false. 'Double' and 'half' are opposed to each other as correlatives : neither of them is true or false. The case is the same, of course, with regard to 'positives' and 'privatives' such as 'sight' and 'blindness'. In short, where there is no sort of combination of words, truth and falsity have no place, and all the opposites we have mentioned so far consist of simple words. (175)

The opposition of contradiction, therefore, takes place within the judgement. This is indicated by the etymology of the word : contra and dicere. One statement is opposed to another statement. The other kinds of opposition, as Aristotle states, have terms that are simple words, and so there is not yet an act of judgement.

Even when the terms of the other kinds of opposition enter into propositions and judgements, however, they do not

thereby become opposition of contradiction. In order to have contradiction there must be affirmation and negation of the same thing.

At the same time, when the words which enter into opposed statements are contraries, these, more than any other set of opposites, would seem to claim this characteristic. 'Socrates is ill' is the contrary of 'Socrates is well', but not even of such composite expressions is it true to say that one of the pair must always be true and the other false. For if Socrates exists, one will be true and the other false, but if he does not exist, both will be false; for neither 'Socrates is ill', nor, 'Socrates is well' is true, if Socrates does not exist at all.

In the case of 'possession' and 'privation', if the subject does not exist at all, neither proposition is true, but even if the subject exists, it is not always the fact that one is true and the other false. For 'Socrates has sight' is the opposite of 'Socrates is blind' in the sense of the word 'opposite' which applies to possession and privation. Now if Socrates exists, it is not necessary that one should be true and the other false, for when he is not yet able to acquire the power of vision, both are false, as also if Socrates is altogether non-existent. (176)

Where the opposition, however, consists in an absolute negation of what has been affirmed by the judgement, then one part of the opposition must be true and the other part false. And this holds true whether the subject really exists or not.

But in the case of affirmation and negation, whether the subject exists or not, one is always false and the other true. For manifestly, if Socrates exists, one of the two propositions, 'Socrates is ill', 'Socrates is not ill', is true, and the other false. This is likewise the case if he does not exist; for if he does not exist, to say that he is ill is false, to say that he is not ill is true. Thus it is in the case of those opposites, only, which are opposite in the sense in which the term is used with

reference to affirmation and negation, that the rule holds good, that one of the pair must be true and the other false. (177)

We must distinguish between the affirmation and negation and that which is affirmed or denied --- that is, we must distinguish between the statement and its content. The affirmation and negation are acts of the judgement, but that which is predicated is objective and independent of the act of the mind. That which is predicated is the absolute distinction between being and non-being. And it is in this opposition between being and non-being that contradiction is founded. (178)

There cannot be, of course, a real extra-mental existence of non-being, since this would itself involve a contradiction. Only real forms have objective existence. But non-being is the negation of being which has real existence apart from the mind. Just as the existence is independent of the mind, so the non-existence or non-being (if the object does not really exist) does not depend upon the intellect.

In order to have opposition, however, we must have some kind of simultaneity between the terms of opposition. There must be some kind of union or comparison of terms. Here the mind enters in to give a logical existence to the negation which is non-being. The mind considers non-being after the manner of real being,

though objectively non-being is the same as pure nothing. Thus a certain simultaneity is given to the terms and the mind is better able to conceive of opposition between them. In the case of privation, we saw that it, too, is a non-being in reference to the form that is absent from the subject. But there we had a common subject, so that we could use that as the basis of comparison or basis of opposition. In the opposition between being and non-being we do not have the common subject, since the one is the absolute, unlimited negation of the other. They have nothing in common. In order to grasp this opposition more clearly, the opposition is formulated in what is called the principle of contradiction --- the terms are affirmation and negation, acts of the judgement, where the mind sees clearly the incompatibility of being and non-being.

Since the negative term cannot have real existence, the Marxists cannot speak of contradictories existing simultaneously in the one being. The absolute negation of non-being is purely a logical entity. It does not have even the foundation in reality that other logical beings such as species, genera, etc. (second intentions) have, for these latter do have a positive determination that is found objectively in nature, though they cannot exist in nature as species or genera. And unless there is simultaneous existence in nature of two positive entities there cannot be conflict. In this final kind of opposition, contradiction, the Marxists do not have the basis for their fundamental law of dialectics.

