We now turn to the second part of the synthesis, the determination of the intelligibility in "being something."

First then "being something" is limited. It is the "something," but neither more nor less nor in any way different from it.

Second, to repeat the same point under any other aspect, being something is specified. The "something" specifies what the "being" in being something is limited to.

Third, the being of being something is ~~empirical~~ contingent. For what is something is what includes or involves not being. What involves not being, is not what excludes not being. But only what excludes not being, is necessary. Therefore the being of being something is contingent.

Fourth, the being of being something is empirical.

This point follows from the antithesis. We said that for being to be intelligible, it did not suffice for it merely to happen not to be; we maintained that it must of its nature exclude all not being. This was our initial thesis, but in the antithesis we noted that no object of experience satisfied the thesis.

By "empirical" then we mean what has not intrinsic intelligibility, what finds its explanation in something outside itself.

Now the being of being something is not intrinsically intelligible, for it does not exclude not being; it is a being that not only is but also is not. It is then empirical.

Still there can be nothing (nothing can positively exist) that has no intelligibility of any kind: else thought would be stultified. There must then be some intelligibility to being something. This as we have already shewn is its causation by pure being, which supplies an extrinsic intelligibility.

Fifth different limited beings differ by their specifications. They cannot differ by their being, for all that can be said of the

being as being of the one, can also be said of any other. They must have some difference, else their being different would be unintelligible. It remains that the difference lies in their specifications, that the "something" this one is is not the "something" that that one is.

Sixth, limited being is mutable.

It is contingent, not necessary, therefore not immutable, and therefore mutable.

Changes are of three kinds, action, passion, and solidary change. The first is acting, the second being acted upon, the third is the combination of the two when a set of interdependent units are subjected to some external influence.

Seventh, agere sequitur esse.

Because a being is limited, it follows that its capacities for action and passion will be limited. It cannot do simpliciter, unless it is simpliciter. It cannot be acted upon without limit, unless it is not without limit.

Further, there is not only this requirement of intelligibility with regard to action and passion, but also that the limitations of action and passion be coherent with the limitations of the being.

That the activity of limited being is limited, and that the limitation of the activity is coherent with the limitation of the being, constitute the meaning of the phrase: agere sequitur esse.

Hence, a <u>nature</u> is limited being as the intelligible ground of the limitations of action and passion. This definition is provisory, to be amended later.

Further, a <u>law of nature</u> is a correlation of the limitations of action and passion with the limitations of the nature.

Eighth, to return to point six above, differences in the specification of being are of two kinds.

They are <u>formal</u> if they are differences in nature. Thus a star is different from a rose, because it has a different nature.

They are <u>material</u> if they are not in the natures. Thus this star differs from that, this rose from that, not formally for the nature is the same in both cases, but materially.

Again, if the differences are purely material, they are said to be numerical. Thus if this rose, no matter how carefully examined, is found in every respect to be exactly similar to that one, then the difference is purely material. There is not only no difference in nature, but there is not even accidental difference.

Purely material difference is said to be numerical, because the presupposition of counting is some similarity in what is counted: a pig and a hen do not give two pigs or two hens but two animals. Hence the pure case of "number" is when similarity is found in every aspect of the objects counted.

Ninth, numerical difference is empirical.

We said contingent being was empirical because it offered no intrinsic intelligibility; contingent being happens to be without excluding not being. It is easy to recognise the same feature in numerical difference.

For objects that differ numerically must have something in their specification that is not in the specification of the other. But the only assignable difference is that the matter of this one is this matter while the matter of that one is that matter. But matter as matter does not differ from matter; the whole difference falls on the "this" and "that." But this and"that" mean no more than difference. And similarily any argument returns upon itself in a vicious circle.

The point is that they just happen to differ. Their difference is not intrinsically intelligible. It is empirical.

But the empirical has to have at least at extrinsic intelligibility. What then is it?

First let us term the origin or principle of empirical difference "matter." ~~Second, let us distinguish between natures that are types and natures that are not, that is, between natures whose laws are general and to be verified in any instance of the type, and natures whose laws are particular because there can be~~

Second, let us distinguish between natures that are types and natures that are individual.

A type-nature is one which requires a number of instances for

its normal functioning. Thus, though absolutely possible, ~~it is not~~ it would be abnormal for there to be only one electron, one proton, one member of each of the distinct biological species. And this abnormality follows from the natures of the things themselves. For the nature of the electron to function, a multitude are needed. Similarly any biological species of its nature is destined to procreate, develop, adapt itself to changing environments. In the first case the need of the multiplicity is simultaneous; in the second it is successive. But in both it is natural, follows from the nature. And, of course, beyond the abnormality of there being but single instances of each species, there would be the cosmis abnormality arising from the natural interdependence of the species.

On the other hand, an individual nature is one that has no such exigence for multiplicity.

To return to our point, what is the extrinsic intelligibility of matter, of numerical difference. Plainly it is the exigence of multiplicity in the type-nature. The type-nature to be itself fully must be itself in a number of instances; were the instances different in nature, then there would be no realisation of the type-nature; the instances must be the same in nature, and for them to be the same in nature yet different instances, there must be a principle of material or numerical difference.

Tenth, changes are either substantial or accidental.

They are substantial if the nature changes.

