Part 2. Systematic exposition.

Chapter 7. Kant’s ontological system.

In this chapter I will expound the structures presented in the previous two chapters in a systematic way. The result of this will be, I hope, a representation of Kant’s ontological system of the pre-critical period (which I referred to in the introduction of the previous part) and the logical structures in it which concern force. I should, however, add that here, as with the systematic part on Leibniz, I am interpreting Kant, that is, reproducing structures (of which I have demonstrated that they are present in Kant’s writings) in a way which seems to me both logical and supported by the previous two chapters.

section 1. External interaction and the evolution of the universe.

Force, according to Kant, is not to be associated with motion but with activity in general.

This idea of force brings about that the concepts involved are not merely physical but also metaphysical and ontological. Motion is a physical phenomenon. One cannot, however, say the same of activity in general. Activity in general is a theoretical construction referring to being in general; it is, therefore, a metaphysical concept. It is also a concept which refers to nature as it is; it is, therefore, an ontological concept.

Force, furthermore, is not a simple concept; it refers, according to Kant, always to a relation between bodies. As such, force has two forms: the effort of bodies to approach each other, and the effort of bodies to do the opposite: attraction and repulsion, respectively. Attraction and repulsion are not, according to Kant, properties of single bodies. In fact, in his system there cannot be such a thing as a single body. Force, therefore, cannot be inherent to a body, it must be an external relation. Attraction and repulsion are properties of matter in general which shape matter into a changing whole of a multitude of bodies: a dynamic universe. These two forces have, in Kant’s system, only meaning as this general shaping activity. External relatedness and evolutionary activity are, therefore, closely connected.

This can be explained systematically as follows.

Any ontological system which deserves that name has to deal with the problem that the universe is both one and many; this is a fact Aristotle pointed out already in his Physics. Kant was apparently well aware of this, for his system seems to be designed to solve this problem elegantly.

The universe has to be one. Otherwise nothing in it would be related to anything else. As a consequence, nothing could be predicated of anything. The universe has also to be many. Otherwise relation would not be possible, and neither would predication. When Kant discusses the original state of the universe (in ANTH; see chapter 5, section 2), it is obvious that he begins with this original paradox: a universe which is
one, yet is also many. In Kant’s system, being one is brought about by attraction; being many is brought about seemingly by the differentiation of matter in all kinds of bodies, but in fact by repulsion which strives to maintain the differentiation by opposing attraction. The paradox has been transformed into an ontological opposition.

The first result of this opposition is the Kantian concept of space. Space, according to Kant, is the relatedness of bodies. This implies that they must be kept together (by attraction) but also that they must keep their distance from each other (by repulsion) (48).

The second result of the opposition is the concept of time. The interaction of the two contending forces, and hence space, can only actually exist insofar as the subsequent effects (viz. change) have actual existence. In other words: there must be not only spatial extension (necessary for each constellation of the multitude of bodies effectuated by the contending forces), but also temporal extension (necessary for the different constellations to succeed each other). Time is needed for the opposition to actually exist in.

In this way, space and time are established by attraction and repulsion. They cannot be separated: space, that is, the order of bodies in the universe, needs a temporal dimension for its actual existence. This means that space, that is, the order of bodies in the universe, exists as a process. I have described this process as a pool on the surface of which concentric ripples of organization alternate with ripples of disorganization in a never ending series (see chapter 5, sections 2 and 4). The fact that this series is infinite implies that the dynamical opposition of the two fundamental forces never ceases to exist. The forces do not neutralize each other in the sense that their activity comes to an end. If they did, the universe would become an unchanging constellation which would not need a temporal dimension anymore; and as a consequence, space and time would be separated, contrary to their systematic concepts. It is consistent, therefore, that Kant holds the process of organization and disorganization of the universe to be infinite.

In his system, the universe has a proper history.

In this system it is essential that the relatedness of bodies (that is, the actual activity of the two opposing forces) is external.

First of all it is a simple matter of consistency. If relatedness were internal to bodies, there would be no such thing as dimensional order in space. In fact, the externality of relatedness is necessary for the actual existence of the original paradox Kant begins with; it enables real differentiation (the being many of the being one) to exist physically within real unification.

