CHAPTER V

CAUSALITY AND THE METAPHYSICAL PROBLEM. VIEWS OF SOME MODERN EXPONENTS.
In proceeding to discuss this concept it is necessary in the first place, to explain something about causality. There was an old scholastic distinction, which still appears occasionally in philosophical writings, between the *Cause commensardi* or reason for a truth, and the *causa fiendi or existendi*, the cause of the occurrence of an event.

The *Cause commensardi*, or logical *reason* for the affirmation of a truth, as distinguished from the psychological factors which lead a particular individual to affirm it, is clearly identical with what modern logicians call the *ground*. A given proposition must logically be affirmed as true in the last resort, because it fills a place in a wider system of truths which no other proposition would fill. Thus, e.g., a special proposition about the relation between the sides and angles of a triangle is logically necessitated, because it is an integral element in the development of a system of geometrical ideas which reposes as a whole upon certain fundamental assumptions as to the character of spatial order.

What we are concerned with in the everyday and scientific treatment of causation, is not this purely logical relation of ground and consequence, but something partly identical with it, partly different. The *causa fiendi* has no significance except in connection with occurrences or events in time, and may roughly be said to correspond with what Aristotle denotes the "Source of change" and his mediaeval followers named the 'efficient cause'. Cause, in the popular sense of the word, to carry out
the principle of the inter-connection of events in a system along special lines by regarding every event as completely determined by conditions which are themselves previous events. Both in everyday life and in the sciences which use the concept of causation, that every event has its cause is understood to mean that the occurrence and the character of every event in the time series is completely determined by preceding events. In more technical language, causation for everyday thought and for the sciences means one-sided dependence of the present on the past, and the future on the present.

As currently understood, cause is not identical with the whole true logical ground, but with the ground so far as it can be discovered in the train of temporally antecedent circumstances. It shows that causation is not, like the principle of Sufficient Reason, axiomatic. Again, the principle of causation cannot be empirically established by an appeal to the actual course of experience. At most the success of our scientific hypotheses based upon the assumption of causality only avails to show that events may be inferred from their antecedents with sufficient accuracy to make the causal assumption practically useful.

Regarded as a universal principle of scientific procedure the causal assumption must be pronounced to be neither an axiom nor an empirical truth but a postulate, in the strict sense of the word. In the sense that it is a postulate which experience may confirm but cannot prove, it may properly be said to be a priori, but it is manifestly not a priori in the more familiar
Kantian sense of the word.

It is one of conspicuous services of Hume to philosophy, that he takes up the problem of causality. It is also worth noting that, before he remarks on the discussion of causality, Hume has already followed Berkeley in asserting that there are no abstract concepts in the usually received meaning of the phrase, but only vague mental images which are in themselves individual but which through their lack of distinctive characteristics suffice to call up an indefinite number of similar ideas.

In his Book I, Part III, of the Treatise, Hume opens with a list of types of relation, which is divided into two main classes, "such as depend entirely on the ideas, which we compare together, and such as may be changed without any change in the ideas." Resemblance, proportion in quantity or number, degrees in any quality, and contrariety belong to the former class; individual identity, relations of time and space and causation to the latter. Hume maintains that some types of relation are entailed by their terms, but that the causal relation is not one of these.

In the account of causation, Hume passes over the very interesting and fundamental question raised in the treatise of the position of cause in the fabric of our knowledge. On Treatise he asks why a cause is always necessary and concludes that there is no reason for the assumption that everything must have a cause. This conclusion he supports by his analysis of the idea of a

1. A Treatise of Human Nature - Hume ed. Selby - Bigge, pg. 69
particular cause and asserts again that there is 'no absolute metaphysical necessity' that one object should have another associated with it in such a way that its idea shall determine the mind to form the idea of the other. This conclusion is of the gravest importance for Hume's theory of causation in general.

It is assumed, says Hume, that everything existing is either a cause or an effect, "though it is plain there is no one quality which universally belongs to all beings, and gives them title to that denomination." As the origin of the idea of cause-and-effect is found in no quality of our perceptions, it must be derived from some relation between them. Hume discovers two such relations — Contiguity and priority. The cause and the effect are contiguous in space and time, and the cause is always prior in time to the effect. But succession and contiguity do not afford a complete idea of causation.

Hume holds that we generally take a cause to be antecedent to its effect and contiguous to it in space. More important in experience there is a constant conjunction between cause and effect. In a sense these factors provide the basis of our belief in the necessity of the causal connection.

It is important to note that Hume has not in any way justified our belief in the necessity of the causal connection. Hume points out that the most important element in causality as

3. Ibid., pg. 172
4. Treatise - Selby - Bigge edition, pg. 75
generally conceived is 'necessary connection'; yet that this 'corresponds to no impression', or is not given through sense. This he easily shows that it is not self-evident.

Hume at least destroyed the ancient presupposition that the relation between cause and effect is analytic and rational. And so far Kant, for whom he prepared the way, was in agreement with him; he too, held the causal connection to be empirical and synthetic. But for Kant it is not the empirical result of association. It belongs to the original constitution of human mind. Beginning at the opposite end and as compared with Hume, Kant assumes that there is science of experience, and seeks for its necessary conditions. One of these is the category of cause.