They are ~~numerical~~ accidental if the change is within the frame-work of the nature. ~~In other words, the nature is unchanged~~

This may sound simple, but there are difficulties. For plainly there is no impossibility to the same nature under different circumstances or at different stages of its development presenting entirely different sets of natural laws. According to the temperature, water is solid, liquid or gaseous. According to the season, the insect will be a worm or a moth. Further, there is the difficulty arising from the fact that the action of any given nature may be covered or transformed by the presence of other action.

Tenth, we distinguish between substance and certain accidents, those of action and passion.

A substance is what of its nature is something absolutely. Thus an object is or is not a man; it is metaphor to speak of an object being more or less a man, a man up to a certain point.

An accident of action or passion is what of its nature is something not absolutely but more or less, in some degree. Thus, there is no absolute brightness, resistance, weight, strength, and the like; these things are simply in degrees, more or less.

This distinction recalls the distinction between pure being and limited being: pure being is simpliciter; limited being is something, where the something specifies some grade or degree of being. Now both substance and accident are something, but the substance is simply something, the accident is something in some degree of the something it is. A man is not more or less a man but simply a man; but brightness is brightness not absolutely but in some degree of brightness.

Parenthetically, we note that we define the distinction between substance and accident where the two are found in the same limited being. Pure being, on these definitions, is super-substance rather that substance: it is not what is something absolutely, but what is absolutely.

Eleventh, we distinguish between spiritural and material accidents of action and passion.

The spiritual is what is neither material nor in itself conditioned by matter.

Matter is the principle of merely empirical difference, of numerical difference.

Hence, material accidents of action and passion are those whose "more or less" or degree admits mathematical expression.

Further, the extent to which they are material will determine the degree in which the mathematical expression is exhaustive of their reality.

The maximum in materiality is found in quantity and local motion. For quantity is the pure instance of material passivity;

local motion is the pure instance of material activity. Let us make this clearer, and first let us examine quantity and local motion in themselves apart from the subjects that have quantity or move locally.

Quantity is sometimes said to be what has parts outside parts; as the more acute observe, the term "outside" makes the definition a vicious circle. What then is quantity?

Quantity is the static continuum of purely material difference.

Static, for it is not a process, not a succession, but all at once, simultaneous.

Continuum, for it realises an idea not in a number of ~~discrete~~ instances, but without limit of instances, and so without number in the sense of innumerable; but while the continuum realises an idea without limit to the number of instances in which it realises it, at the same time the realisation itself is something limited. Thus the continuum realises without limit within limits.

Of purely material difference, for the idea realised without limit of instances is not, properly speaking, an idea at all; it is not an intrinsic intelligibility; it is the purely empirical, the extrinsically intelligible, numerical difference.

~~Thus, to define anew, quantity is the limited realisation of numerical differences without limit.~~

Thus, to define anew, quantity is the simultaneous but limited realisation of unlimited numerical differences.

Local motion on the other hand is the dynamic continuum of purely material differences.

Or, on a parallel with our second definition of quantity, local motion is the successive but limited realisation of unlimited numerical differences.

Now plainly, unlimited numerical difference is the maximum of materiality. Hence quantity and local motion are the most material of accidents. They are the pure objects of mathematical thought, in so far as mathematics deals not simply with numbers but is applied to objects.

Further, they are accidents, and as accidents plainly ~~quantity~~

local motion falls into the category of activity, and so is the most material of activities.

Newton's first law of motion throws light on the point.

This law may be expressed metaphysically as follows: what requires a cause is not a velocity but only a change of velocity.

Now why should a velocity not require a cause?

Consider what is meant by a velocity in the context. To deny that a velocity requires a cause is not to deny that local motion ~~does not~~ requires a cause; it is to deny that a continuance of local motion requires a cause.

Next, consider what a cause is. It is the intelligible ultimate of change.

Third, effect must be proportionate to cause: cause is an intelligible; therefore effect must be an intelligible difference.

Fourth, mere change of place, the purely material difference of the quantitative continuum, is the formal effect of local motion; but this difference we have shewn to be merely empirical; therefore no amount of such difference can be proportionate to ~~an~~ a cause which is intelligible.

Hence we conclude that, given a local motion, we have already the cause of indefinite numerical difference. In other words not velocity but only change of velocity requires a cause.

So much for purely material activity. We have said that quantity is purely material passivity.

Now a passivity is correlative to an activity. Quantity as passivity is correlative to local motion as activity in two ways.

First, it supplies the differences through which local motion moves, and so makes motion a motion. Without such differences local motion would not be change at all.

Second, it supplies in a subject the passive quality that will make possible for it to act or be acted upon by local motion: in other words it makes impact and contact possible.

Let us now consider local motion not in its pure materiality but in its intelligibility, that is, as change of velocity.

local motion falls in the category of activity, and so is the most material of activities.

Parenthetically we may note the metaphysical element in Newton's First Law of Motion, that an uniform velocity of itself is indefinite. This follows from our position. The change effected by the activity of local motion is purely material, a transfer from one place to another, where the difference of the places are simply the numerical differences of the quantitative continuum. Plainly such change is empirical, not something that calls for the intrinsic intelligibility of a cause, but something that is of the nature of the change effected. Now what is of the nature of the change effected? Simply local motion. Hence what is caused is not velocity but change in velocity