But this consistency is the result of a rigorously applied logical and ontological structure which can be explained as follows.

The paradox, being transformed in the ontological opposition of attraction and repulsion, has thereby been divided in its constituent contending parts; these parts have still to be unified in order to conceptualize the paradox: a paradox is a whole, it should therefore be conceptualized in one concept.
The division in two parts is, so to speak, the form of the paradox outside of itself, that is, being not one whole; it is a form of externality (49). The externality is necessary in order to be able to determine the contending parts (viz. attraction and repulsion, which, being external, establish externality physically, that is, extension in space and time), but as such it has lost its being one. To retrieve it, what is external has to become internal again; but this involves a transformation, for the external form is not the internal form. Only in the internal form, the paradox is made one real whole again.

This strict conceptual distinction between internality and externality implies that the physical, that is, spatially and temporally extended, universe is not a real whole, that it is not really one. And according to Kant indeed it is not. Physical features which indicate this are for instance the infinity of the process of organization and disorganization (which means that total unity never exists, but that it is an eternal becoming), the relativity of motion (which implies that there is no absolute space, no absolute position and situation, hence no completed unity), and, more fundamentally, the enigmatic centre of gravity of the universe and the seat of attraction and repulsion which are the subject of the subsequent two sections respectively. One can conclude, then, that the original paradox, being transformed into the ontological opposition of attraction and repulsion, is in this external form (which is as such not really one whole) necessarily expressed as a process which is infinite; the externality is necessarily connected with its proper historical dimension.

section 2. Internality and the ultimate ground of existence.

The centre of gravity which acts as the point of support of the entire universe is only enigmatic insofar as one considers its ontological and metaphysical aspects. As concerns physics there is no problem at all, once one has understood that physical reality is essentially external and, therefore, necessarily not a completed whole but an infinite process, in Kant’s system. The universe in its external form begins to take an organized shape at the point where attraction (that is, gravity) is greatest; from this point outwards, organization (and later disorganization) spreads; it is, therefore, in this sense a middle point (see chapter 5, section 2). Problems begin to arise, however, as soon as one is aware of the fact that attraction is not essentially a local phenomenon but on the contrary a universal law. As I have pointed out (see chapter 5, section 2), Kant must face this dilemma: either he can claim that the universe is an infinite but single system (that is, one whole), but then he cannot locate its central basis, or he can locate a central basis, but then he cannot claim that the universe is an infinite single system (that is, one whole). This dilemma is, in fact, yet another apparition of the original paradox which is haunting Kant’s system, and its difficulty arises from the confusion of internality and externality.

In its external form, the universe is infinite, that is, an
infinite series of finite organized (and disorganized, and so on) spheres. In this form, the universe can indeed have a location for its middle point, viz. the point from which historically organization and disorganization spread. But in its external form, the universe is not completed, not one whole. And this property, viz. having a historical dimension, is the very condition for the existence of a middle point. As soon as this condition is absent, the location of a middle point becomes impossible. This condition becomes absent, as soon as one considers the universe as one infinite whole, since then the historical dimension vanishes: as one whole, the universe is no longer a process. But this is the internal form of the universe, viz. the form which is the ontological counterpart of the unity of the original paradox. This form is ontologically necessary to make attraction and repulsion truly universal. The external form cannot achieve this, because it is not a completed whole; hence it offers no universe which can be the object of truly universal forces. The internal form does; it is, therefore, complementary to the extended form. But does Kant's system include this form?

I think it does. In God the unity and harmony of the existing universe are present even before they actually exist (see chapter 6, section 3). But because of this, the unity and harmony are not developed; their development takes place in the external form of the universe, that is, in the form of a process. In God they are only given as that which makes this development in the other form possible, as the minimal condition for total existence, that is, the ultimate ground of existence (see chapter 6, sections 3 and 5). This form is indeed internal as opposed to the external form, because it is in God, and God is one whole, devoid of contradictions, that is, of logical oppositions. Since no oppositions are present in God, His contents are not divided; therefore He remains one, and, as a further consequence, there is no need of physical extension in time or space. Which is exactly why this is a form of internality instead of externality.