Hume's discussion of the problem of causality in the two works differ in some important respects, but the main contention that causation is nothing but an expectation of regular sequence is upheld in both "A Treatise of Human Nature" and in the "Enquiry concerning the Human Understanding."

Hume has given two definition of causal relation which are only different by their presenting a different view of the same object and making us consider it either as a philosophical or as a natural relation; either as a comparison of two ideas or as an association between them. Hume says that we may define a cause to be "An object precedent and contiguous to another, and where all the objects resembling the former are placed in like relations of precedency and contiguity to those objects, that resemble the latter"; again the other one is "A cause is an object.

5. A Treatise of Human Nature, ed. Selby-Bigge, Pg. 170
precedent and contiguous to another, and so united with it, that
the idea of the one determines the mind to form the idea of the
other, and the impression of the one to form a more lively idea
of the other." This determination of the mind is of course
itself a causal law believed on evidence no more respectable
than that of the causal law which the mind is determined to
believe in accordance with it. For Hume, therefore, there is no
possibility of justifying the objective validity of causal laws.
Causation, he claimed, a complex idea. Two of its elements,
priority and contiguity, are accessible to the senses, but we can
have no sense impression of the third necessary connection. Hume
concluded that it is an internal impression of reflection from
which this elusive idea is derived.

As we know that, according to Hume "all our ideas are nothing
but copies of our impressions". "In other words, — it is impos-
sible for us to think of anything, which we have not antecedently;
felt, either by our external or internal sense." Some ideas are
simple, some complex. Simple ideas are direct copies of impres-
sions; complex ideas are made up of simple ones. Provided with
this criterion of objective validity, Hume proceeds to examine
the causal relation in its various aspects.

Hume divides his problem into two questions: (1) why we
believe that every event must have some cause; (ii) why we believ
that the same cause must necessarily produce the same effect.
R.W. Church, in his book says that "Hume thus distinguishes

6. Ibid.
7. Enquiry - Pg. 49
the law of causality from the law of causation, and takes it that together they are what is meant by a necessary connexion among events."

The first of these two questions Hume was the first thinker to discuss. Hume, as we shall see, comes to the conclusion that there is no reason for the presumption that everything must have a cause; that there is "no absolute metaphysical necessity." that one object should have another associated with it in such a way that its idea shall determine the mind to form the idea of the other. This thesis is of utmost importance for Hume's general theory of causation. But in his Enquiry, he ignores this problem altogether; it does not question the validity of the law of universal causality.

It is a general maxim in philosophy says Hume, that whatever begins to exist must have a cause of existence. This is commonly taken for granted in all reasonings, without any proof given or demanded. The fact is that, every event must have some cause or other means that the ideas of cause and effect are necessarily connected. Now if this were true, it would be impossible to separate the two ideas — impossible to think of one without the other. But since they are distinct they are separable, and the denial of their necessary connexion involves no contradiction. We can think of the beginning of existence without thinking of a cause. Therefore the beginning of existence does not necessarily imply causality.

We cannot derive the effect from a cause by any a-priori reasoning. Again Hume says that the ideas of cause and effect
are evidently distinct. That means the ideas of cause and effect are distinct and separable. But if, when they are considered in relation, one is known to entail the other, it follows that they are inseparable and that the thought of their separation implies a contradiction, because it implies that a relation which is known to subsist between does not subsist between them.

So Hume falls back on a psychological examination of the process of causal inference. Here he finds a new relation between things regarded as causes and things regarded as effects, and this is that objects similar to them have been found in past experience in constant conjunction. Hence on the presentation of one of them in a new experience, the mind naturally leaps by association to the idea of the other. But it remains true, on Hume's principles, that the ideas are separable. There is no logical necessity that when they have been conjoined in ninety nine cases they will also be conjoined in the hundred cases, or when they have been conjoined in the past, they will also be conjoined in the future. Such propositions cannot even be said to be objectively probable, because their probability could be based only on causal principles.

For Hume, there is no possibility of justifying the objective validity of causal laws. He tells us indeed that we cannot help believing them, but the whole point of this is that, if we adopt his view, we can help it, at any rate at the moment when we reflect that it is a mere subjective necessity of belief.

An alternative method of justifying the notion of causality lies in admitting with Hume that it cannot be got out of the
data of sense-experience but regarding it as an importation on the part of the subject, an importation which nevertheless acquires a certain objectivity on account of its being an indispensable condition of the constitution of an object of knowledge. This of course is Kant's solution. Kant agrees with Hume that the concepts and principles essential to an intelligible experience cannot be found in the given of experience, but justifies them as necessary presuppositions of knowledge provided by the subject, which by means of them orders and interprets what would otherwise be a chaotic manifold.

It is often supposed that causality for Kant stands for nothing more than necessary succession in the phenomenal sphere, even though in the noumenal sphere it may also include productiveness or dynamical efficacy. As Paulsen puts it: "Causality in the phenomenal world signifies for Kant, as for Hume, nothing but regularity in the sequence of phenomena. Real causal efficacy cannot of course occur here, for phenomena are ideational products."9 *Kant* accepts this view, but urges that Kant may also accept causal efficacy on the phenomenalistic interpretation of his doctrine. He is, however, of opinion that the central teaching of Kant is subjectivistic and hence for Kant "Causality in the strict sense is a dynamical agency, can be looked for only in the noumenal sphere."10

9. Kant, tr. by Creighton & Lefevre, P. 196
10. Commentary, Pg. 373
But such an interpretation is wholly misleading. Kant does not anywhere speak of the regularity of succession, though this would be consequence of the view that the cause necessarily and inevitably leads to the effect. Regularity of succession is generally regarded as a consequence of necessity and often identified with it. It should be remembered that Hume rejected necessity in this sense if regularity were viewed as invariable. Anyway, Kant does not discuss this point explicitly nor does he suggest that dynamical efficacy belongs only to the noumenal sphere. Kant is partly responsible for the above interpretation of his view on causality because his central argument ignores essential connexion between causality and substance.