A Dialectic is possible only where there is some kind of movement. In examining the four kinds of opposition we saw that real movement is had in only one of them, namely, in the contradictories which have a medium. Only there is verified the definition of movement : actus entis in potentia in quantum in potentia. In all the four kinds of opposition this is the only place where there is a semblance of conflict. Relatives are not in conflict, since they are mutually complementary. Privatives and contradictories have only one term that is positive. A purely negative term cannot exercise efficient causality. In the condition of becoming contraries exist simultaneously in the same subject, but within the limits defined in the part on contradictory opposition. We cannot say that one contrary contains the other. Rather, the common subject contains both contraries, when these latter are in an imperfect condition, the condition of potentiality and becoming.

Outside of the movement of contraries, a logical dialectic is possible. This is the movement considered in the Topics or Aristotle, as well as in the progressions of higher mathematics. The essential condition of each of these Dialectics is that the movement is logical and not real. It is a construction of the mind. Just as there is no real generation of truth in Aristotle's dialectic, so there is no real generation of a new mathematical form in the mathematical progression. An attempt to consider either of these as real movements would result in contradiction.

Hegelian Dialectic can speak of the conflict of contradictory elements because it abstracts from real being.

Negation is given a kind of positive character, but with this defect, that Hegelians forget this attribution is purely logical. Marxists severely criticise Hegelian philosophy because, they say, "it abstracts from the real world". In their use of Hegelian laws they are, however, in exactly the same position, for the conflict they consider to be present in the very essence of natural beings cannot be there. To what extent we can admit conflict in nature will be considered in the final part of the dissertation.

The philosophy of conflict based on the first law of Hegelian Dialectic is without a valid foundation in reason. It cannot explain movement or becoming, because there is no such thing as intrinsic opposition in the essence of a natural being. The law of unity of opposites is formulated by Hegel without reference to reality. It gives a principle for the evolving of the whole of Hegelian philosophy, and as such it is a remarkable device. But the law is no more real than the system built upon it. It cannot account for real becoming. In the following and final part of the thesis we shall study becoming from the Aristotelian point of view, and in so doing we shall be able to see more clearly the false principle upon which the Marxist dialectics of nature is founded, namely, the confusion of the various kinds of opposition.

Aristotelian solution of the problem of becoming :

Certain of the ancient Greek philosophers tried to solve the problem of becoming by positing the real existence of non-being : different combinations of being and non-being, they said, accounted for multiplicity and diversity and change. Coming to be is the new combination of being and non-being. Both principles are equally real.

Marxist philosophers of nature, using Hegelian dialectics as their principle of movement, explain becoming through the simultaneous existence in all natural beings of contradictory principles. The instability caused by this conflict in the very essence drives the being on to a new state (called the synthesis), but even there no stability can be reached, since matter by its very nature is self-contradictory. Thus, an eternal motion of matter. Matter is made up of conflicting elements which may be called positive and negative, or being and non-being. The negating element is just as real as the positive element which is negated.

The ancients and the Marxists both see the necessity of "contrary" principles of being, otherwise variation and change would be impossible. These two basic principles explain all becoming : the non-being opposes being (it is just as real as being) and out of this condition of instability arises a new being.

Though the contradictory character of all natural beings is seen even in a static view of nature, that is, when we view nature as it was before and as it is after the change, the intrinsic conflict is brought out more clearly when we take a dynamic view of nature --- when we see the new being in the very process of becoming. Motion, the Marxists say, is the condition of everything in nature, because matter (the ultimate, constitutive of everything) is essentially dialectical.

With the notions of being and non-being possessed by the ancient Greeks up to the time of Aristotle, a solution was impossible. If there were nothing but being absolutely, and non-being absolutely, then the dilemma of Parmenides could not be solved. To the genius of Aristotle belongs credit for an analysis of being and non-being that is the key to the whole of the philosophy of nature. Being and non-being are not the most fundamental philosophical principles : being itself undergoes an intrinsic division into principles of being which are not absolutes but relatives. And it is through relative being that becoming is ultimately explained.