The main point is, that in this internal form of the universe there is no middle point (since there is no extension), but this form does make attraction and repulsion truly universal and in this sense it offers a central basis, the ultimate point of support of the universe. Interestingly, this point is not within the universe at all, since this internal form has no temporal or spatial dimensions.

It is clear that the dilemma mentioned above is actually solved in Kant's system by expressing its two alternatives, each in a specific form, the two forms complementary to each other, which maintains the unity of the dilemma, that is, the unity of the original paradox. The "either-or" is transformed and sublated in the "both-and".

The external form, that is, the universe in its physical or phenomenal form, extended spatially and temporally, expresses the opposition, viz. that the universe must be both one and many. Its basis is the opposition of attraction and repulsion. This opposition is expressed as the process of organization and disorganization, that is, the historical existence of relatedness.

What is, as such, single (viz. the single parts of matter)
becomes related; but not universally so, at least not without the complementary internal form. The external form is, therefore, particular.

The internal form, that is, the universe in its metaphysical form, non-extended and potential, expresses the ultimate unity of the universe. Its basis is the ultimate ground of existence from which all existing things must flow. This ground is expressed as the logical identity (that is, the absence of logical opposition) which is the non-historical existence of relatedness, since it both precedes and encompasses the historical existence. This ground is both singular and universal: it is the one ultimate ground of the entire universe which flows from it.

The remaining question is, how this ultimate ground is actualized in order to bring the physical universe into existence. The answer involves the concept of matter.
Matter is a somewhat elusive concept in Kant’s system. Kant uses terms such as substance, monad, and body frequently but matter is found much less frequently in those of his writings reviewed in the two preceding chapters. In this section, I will try to explain why this is so.

Relatedness is external, according to Kant. In the physical or phenomenal world, relations are determinations which do not affect immediately the internal state of bodies. These determinations are the result of interaction between bodies, that is, the activity of forces. Forces, therefore, cannot influence immediately the internal state of bodies either. There is no *influxus physicus*, says Kant (see chapter 6, section 1). Yet the interdependence of all bodies or substances is real and physical, he says. If it were only that, absolutely confined to the phenomenal world, the interdependence would be totally contingent; there would be no harmony, no laws, for the phenomenal world is essentially incomplete and cannot, therefore, establish the harmony of its development which transcends its incompleteness. The interdependence is not confined to the phenomenal world, it also exists in God’s intellect; its phenomenal existence is in accord with its existence in the divine intellect, as Kant says: "The scheme of the divine intellect, the origin of the existing things, is an everlasting act (called conservation), in which, if any substances whatever are conceived by God as solitary and without determining relations, no connection at all will originate between them, nor mutual respectivity; but if they are conceived in His intellect with respect to each other, then, in conformity with this idea, afterwards in the continuing existences, the determinations themselves always take each other into account, that is, they act and react, and there is an external state of the single thing which, if one would deviate from this principle, could never exist solely by virtue of its existence." (see chapter 6, section 1).

It is clear that the physical or phenomenal interdependence is the spatially and temporally extended form of existence, that is, the historical existence (in the form of a process), of what exists non-extended in the divine intellect. In this way, the physical existence is the mediation of what is immediately in God. Mediation is activity, and activity is completely external. Externality, however, and as a consequence physical mediation itself also, lacks existence as such.

One can deduce this from Kant’s system as follows. In PPCMND, Kant explains that existence is a quality of single beings as such (that is, for themselves). He argues that nothing (except God) can have its cause in itself; therefore, nothing can determine itself, and hence relations with other beings are necessary for determinate beings. As a concept, however, existence does not include relations with other beings, for a relation is a respective determination, that is, not intelligible in an entity which is considered in an absolute way (that is, in itself, apart from others), as Kant says (see chapter 6, section 1). Existence is not, as a consequence, a unifying quality in the universe; Kant makes clear that the only unifying entity of the universe is its ultimate
ground, viz. God. This emphasizes the fact that existence pertains to singular entities. It is obvious that Kant maintains this concept of existence throughout his system, since he keeps repeating the possibility of existing things which are not connected to our universe, that is, the ontological possibility of completely separately existing things. It is also obvious that, according to Kant, physical relatedness does not endow entities with existence; relatedness remains absolutely external. In BDDG, Kant makes this even more clear. He says that existence is the absolute position ("absolute Position") of a thing, that is, absolute being as such (see chapter 6, section 3). Obviously, this excludes the relativity of physical relatedness. Kant states, furthermore, that the existence of things is absolute, but that their possibility is relative, that is, respective; the concept of an existing thing, however, does not differ from the concept of a possible thing insofar as their predicates are concerned (see chapter 6, section 3). It is quite clear, I think, that Kant distinguishes between the existence of things, which is non-physical, and the physical relatedness of things, which determines their appearance. Existence precedes physical appearance, since existence, being absolute position, precedes possibility (see chapter 6, section 3). But how does it precede physical appearance and possibility?

