

Chapter V

SOME PHILOSOPHICAL PROBLEMS AND THEIR SOLUTIONS. NATURE OF CAUSAL RELATION WHETHER IT IS A KIND OF *SVARŪPA* RELATION OR NOT. COMPARISON WITH SOME VIEWS OF THE WESTERN THINKERS.

In this concluding chapter, I like to consider some philosophical problems and also try to solve them.

First, in different treatises, the Naiyāyikas have defined cause (*kāraṇa*) and superfluity (*anyathāsiddha*) very carefully. For them, causality is the invariable immediate antecedent of what is not a superfluity (*anyathāsiddha*). That is, the cause must abide in the substance in which the effect is produced, at the moment immediately preceding that of its origin. But what is superfluity? Whatever is not strictly necessary to explain a phenomenon is a superfluity ; for example, the donkey that carries the earth for making a jar because the earth could be carried otherwise. For the Naiyāyikas, superfluity is of five types:

(1) The particular aspect in which a cause is known to be antecedent to its effect is a superfluity with regard to that effect; as the characteristic attribute of staff (*daṇḍatva*) is with regard to a jar. Actually, a staff is the auxiliary cause of a jar, and it is so by virtue of its being a staff, and not as a substance or one of the categories, or anything else. That

particular aspect in respect of which it is a cause-in logical language, the determinant of its causality-is the first superfluity.

(2) That which has no independent agreement and difference (*anvaya-vyatireka*) (with the effect), but whose agreement and difference with the latter are known only through those of the cause, is a superfluity, as the colour of the staff. That which has no independent bearing on the existence or non-existence of the effect. If there is a staff, a jar is produced. This is agreement. And if there is no staff, no jar is produced. This is difference.

(3) That which must be known to be antecedent to something before it is known to be antecedent to a particular effect, is a superfluity with regard to that effect; as ether is to a jar etc. It is a cause of the jar etc, only as ether. And ether is that which is the inherent cause of sound. Hence it can be known as a cause of the jar etc, only after it is known to be a cause of sound. Therefore it is a superfluity.

(4) That which is known to be antecedent to a particular effect only after it is known to be antecedent to its cause, is a superfluity with regard to that effect; as the potter's father is with regard to a jar. He is superfluous if he is considered to be the cause of the jar only as the father of the potter (who made the jar).

5) Since an effect is possible only from what is

indispensable and invariably antecedent, whatever is other than that is a superfluity. Although with regard to a particular jar a donkey may be an invariable antecedent, yet, since with regard to jars in general the staff and the rest have been universally accepted to be the cause, and can therefore produce that particular jar as well, the donkey is a superfluity.

The above five cases are the cases of *anyathāsiddha*. They are not the causes of a particular effect. Now though the Naiyāyikas have made a distinction between *kāraṇa* and *anyathāsiddha* regarding a particular effect, still it is very difficult to show a demarcating line between *kāraṇa* and *anyathāsiddha*. An object which is a cause in the context of a particular effect may be *anyathāsiddha* in another case or in another situation. A teacher, for example, may be a cause for teaching privately a naughty boy. While teaching student's mother may visit the room with some other work, and in this case mother, though antecedent, is to be taken as *anyathāsiddha*. The same mother may be taken as a cause behind the teaching of a naughty boy who does not care for the teacher. Here mother's presence is essential for his teaching. It is clear therefore that the status of cause or *anyathāsiddha* in respect of an effect is not fixed but changeable or situational. Naturally, question arises: whether an incident should be taken as a cause or *anyathāsiddha*? This is the vital constituent of the theory of causality. The answer would be in favour of its situational

character. Apart from this, the term 'cause' cannot give us an exact meaning so that it leads to ambiguity. Sometimes 'cause' means a cause related to the generation of result (*phalopodhāyaka*) or sometimes mean something having intrinsic potentiality of being a cause (*svarūpayogya*). The Naiyāyikas have admitted *svarūpayogya* cause as a bonafide cause. But this standpoint again is not problem free. A cause which is *svarūpayogya*, e.g, stick existing in the tree of a forest is not directly related to the cause that is , the stick in the hand of the potter and hence it is *anyathāsiddha* in the true sense of the term. How can it be described as a cause? It is clear therefore that something may be taken as superfluous or *anyathāsiddha* in a particular case, but it may have potential or essentially fit for being a cause which is called *svarūpayogya* cause. Hence it is very difficult to give a demarcating line which can differentiate a particular *anyathāsiddha* from a cause. Rather it can vary from case to case. We must keep this flexible character of cause while analysing the nature of it. Now the above mentioned problem may be avoided if the governing factor of qualificative cognition (*Viśiṣṭadhīniyāmaka*) is taken in the same sense of being the object of cognition. In this case Gadādhara's suggestion may be mentioned here in the following way— " x is a relation of y if x is the object of the cognition of something z as qualified by y and at the same time x is not z. Literally, relationship

with respect to y is that contentness of a cognition which is conditioned by the qualierness in y and at the same time is different from the qualificandness of that cognition.”¹