"Causality", says Kant, "leads to the concept of action, this in turn to the concept of force, and thereby to the concept of substance." Kant again points out that we cannot understand a-priori how anything can be altered and that this is intelligible only with reference to "actual forces" which can be given only empirically, "certain successive appearances, as motions, which indicate the presence of such forces." "All alteration is possible only through a continuous action of the causality, which so far as it is uniform is entitled a moment. The alteration does not consist of these moments, but is generated by them as their effect." Hence there can be no doubt that Kant believed that the causal relation involved dynamic efficacy in the field of appearances. The real difficulty is not whether he accepted this view,

11.Critique, Pg. 228. Kant  
12.Ibid., pp. 230f.
but how he came to accept it. He merely took over the conception from Newtonian Physics and embodied it in his critical teaching without trying to discover sufficient reasons for its acceptance. He did not notice that Hume had already rejected the view (that causation involves production or activity) on the ground that we have no experience of such a thing. Force or energy is held by Hume to be a figment of the imagination to which nothing corresponds in experience. All we experience in the case of causation is a transition from one event to another and never the transference of energy or movement from the one to the other.

Kant thinks that the problem of synthetic a-priori judgments is the most important problem with which the philosophical investigation of the nature and limits of our knowledge must begin. This becomes clear when we study Hume's analysis and examination of common notion of causality. Kant regards Hume's treatment of the nature of causal connection as a specimen of the dogmatic procedure in philosophy to which he himself was addicted in the first stage of his philosophical career.

The popular notion of causal connection when analysed, is found to involve the ideas of necessity and efficiency. Hume points out that these ideas have no warrant in our actual experience. We do not even say or actually perceive any link between the cause and the effect distinct from the phenomena themselves nor any power passing from the former to the latter. The connection between a cause and its effect is purely a subjective affair and does not involve any objective necessity.

13. "The proper problem of pure reason is contained in the question. "How are synthetic judgments a-priori possible?" Critique of Pure Reason (Everyman's Library) Pg. 35.
Judgments concerning matters of fact, which are derived from experience can never be necessary. Mathematical judgments are necessary but they deal only with our concepts and their relations. They are necessary because they are ultimately tautological in nature. "7 + 5 = 12" is a necessary proposition because 12 is the same as 7 + 5 and in asserting that 7 + 5 = 12 we do not add anything to our knowledge 7 + 5.

Hume thus denies the existence of a purely rational knowledge of matters of fact, that is, knowledge which mind has produced by its own activity independently of experience. Kant is of the opinion that all changes take place according to the law of the connection of cause and effect. He thinks that he has already demonstrated that the applicability of the category of causality is a necessary condition of objective experience. But he considers that it is necessary to add further demonstrations in order to confirm the previous result.

The long argument, which is given by Kant in support of the principle of causality contains at least six proofs five of which are really different versions of the same proof. The gist of all these proofs is summed up by Paton14 as follows:

"If we are to distinguish the objective succession of events in the phenomenal world from the subjective succession of our ideas, we must regard the former succession as necessarily determined, that is to say, as governed by the law of cause and effect."

As I have mentioned in the second chapter that Kant speaks of the twelve categories. He says that category is nothing to but

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the forms of thought. Without the categories intelligent experience and consequently knowledge would be impossible. There could be no knowledge, no connected world of experience without original a-prinici acts of thought without a unifying consciousness consciousness which operates with certain categories. The form of unity which a-prinicii synthesis imposes on sense impressions is a category. Therefore there must be as many categories as there are forms of judgment. Broadly speaking it may be said that categories are universal concepts which are involved in all rational experience and thus can be applied to all objects of experience. They are the universal and necessary characteristics of things so far as they are objects of experience. Kant has described these categories at different places and in different contexts as 'concepts of an object in general', 'concepts of necessary synthetic unity', 'concepts of the forms of judgment and 'concepts of pure synthesis'. But these different phrases ultimately mean more or less the same thing. Categories are thus a-prinicii, that is, independent of all experience. Our ordinary concepts are a-posteriorii, that is derived from experience. But concepts of 'substance', 'causality' etc. are pre-supposed in all experience.

Now, one of the twelve categories, the most important of them is causality which is a necessary and invariable factor of all consciousness. While Hume had maintained that we can be never be conscious of anything but succession in objects, Kant contends that consciousness of succession is possible only through awareness of a necessity that determines the order of successive events. This is his famous "answer to Hume" which has been
interpreted in very different ways by different thinkers.

While Hume had refused to view the causal relation as necessary in one sense, Kant proved it to be necessary in a different sense. In other words, Kant showed the necessity of the employment of causality in the knowledge situation, but failed to explain whether the causal relation was a necessary relation among specific objects. Thus, while Hume maintained that causation is objectively necessary, Kant replied that causality was a necessary concept in the judgmental situation.