Ultimately, existence precedes physical appearance as the absolute existence of God. As Kant points out in BDDG, God’s existence, that is, the existence of a single ultimate ground of existence, precedes everything else, because everything else flows from it in the physical form of the temporally and spatially extended process the universe is. God’s form of existence is the universal form of existence, that is, the form of existence which encompasses all existence. It is also a singular form, because it is the single ground of everything. The things which flow from it are in themselves merely possible, because their appearance depends on the appearance of other things. Their existence, however, is necessary; but only in a universal way: it is the necessity which derives from the ultimate ground.

In Kant’s system, therefore, existence is both universal and singular, and these two forms are transformed into one another as follows. Existence is, as the single and undivided ground of existence, singular. But it is also universal, because as such it encompasses all existence. The encompassed existences exist, however, not only in their ultimate ground in a universal way but also in themselves, viz. as the existence of physically appearing things. In that respect, they are singular again, because existence does not include physical relatedness. But exactly because of that, there is nothing which distinguishes between this single existence or that; which brings about that these singular existences are essentially of one universal form, viz. the ultimate ground of existence (not, of course, the universal form of existence of the universe, for the universe is never completed and has, therefore, as such no form of existence; universality of existence is per se outside the universe). Evidently, these two pairs, viz. the singularity and universality of the ultimate ground of existence, and the singularity and universality of the physically appearing things respectively, are complementary.
If there were no physical universe, there would be no ground; if there were no ground, there would be no universe. Their necessary relatedness is obvious. How this relation seems to be conceptualized in Kant’s system, I have expounded above. It is an analytical exposition of the concept of existence in Kant’s system. The complementary two forms of the pairs of singularity and universality are implied in this system, not, however, worked out as such in it. It is my analysis and interpretation which distinguishes explicitly between them.

From this analysis it is clear that the mediation of the universal harmony which is inherent in and derives from the ultimate ground of existence indeed lacks existence. The mediation is, as I have pointed out above, the actual existence (one should properly say: appearance) of the process the universe is. Neither the universe as such, nor the constituent parts inasfar as they are related to each other and thereby actually constitute the universe, have existence. Existence and this physical or phenomenal form of relatedness exclude each other, and the logical basis of this mutual exclusion will be the subject of the subsequent section.

This is why in Kant’s system there seems to be no concept of matter which is a general or singular substrate of the actually active forces and which encompasses all, that is, both the appearing universe and its constituent parts. The concept of matter is substituted by the concept of existence on the one hand, referring to universality and singularity as I expounded above, and on the other hand by the concepts of monads or simple substances (which are identical; see chapter 6, section 2). Indeed, the concepts of monads or substances make clear the virtual systematic absence of matter as a general or singular substrate.

In MPh Kant explains the internal nature of bodies, introducing his concepts of simple substances or monads.

Bodies, according to Kant, are spatially extended composites, consisting of a finite number of monads which are their ultimate elements. The concept of bodies involves spatial extension, hence it is essentially a physical or phenomenal concept, for it necessarily includes relatedness to other bodies.

The concept of monads as such, however, does not involve spatial extension; as Kant points out, space is completely exempt of substantiality and, therefore, only a phenomenon of the external relations of united monads. Monads as such are indivisible, although they may be composed of a multitude of parts; these parts, however, cannot exist separately (see chapter 6, section 2). Therefore, the monad is a unity which can only be conceptually differentiated (viz. in logical relations between subject and predicates), not physically, and is, as a consequence, indestructible; hence its concept does not include extension, that is, space; it only includes mere existence.