Real being is divided into two principles of being, one of which is an actualizing principle and the other is potential. These principles of being are themselves real, though they cannot have separate existence as natural principles. Because they are relatives, there is mutual dependence one on the other; both as to essence and to existence:--- the actual principle defines the passive

principle, and the passive principle limits the actual; while at the same time each is dependent on the other for real existence.

The ancient Greek philosophers of nature did not admit anything more than accidental change in nature. For example, the division and separation of confused being, according to the opinion of Anaxagoras; the combinations of being and non-being (plenum and void) of Democritus; (179) none of these account for the coming to be of something new except in an accidental form. The combination alone is new: the elements that enter into the composition already existed in nature. (180)

Aristotle says that there is becoming in nature not only in the accidental order but also in the very substance of beings. And in this sense Aristotle teaches a more universal mobilism than that of the earlier Greek physicists. Among the various kinds of changes in nature, the most fundamental is substantial change, which is a coming to be or a passing away of the substantial nature itself.

In our analysis of the kinds of opposition we saw that movement in the strict sense is present only where there is contrary opposition. In the opposition of privatives we can speak of change, but not motion --- which is defined as actus entis in potentia in quantum in potentia. In both substantial change and in movement, however, we have a third opposition, that of relation,

for change of any kind can be explained only through the principles of being, namely act and potency, which are principles of relative opposition. Translated into the language of the philosophy of nature this means that no change in nature can be explained without reference to the correlative principles of natural beings, matter and form.

Aristotle teaches that in order that there be change in nature, it is necessary that there be contrary principles. And he shows how all the ancient philosophers held this same basic truth, "constrained as it were by the truth itself".

...Everything that comes to be or passes away comes from, or passes into, its contrary or an intermediate state. But the intermediates are derived from the contraries --- colours, for instance, from black and white. Everything, therefore, that comes to be by a natural process is either a contrary or a product of contraries. Up to this point we have practically had most of the other writers on the subject with us, as I have already said : for all of them identify the elements, and what they call their principles, with the contraries, giving no reason indeed for the theory, but constrained as it were by the truth itself. (181)

In every change there is the loss of one thing and the acquisition of another. This we call the loss of one form and the coming to be of another. Therefore between these forms there is an opposition, since the coming to be of one is the privation of the other. In the first book of the Physics Aristotle calls this opposition contrariety.

This cannot be the opposition of contrariety

as we saw it in the four kinds of opposition, but rather it is contrariety in the broad sense. (182) In the first book of the Physics Aristotle speaks of contraries as a generic kind of opposition that includes both privation and contrariety in the strict sense. Now used in reference to the principles of natural beings "contraries" have to mean privatives, for in the science of nature we treat primarily of substance and only secondarily of accidents. We saw that contraries in the strict sense are always accidental characteristics. In substances we cannot speak of the form being more or less present --- it is present simply or it is not, for substantial forms are totalities like whole numbers.

This making the principles of nature consist in contraries in the strict sense is the explanation why the ancients taught only accidental change in nature. They had not yet become explicitly aware of such things as substantial being --- they spoke instead of heat and cold, of hatred and love, or hard and soft. And even Plato taught that substance has no contrary, consequently substance could not be generated nor cease to be. (183)

The contrary principles of nature are form and the privation of the form : and this takes care of both substantial and accidental natural beings. In every change there is a passage from the absence of a form to the possession of a form. Underlying these two privative terms of opposition is a common subject which is

said to pass from the condition of privation to the condition of possession. Hence, we have a third principle, namely, subject which Aristotle identifies with matter. The form and the privation of the form only are called contraries (in the broad sense), for between matter and form there is not opposition of privation but of relation; and privation is distinguished from matter only by a distinction of reason, as we shall see later.

In a natural change three principles are involved: the absence of a form (the point from which the change starts); the form which is to be possessed (the point at which the change terminates); and the subject or matter that underlies the change. Aristotle shows the necessity of this third principle of becoming through analogy with art, where it is always necessary to have some material, some subject that perdures. This, of course, would show the need of a subject in accidental change. No strict proof can be given that a subject is needed in substantial change, but by an analysis of the definition of substantial change and through the analogy of art, the mind can see the necessity of such a substratum.