In his earlier discussions Hume did question the validity of the law of universal causation, but later on he came to recognise that even though we cannot prove it, we must believe in its truth. Things are always caused and we act on the assumption that the causal principle has universal application. But Hume would never subscribe to the view that causation is a necessary relation among specific objects. But the necessity he allows and even regards as an essential aspect of the causal relation is not objective but subjective or psychological. It is simply a habit of thinking that has no objective counterpart. Some are of the opinion that it is a compelling force or power that generates the effect, but Hume points out that neither in the physical nor in the mental sphere do we experience any transference of power or energy. Necessity, may mean universality but Hume urges that in this sense also the cause effect relation cannot be held to be necessary. Two things may have been found to occur together on a number occasions, but we cannot conclude that they will always do so. The past
is no sure guarantee for the future, and hence the causal relation cannot be regarded as constant and invariable under all conceivable circumstances.

Kant, in the second edition of his Critique, has maintained that "All (changes) take place in conformity with the law of the connection of cause and effect." This is the law of causality or of universal causation and Kant agrees with Hume in recognising that it is neither intuitively certain, nor demonstrable by general reasoning from more ultimate truths. Kant never tries to explain the nature of causal connection, i.e., how one event is able to give rise to another. Kant merely urges that every event must have some cause in what immediately precedes it. By change, Kant means the objective change, change in the spatial world, as distinct from the mere succession of mental states which cannot except symbolically, be said to be in causal connection. In fact, not merely the laws of succession among the objects of the internal sense, but apparently any specification in it, e.g., the distinction of the succession of two mental objects A and B from that of A and C or of the order A - B from that order B - A would be taken by him to be known only through the knowledge of causal dependences in the spatial world. What is called a causal sequence of A and B is indeed a given or causal sequence but X and Y, not of A and B, A and B being somehow round up with X and Y so that the causal sequence is represented subjectively as between the apprehensions of A and B.

15. Critique of Pure Reason - Kemp Smith's transl. Pg. 218
Apparently the law of causality as presented in the second Analogy of Experience is legitimated by the epistemology of the perception of change. Every change, however, has a cause which proves its causality during the whole of the time in which the change takes place. The cause, therefore, does not produce the change suddenly (in one moment) but during a certain time.

According to principle of causality actions are always the first ground of all change of phenomena and cannot exist therefore in a subject that itself changes.  

Now the action through which a change or a changing thing arises cannot belong to the same thing. The action or influence of one thing on another implies "a relation of the subject of the causality to the effect." The "subject of the causality" is a substance other than that in which the effect is produced. The relation of the two substance must appear in a single mode of their co-existence in space.

Aristotle is of the opinion that identity is necessary for all change. Buddha also simply accepts the facts of experience. Things change. There is no being in the world, but only becoming. He has maintained that in such a state the supreme reality is the law of change, and that is causality. Buddha does not say that all change involves a permanent that changes, nor does he say that change alone is permanent as some of his followers interpret him. He is indifferent to the "being" of things and

finds the reality relevant to our practical interests in growth. But, if each phenomenon is referred to another as its sufficient reason and that again to another, we cannot in the nature of the case find a sufficient reason for anything. We must some how get beyond the category of cause to some being which is its own cause and remains one with itself in spite all its changes. When we say that transient is known as transient we oppose it to the eternal and the question of the reality of the eternal is raised. Either we should look upon the ultimate reality as a growing principle or we must admit some permanent element which manifests and maintains itself in the whole process of change. In any case principle of being or identity is admitted. But in the Indian thought we have found that the Buddhists and the Nyāyavaiśeṣika held the non-identity theory (asatkāryavāda). The Buddhist emphasises the emergent aspect of the effect. If the cause and effect were identical, how is one to function as cause and the other as effect.17 Their natures are different. As Śāṅgērjuna puts it, "The identity of cause and the effect (act and the result) is utterly untenable; if so there would be no difference between the does and the thing done.18 In fact, acceptance of

17. na hi yad yasmād avyatiriktaḥ that tasya kāryaṁ kāraṇaṁ va yuktāḥ bhinnaḥ - lakṣaṇatvāt kāryakāraṇayath anyathā hīdaḥ kāryam īdāṁ kāraṇaṁ vety asamkīrṇaḥ - vyavasthā kathāḥ bhavet.

- Tattva Saṅgraha Panjika (commentary on Tattva Saṅgraha) by Kamalasila.

Satkārya-vāda would logically lead to the abolition of all difference.

Aristotle says that all change involves a permanent that changes, we cannot think of change without a permanent. It is the truth which we have found in Kant's second Analogy of Experience. Without the permanent, there is no possibility of relations in time. The succession of "B" upon "A" means that "A" is over, before "B" begins. The relation between them called succession which cannot exist either for "A" or for "B", but only for something else that is present to each of them. If there were nothing but successive events in the world nothing but "A" vanishing before "B" begins, "B" before "C" begins and so on, there could be no succession. The possibility of any succession implies a relative permanence. Even if we grant that all change implies a relative permanent, still the possibility of everything being relatively permanent implies an absolute permanence.