Having established the concept of a monad as such, Kant subsequently deals with the relations between monads, for monads must be related in order to compound bodies. And this is where space comes into the concepts. For relations between monads are actually external relations. I have presented
Kant’s views in this matter above (see chapter 6, section 2) and need not repeat them here. It is enough to point out once more that with externality, that is, with spatial extension, forces come in, and temporal extension with them.

This means that a monad as such, that is, mere existence, is not (in Kant’s system) a historical process, whereas relations between monads, and bodies, appear only as a historical process.

Monads, according to Kant, are the elements of matter (see chapter 6, section 2). Kant does not elaborate on this remark of his. But it seems unlikely that with matter he refers to the physical being of bodies, since this being involves spatial (and temporal) extension, and space is, according to him, insubstantial and a phenomenon of the external relations between monads (and bodies). Matter, therefore, seems to refer to some kind of substrate; most likely matter refers to the monads as such in general. In that case, it refers in fact only to existence. More specifically, it seems to refer to the form of existence which is the complement of the existence of the ultimate ground of existence, that is, God (see above). This would concur with another remark Kant makes in MPh, viz. that God is present to all things immediately, but internally; for, as I pointed out above, the two complementary forms of existence are transformed into each other. This remark would mean, then, that God is present in the mere existence of monads as such. It would also concur with Kant’s view that internal force, that is, the force which effectuates the continued existence of all monads as such, is not spent while being actually active but continuously renewed (see chapter 6, section 2); obviously, God’s eternal existence must be maintained in its complement also.

It is difficult, however, to see how matter can be the substrate of externally active forces, since these forces are essentially external and historical, and matter is not. In fact, this difficulty seems to arise from the logical structures involved, which will be expounded in the next section.

section 4. Opposition and contradiction.

Kant distinguishes between logical contingency and real contingency (see chapter 6, section 3). This distinction derives from his distinction between the physical or phenomenal world of spatially and temporally extended relations, and the non-extended world which lies in God, the ultimate ground of the physical world. In the extended world, the relations between the existent things determine these things but only externally, not internally, that is, they do not determine their absolute position or existence as such (see above). Hence they are merely really contingent, that is, their determined existence (not their absolute existence) can be negated without negating thereby all existence. Their ultimate ground, however, does not possess this distinction between external and internal; it is, in fact, only internal, that is, its determinations affect its very existence as such, its absolute position. This ground, therefore, cannot be negated without thereby negating all existence (since existence would vanish with its ultimate ground); contingency is not real, here, but logical: predicates must not contradict their subject. In
other words, in the real world predicates can contend since they (and as long as they) do not affect existence as such, but conflicts in its ultimate ground are unthinkable, because they would affect existence as such. As a consequence, identity cannot be the same in the real world as it is in its ultimate ground.

This emphasizes once more that God (the ultimate ground) is absolutely existent and that He establishes the absolute existence of the things in the real world. The formal structure of this I have analyzed above (section 3); He is universal existence in a singular way, and He establishes singular existences in a universal way. As Kant says: "God is completely sufficient. What exists, it may be possible or real, is only something insofar as it is given by him."

It also explains the harmony of the real world which transcends that real world. The harmony is, according to Kant, ultimately the harmony of things in God’s idea of the world. In the real world, harmony is the universal phenomenon of everything fitting together; Kant points out that this can be demonstrated by reducing varieties of seemingly different phenomena to one and the same cause or law (see chapter 6, section 3). Ultimately, of course, the overall variety must be reducible to the one ultimate ground which is God. In order to be reducible in this way, the harmony of the real extended world must be the extended form of the identity (that is, the absence of contradiction) of the ultimate ground. What is this extended form of identity? It is the principle of equilibrium of existence which Kant introduces in NO.

In NO, Kant explains in detail how a logical opposition involves a contradiction, and how a real opposition does not (see chapter 6, section 4). I will not repeat that here. I will point out, however, that the logical opposition involves a form of identity which is different from the form of identity the real opposition involves.