Now in all cases other than substance it is plain that there must be some subject, namely, that which becomes. For we know that when a thing comes to be of such a quality or in such a relation, time, or place, a subject is always presupposed, since substance alone is not predicated of another subject, but everything else of substance. But that substances too, and anything else that can be said 'to be' without qualification, come to be from some substratum, will appear on examination. For we find in every case something that underlies from which

proceeds that which comes to be; for instance, animals and plants from seed. (184)

When speaking of the principles of natural beings as contraries, we can do so only in reference to their coming to be and not to their entitative condition. For only the principles of natural becoming (fieri) are contraries, while the principles of being (in facto esse) are relatives. The contrary principles of becoming are privation and possession of a form, but the principles of being are matter and form. There is a sense, then, in which we can speak of two principles of natural beings, and a sense in which we can speak of three.

There is a sense, therefore, in which we must declare the principles to be two, and a sense in which they are three; a sense in which the contraries are the principles --- and a sense in which they are not, since it is impossible for the contraries to be acted on by each other. But this difficulty also is solved by the fact that the substratum is different from the contraries, for it is itself not a contrary. (185)

The passage just quoted does not explicitly say that there are only two principles of natural beings in facto esse, and that they are relatives. But implicitly this is contained, for Aristotle says that matter is not a contrary, and after the change has taken place the privation no longer is, but only the form. Hence, in facto esse, there are only two principles, which are not contraries, but relatives, since they are mutually complementary. (186)

The Nature of the Material Principle :

The ancient physicists who did admit becoming were forced to admit the reality of non-being. But the non-being they had in mind was that which is identical with privation, namely the contrary or opposite of being. Thus, they could explain becoming only through a contradiction, that is, by identifying being pure and simple with non-being or negation.

Aristotle maintained that Parmenides was correct in insisting that being cannot come from being considered absolutely, just as it cannot come from absolute non-being. But through an intrinsic division of the notion of being he showed that there is a being and a non-being which is relative, and it is this that gives rise to new being or becoming.

Matter is not non-being in the absolute sense, nor is it being absolutely. Matter is the subject which is potentially being; it can enter into union with an actual principle to form absolute being. As potentiality it is neither negation of being absolutely, nor it is yet being in the full sense. It is the subject into which a new form can come to constitute a new complete being.

We ourselves are in agreement with them in holding that nothing can be said without qualification to come from what is not. But nevertheless we maintain that a thing may come to be from what is not --- that is, in a qualified sense. For a thing comes to be from the

privation, which in its own nature is not-being --- this not surviving as a constituent of the result.... In the same way we maintain that nothing comes to be from being, and that being does not come to be except in a qualified sense...Note further that we do not subvert the principle that everything either is or is not. This then is one way of solving the difficulty. Another consists in pointing out that the same things can be explained in terms of potentiality and actuality. (187)

This is the error that is common to all philosophies which try to explain becoming through conflict, they are ignorant of the nature of matter. In some way or other they identify matter with privation, or, in other words. they identify the opposition of relation with that of privation. They cannot conceive of non-being except in an absolute sense.

The ancients as well as the Marxists recognized change in nature, and they said that change had to be explained through contrary principles, but they did not go far enough and show that there is a third principle of becoming, matter, which is not a contrary. They admit two principles : form and its negation, but they did not speak of a subject which is common to these opposite terms. And it is precisely this common subject which is neither being nor non-being absolutely, the key to the problem of becoming.

All becoming is a change in a subject from the absence of a certain form to the possession of that form. And this is verified both in accidental and in substantial becoming. The

terminus a quo of becoming is a privation (the absence of a form) in a subject, and the terminus ad quem is the form possessed by the subject. Wherever contrary forms in the strict sense are involved there is a gradual change from the one term to the other, for there is a medium through which the underlying subject must pass --- and this is called motion in the proper sense of the word. In substantial changes, however, there is no gradual movement, for substantial forms have no contraries, as Aristotle declared, since they are the primary forms of any real being in nature --- there cannot be any medium prior to the possession of a substantial form, since the substantial form is necessary for the very existence of the being.

The subject of the change does not come to be in an unqualified sense, for it already has existence prior to the reception of the new form. Yet, because in its state of actuality it does not yet have the new form, it can be said to become that being which is characterized by the form it will receive. Hence, matter is a positive principle that perdures throughout the change, and in the new being that results it is one of the co-principles --- the other being the form towards which the matter has a natural affinity.