Kant accepts the traditional view that substance is the ultimate subject of all predicates. He says that the subject of the causality is a substance. The question may be asked about the status of these substances and of the causality of which the influencing substance is said to be 'the last subject'. These substances cannot be metaphysical in the sense in which the free self is metaphysical, nor are they unknowable things in themselves. Kant calls these substances in

phenomenon. As to the causality of which the acting substance is said to be the last subject, it is not the temporal action but what is embodied in it and is determinative of the change that follows it. It is what he calls "real powers, which can be given empirically ........ motive powers." The cause that is said to operate during the whole of the time in which the effect takes place is thus a motive power or force, a metaphysical entity in the sense explained. Thus Kant's conception of causality differs from Hume's not merely in the recognition of necessary connection, but also in the recognition of the metaphysical entities of substance and force as necessarily in phenomena.

Causality to Kant implies the category of substance though substance need not imply causality. Causality is understood in respect of a change of a substance, of change as implying a static permanent. But after the recognition of causality, there arises the concept of action which implies again the concept of the "subject" of the action, the "last subject of the causality", which must be permanent. As time necessarily refers to space which without reference to time is not known as fact, and cannot yet be denied, so causality presupposes substance which as a merely static permanent cannot be denied. Thus, though, according to Kant, nothing is known as objective fact unless it is causally related, the terms of this relation are not therefore taken to be constituted by the relation. Causality is a regulative and not a constitutive category. The effect must be outside the cause and dependent on it. Causality means an

20. Critique of Pure Reason, p. 169
order of time, a rule of succession. The effect must be co-existent with the causality of its cause, though the cause cannot produce its whole effect in one moment. 21

The second Analogy of Experience states only that change takes place according to the law of causality or in other words, that it does not happen by change. It does not exclude the possibility of a causal transition (from an action to a change) being itself only a fact, being conditional on nothing else, or as it may be put being unintelligibly fated.

Regularity of succession which on Hume's view enables us to know the cause is not considered by Kant as part of the nature of the causal connection but only as a consequence. He is haunted by the ideal of the relation of ground and consequence and yet fails to show the proper relation between it and causality.

The discussion of Kant's view of causality would be incomplete without reference to his conception of the third Analogy, which is described as "the principle of co-existence in accordance with the law of interaction of commonion. The third category of relation combines the first two categories of substance and causality and Kant means by "commonion" or "interaction" the reciprocal of mutual causality of substances in regard to their accidents.

Kant holds that interaction is the condition of our knowledge of objective co-existence, i.e., the co-existence of things in

space. "Things are co-existent", he says, "so far as they exist in one and same time." Kant seems to identify things and substances, which are, however all permanent. He is assuming that we experience real objects as permanent substances which are, for him objects in space. He argues further, that the reversibility of perceptions would not be possible unless the substances were in reciprocal interaction. The concept of interaction is thus a necessary condition of our experience of objective co-existence and therefore a necessary condition of all co-existent objects.

Kant generally speaks of interaction as taking place between co-existent substances. Such substances are those whose accidents or states remain relatively constant so that they can be spoken of as "things" (like the earth and the moon). "Every substance must contain in itself the 'causality' of certain determinations in the other substance, and at the same time the effects of the causality of that other." Interaction is meaningless without the reciprocal causality of co-existent substances in respect of their states. Hence, the co-existence of objects of which we are directly aware implies simultaneous determination of their states by one another, which means their reciprocal causality — a necessary determination that is dynamic. This dynamic determination is communion, interaction or reciprocal influence.

The discussion of the third analogy throws a flood of light on many obscure points in Kant's treatment of causality. We can now see why Kant sometimes tends to identify the cause with the immediate antecedent and yet refuses to do so in the end because
there is a further correlate which must be taken into account. This interpretation accords with his general position that particular causal laws cannot be known *a-priori*. Particular causal laws relate to the regular succession of similar objects, for Kant maintains that given the cause the effect must always and necessarily follow. But if we cannot ascertain the *a-priori* the nature of the additional correlate which turns the immediate antecedent into the cause, how can we say that the effect must always and necessarily follow the cause? It is not maintained that the regularity of succession follows from the law of causality, for all that the law requires is that every event should have another for its antecedent which is continuous with it. He has not even shown that there must be repetition of similar events continuous with one another. Kant is also not concerned to justify regularity which has no essential connexion with the law of causality. But we must not deceive ourselves by verbal arguments. Continuity of events in time is not equivalent to causality and Kant himself asserts that there is a further correlate which forms part of the concrete event viewed as a cause. But there is another consideration that settles the point at issue leaving no room for doubt. Causal series are not only "vertical" but also "horizontal", for otherwise we would not experience objects as co-existent as we undoubtedly do in perception. The trains of events are not in isolation determined causality; they are causally determined by one another. Hence instead of there being different worlds each obedient to the causal law, we have one world determined both vertically
and horizontally in irreversible succession and reversible co-existence. The world is much more complex than a one-sided discussion of vertical causality would induce us to believe. Hence the whole state of affairs which precedes an event must be regarded as its cause in the strict sense, for Kant regards causation as a necessary irreversible relation.

The Kantian account of causality is thus largely modified by the discussion on interaction, and comes to regard events as causally connected through all space and time and thus explaining the unity of one permanent nature in the midst of change of its various modes or states. From the above it is clear that Kant has tried to prove the mutual interaction of relatively permanent objects in space, but that such interaction cannot be regarded as necessary in the sense of being inevitable. Again, he has tried to prove the necessary causal determination of the events of a series if they are all regarded as modes or states of the same substance. But the substance itself has been proved to be necessary only when it is identified with the whole of the material world in space.