The identity which the logical opposition or contradiction involves is simple. It is a matter of to be or not to be. If there is no contradiction between subject and predicate or predicates, the relation or relations exist; if there is a contradiction, they do not. The negation of the relation is absolutely nothing, a nihil negativum, irrepraesentabile as Kant says; the affirmation or position of the relation is absolute position. Obviously, the relation in hand cannot be partly negated. This concurs with Kant’s view that absolute existence is indivisible, a view he expresses as concerns monads as such, but which he, as I pointed out above, must maintain as regards the ultimate ground of existence likewise. From this it can be inferred that the identity in question is of an immediate form. That is, its being one is ontologically absolute; it may be complex, but it does not need any extension whatever, and since this is the case, it does not need mediation.

The identity which the real opposition involves is not as simple. Negation can be partial, here, for it does not affect existence as such. This means that what is negated is divisible; it needs, therefore, extension in space and time. The identity must, as a consequence, be mediated. And in fact it
is, for Kant points out that, firstly, "in all natural changes in the world, the sum of what is positive, insofar as it is estimated by the addition of concurring (not opposing) positions and the subtraction of really opposing positions, neither increases nor decreases", and, secondly, "all real grounds of the universe, if one adds those which are concurring and subtracts those which are opposing each other, amount to a sum which is equal to zero" (see chapter 6, section 4). Kant uses this to demonstrate God's existence, for if the sum of actual existences is zero, the real world obviously has no ground for its existence; God gives it its existence, therefore. I would like to point out that, as a consequence of this generous divine activity, the negations in the real world do not affect existence as such and that the zero which symbolizes the equilibrium of existence is not a nihil negativum but a nihil privativum, not an absolute nothing but a real nothing. In other words, the negative activity in the real world, which is in it by virtue of the real oppositions in it, only affects the external determination of existence, that is, the physical relations (time and space). In short, identity is mediated by a multitude of real oppositions of which the sum is zero and which, therefore, ultimately neutralize each other, that is, identity is mediated by a multitude of non-identities.

These non-identities, that is, physical relations, exist spatially extended; on the basic level they exist as the different positions and situations of parts of matter. In order to exist in this way, they must also be temporally extended (as I pointed out above; see section 1). In short, they can only exist as a process. The mediated identity is, therefore, a process, and Kant gives the general rule which governs this process: "every decay is a negative coming into existence, that is, to negate something positive which exists requires just as well a truly real ground as does its coming into existence if it does not yet exist" (see chapter 6, section 4).

Kant distinguishes also between logical ground and real ground (see chapter 6, section 4). He points out that a logical ground contains its consequences, therefore it is related with them by identity. A real ground, however, does not contain its consequences, therefore it is not related with them by identity.

After what has been said above, this is clear. In the physical world, all things depend upon each other, therefore they are each other's real grounds, so they are connected but not by identity, because they remain apart; even God is connected with this world, being its ultimate real ground, but He is not identical with it, which also means He does not contain it (that is, not in its physical form). God Himself, however, contains the real world in his intellect, that is, as an idea, as a concept; this contained ideal or conceptual world must include logical relations between grounds and consequences (for instance, Kant strongly implies that natural laws are included in God’s concept of the real world; see chapter 6, section 3), but this will in no way affect the absolute identity.
section 5. Conclusions.

The Kantian ontological system, as it has been described and analyzed above, can be summarized as follows.

The general concept for existence, viz. substance, is divided in two complementary aspects: existence as such and physical (that is, phenomenal) existence.

The physically existing universe is a collection of external relations between bodies. These relations are in fact determining the bodies in terms of time and space, that is, these relations determine the relative position and motion the bodies have in respect to each other. The relations themselves are the elementary forces: attraction and repulsion. Their determining activity establishes the order of the bodies, which is a historical process in which order and disorder alternate; this is the actual universe (50).