In our examination of the kinds of opposition we saw that the Marxists conceived of privation as a positive form with real existence in nature. Just as did the ancients, they, too,

had to postulate the real existence of negation (the real existence of absolute non-being) in order to give some kind of explanation of becoming. But this is done at the cost of identifying absolute being with absolute non-being --- a contradiction in terms.

We have to distinguish the absolute non-being of privation from the relative non-being of matter. One of them is a negative principle, and the other is positive. One of them is a term of privative opposition, negating the opposed term ; the other is a term of relative opposition, contributing to the natural union between itself and form.

Now we must distinguish matter and privation, and hold that one of these, namely the matter, is non-being only in virtue of an attribute which it has, while the privation in its own nature is not-being; and that the matter is nearly, in a sense is, substance, while the privation in no sense is. They, on the other hand (the Platonists) identify their Great and Small alike with not-being, and that whether they are taken together as one or separately. Their triad is therefore of quite a different kind from ours. For they got so far as to see that there must be some underlying nature, but they make it one --- for even if one philosopher makes a dyad of it, which he calls the Great and Small, the effect is the same, for he overlooked the other nature (the privation). For the one which persists is a joint cause, with the form, of what comes to be --- a mother, as it were. But the negative part of the contrariety may often seem, if you concentrate your attention on it, as an evil agent, not to exist at all.

For admitting with them that there is something divine, good, and desirable, we hold that there are two other principles, the one contrary to it, the other such as of its own nature to desire and yearn for it. But the consequence of their view is that the contrary desires its own extinction. Yet the form cannot desire itself,

for it is not defective; nor can the contrary desire it, for contraries are mutually destructive. The truth is that what desires the form is matter, as the female desires the male and the ugly the beautiful --- only the ugly or the female not per se but per accidens. (188)

This remarkable summary contains the refutation of the Marxist doctrine of dialectical materialism. It points out, first of all, that privation is not a positive term, but is a pure negation. Consequently the Marxist doctrine of conflict in nature is without foundation, since conflict can take place only between positive terms. The second paragraph refutes the Marxist principle that privation is the source of fecundity in the natural world. Privation cannot be the motive power that pushes nature on to new development, for privation is by definition the absence of form. It is matter which has a natural appetite for form, since form is actuality and privation is the absence of actuality. Privation cannot be that which desires form.

The Marxists say that matter, which they call the sole reality in nature, is self-contradictory. Matter, whether found in its highest or lowest forms, is in intrinsic conflict because it contains within itself the negation of the form which it possesses. The negation, they say, is the principle which drives the being on to seek a new form. Thus they identify privation with appetite or matter. (189)

But privation must be distinguished from matter

both by reason of definition and by reason of finality.

By reason of definition it is distinct from matter, since privation is a negative principle of becoming --- it is the absence of the form --- while matter is a positive subject that has the privation. Matter is one of the per se principles that enters into the very constitution of the real being while privation is an extrinsic principle, a principle only of becoming.

Secondly, matter must be distinguished from privation by reason of finality, as Aristotle pointed out in the second paragraph quoted above. The form is a good, a participation in the divine. Privation is the contrary of form, since it is its negation. Matter, on the other hand, is a natural capacity for form. It is impossible that privation desire form, since form is the destruction of privation, yet it is natural that matter do so, since form is the realization of a natural capacity in the matter.

Thus, we have a refutation of all those who in some way or other identify matter and privation : a refutation of the early Greek physicists and Plato who identified them according to definition --- calling matter simply non-being; and a refutation of the Marxists who identified privation with appetite, making privation the source of progress and development.

Prime matter as such is without form, and to

that extent can be called non-being; but privation is nothing more than the absence of a form in a subject capable of having the form, and therefore it is absolutely non-being. Matter enters into the very constitution of real beings; it really exists, though it does not simply exist as a thing. Privation does not enter into the constitution of real beings, but is a principle of becoming.

The Marxists identified matter and privation when they made privation the sole principle of becoming. We call privation one of the principles of becoming because privation is absence of form, and absence or indigence is the first principle of appetite. But this does not constitute privation a tendency towards new forms. Privation is a negative principle of becoming and not a positive one.