Hence he cannot be said to have proved the necessary causal connections between the states of different substances. Nor has he proved the regularity of succession or the repetition of similar events. He cannot be held to have proved even the existence of different series of causally determined events. His views on interaction would lend support to a contrary view.
But some thinkers are of the opinion that the existence of different series of causally determined events follows from the general law of causality. Thus Ewing holds that "the proof of causality given in the second Analogy proves that we can separate particular causal series from the whole just as much as it proves the general principle of causality."²²

This is however based on a misunderstanding of Kant's views on causality and substance. The causal relation holds between the different states of the same substance and the substance may be relatively permanent or absolutely so. But the existence of the substance in this sense has not been proved by Kant, and if substances were regarded as relatively permanent, the causal determination of events could not be proved by reference to its continuity representing the continuity of time. For Kant, all change is alteration and every event has its ultimate subject in the permanent substratum of every thing that changes. If substance were identified with a physical object then we could not account for its destruction in a particular form nor could we explain its origin by reference to another substance, for causality is not a relation between substances but between different states of the same substance. Interaction is, however, a relation between substances and it is the principle of co-existence of substances in space. Hence on Kantian presuppositions the separability of particular causal series may be sought to be proved by reference to the spreadoutness of causal events.

²². Kant's treatment of causality, Pg. 102 - A.C. Ewing
in space. But the proof would fail because as Paton it would require also the assumption that "the transition from cause to effect is continuous." Separability cannot, however, be based on continuity and the Kantian treatment of the Analogies makes all separation between causal series impossible.

Like Kant, the Mādhyamika Kārikās and other Mādhyamika treatises open with a critique of causality. This is the central problem in Indian philosophy. The concept of causality a system advocates exhibits the logic of the entire system. There is a special reason why the Mādhyamika should pay particular attention to causality. The entire Buddhist thought revolves on the pivot of Pratītya samutpāda, the Mādhyamika system is the interpretation of pratītya samutpāda as sūnyatā.

A critique of causality has necessarily to be a criticism of the views held by different systems. It does not directly concern itself with the causal phenomenon; that is the work of science and common sense. Philosophy can only take into account our understanding of things; the datum of philosophy is not the raw fact, but the facts which have already been subjected to a measure of unification and synthesis by the understanding at work in science.

23. Kant's Metaphysic of Experience, Vol. II - Paton

24. yah pratītya - samutpādam paśyati daśa sa paśyati; dūkhanaṃ samudāyaḥ caiva nirodham nārgaṁ eva ca — Mādhyamika Kārika XXIV, 40.

"yah pratītya samutpādeḥ - sūnyatā saiva tu matā", quoted in Bodhi Cary Āvatāra Panjikā by Prajñākaramati, Pg. 417
Except the materialists (the svabhāva vādins) who advocated the chance-origin of things, no serious philosophical system in India denied causality or took it as subjective, i.e., as formed through habit and association of ideas and therefore as merely probable. The Buddhist, the Jaina and the Brahmanical systems all subscribe to the principle of causality as governing all phenomena. Each interpreted it in its own way, but before the advent of the Mādhyamika. They took it as ultimately real as a feature of the unconditioned nonmam. The problem for Mādhyamika is thus confined to proving that causality and other categories are of empirical validity only. They constitute the structure of phenomena. But with regard to the nonmam (tattva) they are mere ascriptions — vikalpa. To adopt Kantian view, we may say that the categories are empirically real but transcendentally ideal (subjective, false). The Mādhyamika establishes this conclusion by showing that all the possible ways in which the categories can be understood under the forms of identity, difference, or both, or neither are riddled with contradiction. This shows their relativity and their limitation to the phenomenal realm.

According to Kant, the problem was first to justify the empirical reality, the a-priory of causality, substance etc. But against Kant, Hume reduced them to association of ideas and habit. For Hume, causality is invalid (subjective) even empirically; they are not true of phenomena even. In that circumstances his position goes against science and commonsense. Though it is mentioned that Buddhism is usually thought to be
Humean in its outlook, this should be confined to the dictum that existents are discrete atomic entities. Unlike Hume, the Buddhists accepted causality as a universal and objective principle, ultimately valid of the unconditioned too. For Kant, there was a double task; to prove the categories of the understanding to be a-priori (this he does in the Analytic) and then to show that they are valid within phenomenon alone and are not constitutive of the nonmonon. This he does in the transcendental Dialektik. The Madhyamika procedure is simple and direct. He had not to defend the empirical reality of the causal principle, but only to urge its restriction to the sphere of phenomena.

From Hume to Russell it is a controversial problem that necessity is a fiction and that causality means invariable connection of uniformity of process. Whether necessity is regarded as a fiction or a myth, it is certainly not a meaningless concept. Hume who was against the concept of necessity, also recognises its meaning.

Bertrand Russell intends to banish the words cause and effect from science and philosophy. In order to find out what philosophers commonly understood by 'cause', Russell has found the following three mutually incompatible definitions:

of another process.

'Cause and effect — are correlative terms denoting any two distinguishable things, phases or aspects of reality, which are related to each other that whenever the first ceases to exist the second comes into existence immediately after, and whenever the second comes into existence, the first has ceased to exist immediately before.