This universe is a process because it must consist of a multitude of bodies with different determinations which contradict each other, and which therefore cannot exist at the same time. It must consist of this multitude because it can either be this, or it can be one undifferentiated whole (which it is in the form it possesses in God’s intellect). It cannot be both at the same time and in the same respect, according to Kant, because this would violate the principle of identity. As a consequence, in this historical and differentiated universe no determinate thing can have its own ground in itself; that is, things determine each other only in such a way that they remain apart. Or in other words: the (relative) position of a thing implies the negation of its opposite determinations; one thing exists physically in one place at one time, and therefore other things must (must, because they are the grounds which determine this one thing) exist in other places and times, as other determinations of this one thing must exist in another time. Determination is exclusive, therefore: any specific position negates any other specific position. This means that in the universe the given amount of determination at a moment must be always the same; if it would increase or decrease, it would be possible that conflicting determinations could exist at the same time and place - conflict or contradiction would not be impossible, as Kant wants, but would be a simple enhancement of determination. Determination is nothing else but specific motion, at this elementary level. The determinate existences must, then, follow the principle of conservation of quantity of motion: the total amount of determinate motion must remain the same from moment to moment. To establish this, the determinate existence of one thing annihilates that of another thing or other things which it is determined by and, therefore, related to. This brings about real change, and that is history. Annihilation is relation; relation is force. Therefore, the forces (attraction and repulsion) establish the historical process the physical universe is. Determination is, as I have said, exclusive, and this would render the bodies as such absolutely singular, except that they are determined and, therefore, related; determination itself prevents absolute singularity - the historical network of relations the universe is does not have the ontological level of singularity but of particularity.

But it is only the external state of bodies which is anni-
hilated, annihilation of their internal state, that is, of their existence as such, is impossible because it would mean the violation of the principle of preservation of the total quantity of reality. Relative position and motion can be annihilated, must even be annihilated in order to establish the physical universe as a process, but not so absolute position.

Absolute position, that is, existence as such, the internal state of the bodies, is that which is (metaphysically speaking) the substrate of real change, that which does not change and is not annihilated in the process of history. Without such a substrate, the process would be impossible, that is, it would not be a whole. But, as I have pointed out above, in Kant’s view the physical universe as such is not a whole. It would be completely discontinuous, which would mean that nothing could determine anything, because nothing would be related to anything else, except for one thing: God thinks it as whole. On the other hand, however, the physical universe needs discontinuity; without it, the principle of identity would be violated, and the historical process would cease to be either historical or a process – everything would simply merge into one indeterminate whole. God, therefore, must create this whole in a mediated, a differentiated form. The solution Kant comes up with for this consists in the strict differentiation of internal and external state.

Physically, Kant rejects *influxus physicus*, separating internal and external state with this; all relations, and therefore all determinations, are external. Only existence as such is internal. It is, therefore, not affected by physical (external) determination. As a consequence, it is not physical, but metaphysical. The monad, which is the elementary particle or unit of existence as such, is not a physical but a metaphysical concept. It constitutes the existence of the singular bodies of the physical universe. God’s idea of the universe constitutes the existence of the physical universe as an interrelated whole, that is, as a historical process governed by laws of motion and the principle of conservation of motion which are carried out by the elementary forces, viz. attraction and repulsion.

The structure of Kant’s ontological system, then, is typically complementary.

Substance has, as a concept, a physical and a metaphysical aspect. Physically, it is a multitude of bodies (which must be conceived as a collection of fixed determinations, the activity of the forces frozen in moments of time, as it were; after all, bodies are, physically speaking, only external states); their metaphysical counterpart are the monads. Physically, the bodies are related by annihilation in the historical process the universe as a whole is; metaphysically the counterpart of this is the real whole, viz. God’s idea of the universe in his divine intellect. One could say that the monad is the ‘identity’ of the changing body, and God’s idea is the ‘identity’ of the changing universe. ‘Identity’ in the sense that it is that which remains constant in change.

This identity is not mediated, except in the physical universe, viz. by the forces of attraction and repulsion. Therefore, the ontological level of universality which the
idea of the universe has in the divine intellect (where it is not yet mediated) is expressed in the physically existing universe as particularity because there it is mediated by these elementary forces. Force, then, is nothing else but the historically expressed wholeness of the universe (51).