Privation cannot desire form, first of all because it is a negation, and secondly, this would entail a desire for self-destruction. Matter, however, seeks form as a good, as a participation of the divine goodness, consequently between matter and form there is not conflict but mutual perfection.

The Marxist philosophy of conflict is, consequently, based upon a logical error; it is based upon the confusion of the opposition of relation with the opposition of privation. Indeed, there is a confusion of the other kinds of opposition also, as we saw in the analysis of opposition, but it is upon this error principally

that the dialectical process is founded : they identify matter and privation. Followed out logically the Marxist error leads to the overthrow of existing government, of the existing economic system, for the negation of these is but the driving onwards to a higher and better form of government and economics.

Privation is a per se principle in respect to the coming to be (fieri), but an extrinsic principle in relation to the entitative condition of the being. Privation does not enter into the entitative constitution of natural being, for every being is made up of two positive and relative principles, matter and form. A negation cannot contribute positively to being --- though Marxists as well as Hegelians consider negation to be a positive determination of being. Privation is a per se principle in reference to becoming. Cause here is not taken as that out of which something is made, that is, as one of the intrinsic causes of being (matter and form); nor is it taken as the extrinsic causes of real being (efficient and final causes), but when we speak of principle in this case we consider it from the point of view of order; all becoming is from the absence of form to the possession of form. Thus, privation is a per se principle of becoming, without being one of the four per se causes of natural being. (190)

The function of privation is brought out in the example employed by Aristotle when he distinguished matter from

privation. (191) He says that a doctor with black hair becomes gray haired, first of all by reason of his hair, and not by reason of his medical science. Thus hair is the subject which is in potency to receive a new form. And it is because his hair is black that it can become gray. The presence of the color black means that there is a privation of the color gray : there cannot be any becoming if the form is already possessed. Thus, privation is a negative principle of becoming. This example of Aristotle brings out the function of these two principles of natural change, and shows how the one differs from the other, even though both of them are called non-being.

Marxists, however, consider privation as one of the constitutive elements of natural being, for they speak of the intrinsic conflict which results from the union of contradictories. And conflict could not take place unless considered the negation as something positive in the essence of material reality. The logical confusion upon which they built their philosophy is once again apparent.

What the Marxists attempt to explain through privation, the development of higher forms in nature, Aristotle sets down as the function of final cause in nature. It is particularly in the II book of the Physics that he treats of finality. If the dialectical laws were valid there would be no need of invoking this extrinsic cause, for matter would move inexorably through higher and

higher forms. What form matter would take after man Marxist philosophers do not say. The nature of man himself will go through a process of development --- man will make his own nature --- and it is conceivable that this will go on as long as man exists. But Engels spoke of a time when the conscious state of matter will disappear to return with the necessity of the law of negation of negation after some great period of time.

Matter moves in an eternal cycle completing its trajectory in a period so vast that in comparison with which our earthly year is as nothing; in a cycle in which the period of highest development, namely the period of organic life with its crowning achievement self-consciousness, is a space just as comparatively minute in the history of life and of self-consciousness; in a cycle in which every particular form of the existence of matter --- is equally in transition; in a cycle in which nothing is eternal, except eternally changing, eternally moving matter and the laws of its movement and change. But however pitilessly this cycle may be accomplished in time and space, however many countless suns and earths may arise and fall, however long it may be necessary to wait until in some solar system, on some planet appear conditions suitable for organic life, however many countless beings may fall and rise before, out of their midst, develop animals with a thinking brain that find an environment that permits them to live, be it even only for a short period, we are nevertheless, assured that matter in all its changes remains eternally one and the same, that not one of its attributes may perish, and that the same iron necessity which compels the destruction of the highest earthly bloom of matter, the thinking spirit, also necessitates its rebirth at some other place, at some other time. (192)