The first definition obviously is unintelligible without a definition of 'necessary'.

Of course, Russell realises, as Hume did long ago, that though the concept of necessity is "very far from having any definite signification" it is very intimately connected with the notion of causality.

A causal law is not necessary in the sense that it has no exceptions. By a "causal law" Russell means "any general proposition in virtue of which it is possible to infer the existence of one thing or event from the existence of another or a number of others." This is in complete agreement with Hume who also regarded the causal law as a rule of inference. The cause and the effect need not be and usually are not similar to one another. A causal law states an implication not in the sense of an objective relation of ground and consequence but in that of a specific relation among propositions that justifies inference.

26. Our Knowledge of the External World. - Russell, Pg. 216
"The Principle 'same cause, same effect', which philosophers imagine to be vital to science, is ........ utterly otiose. 27

Because as soon as the antecedents have been given sufficiently to enable the consequent to be calculated with some accuracy, the antecedents become so complicated that it is very unlikely for them ever to recur. Hence if this were the principle involved, science would remain utterly sterile. Russell admits that principle is neither self-evident nor a-priori, or a "necessity of thought". Further it should not be regarded, in any sense, as a "premise of science", but an empirical generalisation from a number of laws which are themselves generalisations. Here Russell agrees with Mill and not with Hume who considered the law of causality to be an instinctive belief grounded in human nature. It goes without saying that neither Mill nor Hume thought of formulating the law in these terms.

In "The Analysis of Mind" Russell makes sufficient amends by going to the other extreme and almost suggesting that causation is nothing but regular sequence. 28 Strictly speaking cause is indeed nothing short of a state of the universe. But such a conception of causation has no practical value. Again the traditional view that the cause can under no conceivable circumstances fail to be followed by its effect is equally useless. For, everything in nature is apparently in a state of continuous change. So, cause and effect have to be continuous

27. Mysticism and Logic - P. 188
28. The Analysis of Mind - Russell, P. 96
process. Thus if cause and effect are taken to be two different events, both must be shortened indefinitely. Hence Russell arrives at differential equations embodying causal laws. A physical law does not say 'A will be followed by B', but tells us how the particle's motion is changing at each moment. But such laws are not known to be exact, though they may possibly be so. The laws that we actually know empirically have the form of the traditional causal laws, except that they are not to be regarded as universal or necessary. Every event has many nearly invariable antecedents and therefore many antecedents which may be called its cause. Causation is therefore from the practical point of view the same as almost unvarying sequence. This shows that Russell accepts Hume's view of causation as regular sequence in regard to its use in everyday life. But Russell ignores the contiguity in space which was considered by Hume to be part of the causal relation.

Both Hume and Russell regard cause and effect as contiguous in time and E. N. Broad points out that even if all causation involves, it is not beyond doubt whether all regular sequence would be counted as a causal law. He says that "there are many cases where we should admit regular sequence and unhesitatingly deny causation; though there are perhaps no cases where we can unhesitatingly assert causation in addition to regular sequence". The lay man is told that he cannot state the difference between causation and regular sequence and hence there is no difference to state. Further it might be that regular sequence was not

even part of what we mean by causation, but was merely a sign by which the presence of this other relation is indicated. Our unwillingness to equate causation with regular sequence strongly suggest that there is something in causation besides regularity of succession. And, if there be a peculiar relation, that missing factor may well be "a certain spatio-temporal continuity between the sequent events."

Again, in acceptance of the cause and effect as contiguous in time, Broad points out that this view contradicts the general belief that the time-series is continuous. For contiguity does not involve continuity and something may intervene between contiguous events to oppose their causal relation. Russell therefore urges that the interval between them "must be shortened indefinitely" and in a strict sense cause and effect must be continuous and a causal law will be reduced to a differential equation. Hume, however, would not and could not speak of the time-series as continuous; but this is partly justified in that he was mainly occupied with vindicating the employment of causality in practical affairs. For such purposes contiguity alone is needful and capable of justification.

F.H. Bradley regards the causal relation (or any other relation for the matter of that) as illusory because it is self-contradictory. He urges that cause and effect cannot be continuous with one another. He points out that if cause and effect are continuous with each other, there will be a blank time between them during which the cause does not operate which is impossible. Again on the other hand cause cannot be
continuous with effect, because if we took an infinitely thin section across the stream of events it would contain the cause of all that followed, and yet it would be no existent for it could occupy no time at all.30 The thesis of the above seems to correspond to an argument of Russell's purporting to reduce the interval between cause and effect in definitely. But the resemblance is superficial in that Bradley's argument, unlike Russell's, implies an activity theory of causation which cannot be accepted after Hume has inveighed so well against it.

Bradley's thesis assumes that the cause forces the effect to happen as soon as it is strong enough to do and that if it could not do it at the beginning of the interval and nothing happen during the interval, there is no reason why it should do so at the end. Sigmund has a very similar argument stated in clear terms. Continuity is a limiting concept. Finite periods of time perceivable by us do not enable us to infer continuity between events. Perceivable events are sensibly contiguous and not continuous. We can never form the idea of a continuous series whose members are not contiguous.