God’s intellect is, in Kant’s view, above time and space; therefore, it does not need mediation in itself: it simply is (52). In the divine intellect the universe can be both one and many, or rather, it is of a wholeness which transcends the contradiction of one and many because it transcends time and space. Time and space are dimensions of differentiation, and so are one and many, only not in a physical but in a numerical sense. But this differentiation is not as such present in the divine intellect. This it is not to say, however, that in Kant’s view God’s idea of the universe would contain all physically existing determinations in such a way that they do not contradict each other; it is a tempting conclusion, but a false one. Kant expressly states that God contains only the minimum of material which makes the physical universe a reality, not all the material in a way which transcends physical reality (see chapter 6, section 3). I have pointed out (see chapter 6, section 4) that Kant refers to the system of natural laws of motion when speaking of this minimum of material. Consequently, I think that one should, with Kant, conceive of God’s idea of the universe as an abstract idea of the actual mediation by the elementary forces: as mediation without that which is mediated, hence as indeed a whole (53). But a whole which lacks substance; Kant, therefore, has need of introducing yet another abstract idea, viz. that of singular existence, the abstraction of that which is mediated.

These two abstractions are indeed the ‘identities’ of the universe as a whole and its bodies respectively, but, one must add, the abstract identities, since they abstract from the concrete historical determinations: God’s idea is void of the real historical determinations and existence as such is only the internal state of the bodies, which is separated from the external state which is the determined existence at a certain moment.

There are, therefore, on the one hand the abstract identities (viz. God’s idea or the natural laws or harmony of nature, and the existence as such), and on the other hand the concrete differentiation and mediation (the universe as a historical process, that is in fact the existence of actually active forces and nothing more: the external state of the bodies is only the determinate existence of the forces (54)). God’s idea is, of course, universal. Existence as such is singular. The existence of the forces is particular, and mediates in fact between universal harmony and singular existence. However, not metaphysically so: the mediation remains exclusively on the physical level – universal harmony and singular existence are metaphysically separate and remain so. This means also, of course, that universal harmony and singular existence are ultimately and absolutely excluded from physical reality.

This results in the somewhat peculiar situation that the mediation of two things (viz. the abstract universal and singular identities) takes place not, strictly speaking, between them but somewhere else. Mediation and that which is
to be mediated are kept separate, by Kant. This seems an odd thing to do. But Kant has a very good reason for it. If, in his system, he would allow mediation between the two abstract identities to take place, they would each lose their identity. As a consequence, the bodies in physical reality would not have singular existence, and discontinuity (the conditio sine qua non for the actual existence of differentiation, change, and history) would be lost, and the historical process as a whole would not be a whole anymore. In short: the universe would not be both one and many, but only one — hardly a contribution to natural philosophy. Therefore Kant keeps it all apart. The finesse of his system and the elegance of his solution of the problem of the universe being both one and many lies in the fact that one should conceive it as one whole: physical level and metaphysical level are complementary to each other. He has analyzed which concepts are necessary in order to be able to think of the universe as both one and many, and he presents these concepts in an analytical way.

However, this is also the weakness of his system: The system is, ultimately, only analytical and lacks essential synthetic moments; for Kant fails to provide a means to relate the concepts offered. Thus, only the analytical moments remain (separately) and the overall (synthesizing) structure vanishes.

It is, for instance, a problem that Kant does not give a means for relating internal and external state of bodies. For, as a consequence of this, bodies are in fact transient entities of determination, moments of actual activity of force which have ultimately no singular existence (viz. their internal state, which is separated from them), which means that all determining activity becomes in fact an indeterminate blur. This is, to be sure, a most dynamical picture of reality which could be admired for its almost artistic potency of expression; philosophically, however, one must concede that it is not exactly a virtue to fail to offer a means to discriminate between one determination and another. This is bad enough, but what makes it worse is that, since mediation between singular existence and universal harmony is kept apart from them, the physical universe (that is, the actual mediation itself) also lacks wholeness. As a result, physical determination not only lacks discontinuity, it also lacks coherence; physical reality is not only a dynamic blur, it is a blur which is not even recognizable as such. The universe, ultimately, merges into something indiscriminate, utter chaos.

But, to be fair, this is only the case if one applies Kant’s system purely analytically, which is contrary, I think, to the author’s intentions. For he may fail to offer the means to relate internal and external state, and mediation with that which is to be mediated, but he offers these separate concepts in one system, clearly indicating that they should be conceived of as constituting a whole. Conceived of in this way, the system enhances understanding of the paradox of the universe which is one and many, indicating that the universe must be understood in a dynamical way, but also indicating that this understanding needs fixed concepts.