Aristotle brings in what Marxists deny, an extrinsic principle, directing matter to form as to its good. The word finality when applied to nature has a twofold meaning. There is

one kind of finality in which the natural beings determine their own actions --- this is the case of man in reference to those actions which are called personal or individual. But for man considered as part of the natural order as well as for those beings below man that have not the intelligence to direct their actions to ends they themselves choose, there is an external finality, an external direction of nature by the Author of nature. Thus there is no need of positing intelligence in every part of nature in order to save the principle of finality. (193) There must be an intellect directing the movement, it is true, but this intellect can be either extrinsic or intrinsic to the being. It is evident that in the philosophy of Marxism there should be no place for an intellect extrinsic to the world, directing the universe as a whole as well as those natural beings that have no intelligence. For Marxism is essentially an atheistic philosophy : it declares matter the sole reality, and positively denies the existence of spirit as distinct from matter. The criticism of classical materialism is sufficient to make this clear --- there must be no dependence on a cause or on an Intelligence outside the world.

In the philosophy of Aristotle nature is essentially changeable --- the very formal object of the science of nature is mobility. Matter has an appetite for all natural forms, and this appetite is insatiable because of the limitations of matter :

it can possess only certain, definite forms at one time. To all other natural forms there is privation. Privation or indigence, we saw, is the first principle of appetite for a being that is without the good that is natural to it has a natural tendency towards that good. This usage of the word appetite does not involve necessarily cognition, for it means merely a natural ordering towards those forms which it is capable of receiving. Thus appetite is identical with the nature of matter. (194)

Matter seeks new forms not because it is weary of those possessed, but because of the transcendental relation it has to all natural forms. And even though it is informed by the highest of natural forms, the human form, it still has a capacity and appetite for others. The perfection of matter consists not in the possession of the most perfect form in nature but in its capacity to receive all natural forms. Matter of itself does not have any greater determination towards one than towards the other, but only in so far as it is in more proximate or more remote potency to receive a form. And this potency is determined not by the nature of matter as such but by the degree of disposition that matter has in a given nature. (195)

The matter is not in immediate potency to receive any kind of natural form, but it must go through a series of preparatory forms. (196) Thus, in the philosophy of Aristotle there is place, in principle, for evolution. Matter is in potency to all

natural forms, but matter alone, although real, is not a being having its own existence in nature. The matter must be prepared to receive the higher forms, and once it is sufficiently prepared we say that this particular being in nature has a privation of a certain form --- and from that point on a change to a new form can take place, if all the other causes (extrinsic : efficient and final), as well as the proper intrinsic conditions are present.

Each natural species, it is true, tends toward self-conservation, and to that extent nature has an appetite for stability. This stability, however, is for the good of the individual species. This is the individual nature that Aristotle considers in the second book of the Physics, an intrinsic principle of activity that has a regularity and stability and a certain necessity. This stability, however, is by reason of the form rather than the matter. As Aristotle says, "The form indeed is 'nature' rather than the matter."

The principle of mobility, of instability, of chance is matter as deprived of form. In nature, consequently, we have a double principle : one principle of steadiness which comes from the form and from the matter in so far as they are natures; and a second principle of contingency which comes from the matter as deprived of form. The science of nature must take into account the first, in so far as form and matter are both the constitutive principles of

natural beings and natures.

The Aristotelian view of nature, as to fundamental principles, is a complete one. Based upon observation, it accounts for both the change and the uniformity that common sense attests is present in nature. Aristotelian philosophy calls for a science of nature and says that the foundations of the science (the necessity coming from the form) is objective. At the same time, it admits the limitations of its science because of the contingency that may follow from matter as deprived of form, and because of the instability following upon ever other forms. And the Aristotelian philosophy of nature gives this complete, harmonious view without violating the basic laws of logic, while the explanation of the Marxists is based upon such an error.

There can be but one conclusion from the analysis of Marxist philosophy : judged purely from its principles it is a static philosophy. With all the external expression they give to the philosophy of movement, the philosophy of becoming, they cannot explain real change in nature, because they do not understand the principles of movement in nature. They do not know what privation is; they do not know what matter is. Their observation of nature is generally correct, for nature is mobile, since it has an intrinsic principle of mobility. Yet their intellects do not measure up to the observation of their senses.

Marxist philosophy a static philosophy !

This is, indeed, a hard saying --- for men who want to find a rational explanation of their social philosophy of conflict on their philosophy of nature. The rational grounds for the overthrow of existing social conditions : the capitalistic system of economics, and the governments built upon this system, cannot be found in a philosophy where change is impossible.