Miss L.S. Stebbing points out mere spatio - temporal continuity cannot amount to causation it involves a reference to "continuity of change of character of the events" related as cause and effect.31 She says that it is a mistake to suppose that one event causes another event. The missing factor in causation is not necessity or force but lies in the characters

30. Appearance and Reality, pp. 60 f.
of the events. It is an event having a certain character that causes another event having a certain another character to have some other character. She points out that the very fact that we speak of "regular sequences" indicates a reference to the characters of the events, for events cannot occur.

Miss Stebbing rejects the regularity view of causation because it takes no account of the continuity of change of character that is essential to causation. But she is not proponent of the view that causation involving change of characters is equivalent to the logical relation of entailment or ground and consequence.

H.W.B. Joseph maintains that the inductive principle is a consequence of the Law of Identity which declares that A is A. Regularity of succession is implied by the very nature of the causal relation which connects two characters. The same cause must always give rise to the same effect. Now such a way of thinking is open to serious objections. Firstly, the cause can never be regarded as an agent that acts on another object and then produces a change in it. Activity is never observed by us, nor does a third thing come between the cause and the effect. Secondly, the Law of Identity is only an ideal, to which the rationalists would like our judgments to approach so that their very forms would be sufficient guarantee for their truth. But if any judgment satisfied this test, it would cease to be a judgment proper by becoming a mere tautology. Again if the law is regarded as applicable to the world of
existents, we would be committing a blunder. Things do change, otherwise there would be no discussion of causality.

Moreover the inductive principle can be deduced from the Law of Identity only by either regarding everything as eternally the same (as Leibniz imagined) or by supposing that the nature of a thing is constituted by its relation to other things and in particular by its causal relation (as the Absolutists imagine). A.C. Swing believes that, it can be upheld if causality can be proved to be an internal relation. Therefore, the regularity of succession cannot be deduced from the assumption of causality as an internal relation. The internality of the causal relation can be proved if we can also prove that causation involves an implication, as Swing argued.

Spinoza equated causation with implication and Swing believes that causation at least involves it, while Kant spoke as if true causation in the noumenal sphere were a relation of ground and consequence. It is supposed by most people that necessity is involved in causation. This conception is said to be the last trace of the anthropomorphic superstition that all causation involves compulsion. Kant assumed that causation was a necessary relation between events and many others like to follow him in this respect. But nobody has succeeded in proving that the same cause must give rise to the same effect.

Dewey believes that the doctrine that causation consists of a relation between an antecedent and a consequent event is "the

result of a confused mixture of ideas of two different orders." \(^{33}\)

There are no such things as uniform sequences of events, which are minute parts of a spatio-temporal continuum that is unique. On the other hand, a generalised conjunction of characters is a relation between two things but they are not events and therefore not sequential. Yet both the views are mixed up and we arrive at the conclusion that causation is a necessary relation between two events. In Dewey's discussion of causality, nobody can ignore one right point that if the causal relation is regarded as necessary we must ignore the spatio-temporal linkage of cause and effect. But to do that is to embrace a spinosistic view of the world of existents. Moreover, he has done well to insist that causation viewed as an ordered sequence merges cause and effect into one continuous process. But it is doubtful also as Dewey suggests that continuous process can be called a single event. An event is a point instant in the words of Alexander. Hence it should not be quoted with every continuous process.

The physical world may be viewed as one continuous process, but this continuity is both vertical and horizontal and is revealed in indefinite series of events. Of course, it is difficult to make out across this stream of events and relate them as causes and effects. But Dewey is wrong in maintaining that ontologically, everything is both cause and effect of everything else. Causes are surely prior to their effects and with difficulty we can isolate relatively independent series of continuous events. Hence the concept of causation is not only useful for

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33. Logic - Dewey, Pg. 449
scientific purposes but is also something more than methodological. Samuel Alexander regards causation as a relation of continuity between two existents in respect of their motions.

It may be objected that mere spatio-temporal continuity does not amount to causation and Miss Stebbing has already pointed out that it must have involve a reference to continuity of change of characters among events. Mere events do not cause one another, yet we speak of regular succession of as implied in causation. Alexander would say that the causality should not be confused with the regularity of succession between cause and effect. A cause need not occur twice in the universe and yet it would remain a cause in relation to its effect. Alexander says that without regularity of succession we could not discover causal relations among objects, but causality does not consist in Miss Stebbing also does not equate causality with regular sequence but says that continuity is primarily between two characters of events. She never tells us what this character is, but Alexander holds that this character is simply a movement. So that causation is a spatio-temporal continuity between two motions. Causation, for him is therefore another name for spatio-temporal continuity.

Alexander does not, however, explain why causation cannot be discovered without the help of regularity of succession, if causality does not consist in such succession. The fact is that to regard causation as spatio-temporal continuity is only expressing a half-truth about the matter. For both temporal and spatial continuity can be determined only through the help
of regular sequence. Hence regularity of sequence is a test for causation not with reference to its necessity or invariability but with reference to its character of causation as distinct from a mere sequence that is not continuous and a mere co-existence that is not continuous. Contiguity, both spatial and temporal, can be ascertained from a single observation, but continuity is beyond the scope of observation and experiment. We can determine it only with more or less probability and this is the reason why even regular sequence cannot establish a causal connection with absolute certainty. It may be objected that under the circumstances we should not speak of continuity, but in that case we should not speak of causality either. Attempts to perform a conception more and more precise are always commendable and such attempts lie at the root of all science and philosophy.