This definition again is not flawless. It creates a problem in case of false knowledge. According to the Naiyāyikas, though colour remains in a substance through the relation of inherence, one may wrongly take colour as existing in a substance through the relation of conjunction (*saṁyoga*). In this case though conjunction becomes the object of false knowledge, this should not be taken as a relation. But according to the above mentioned definition, conjunction here comes under the scope of relation. This viewpoint may be ratified by saying that though conjunction does not remain between colour and substance it is a relation subsisting between two objects as found in pot and ground. There is no problem therefore to describe it as a relation. But the Naiyāyikas do not accept such view. For them, conjunction cannot exist between colour and substance and hence it comes under a non-entity. That is, by virtue of being an unexampled (*aprasiddha*) the conjunction subsisting between colour and substance does not come under the definition.

Secondly, it is a remarkable fact that the Naiyāyikas have given much intellectual labour and pain in formulating the definitions of *samavāyī* and *asamavāyī kāraṇa*. According

to them, an inherent (*samavāyin*) cause is that inhering in which an effect is produced; for example, 'threads' are of a 'cloth' and a cloth of its own colour and other qualities. "An *asamavāyi-kāraṇa* is that entity which is a cause as inhering in the self-same object along with the effect or the cause; for example, the conjunction of threads (*tantu-samyoga*) in relation to the effect 'cloth' or the colour of the threads (*tantu-rūpa*) in relation to the effect colour of the cloth" ²

Now the problem is that in defining *nimittakāraṇa* they have accepted the method of residues. To them, it is a kind of cause which is different from *samavāyī* and *asamavāyī kāraṇa*. (*ābhyāṃ samavāyikāraṇāsamavāyikāraṇābhyāṃ param bhinnam kāraṇam trīyaṃ nimittakāraṇam ityarthah*).³

In this case we do not find any informative characteristic features of it so that we may have a clear idea about this. Hence it bears some logical weakness of the Naiyāyikas.

In a subsequent commentarial literature called *Nṛsiṃhaprakāśikā* on *Tarkasaṃgrahadīpikā*, we find another definition of *Nimittakāraṇa* which also cannot solve the problem raised above. The chief qualificierness (*prakāratva*) in a *prakāra* or chief qualifier of the cognition attained through the term *nimittakāraṇa* or the property of being the possessor of the above mentioned type of cognition attained through the relation of *prakāratā* is

nimittakāraṇatva, (*Atra nimittakāraṇa-śabdād dhīna – Jñānīyaprakāratvam prakāratā sambandhena tādrśa-jñānavattainḥ Vā nimitta-kāraṇatvasāmānya-lakṣaṇam*) This definition is also not accurate because this definition also cannot point out clearly the object defined (*lakṣya*). If it is said that the content or *prakāra* of the knowledge of a cow is 'cow,' it is insignificant to the hearer, as it fails to give a picture of a cow. Hence definition of *nimittakāraṇa* cannot be taken as a definition, but it is nothing but introduction (*uddeśa*). We do not find its definition in latter literature and hence it is a logical weakness of the Naiyāyikas.

In fact, a large number of objects remains under the category of *nimittakāraṇa*. If we can know the exact characteristics of *samavāyī* and *asamavāyī kāraṇa*, the rest which covers a large area may be understood as *nimittakāraṇa*. It is very much difficult to bring a common connotation among the whole class of *nimittakāraṇa*. For this reason it is described as distinct from the two. For the Naiyāyikas, *samavāya* is an independent category. *Prasastapāda* defines it as 'the relationship subsisting among things that are inseparable, standing to one another in the relation of the container and contained, and being the basis of the idea, "this is in that"'. It is inseparable relationship. It is eternal because its production would involve infinite regress. *Samavāya* has

no locus or substratum. It remains in itself.

While justifying the eternality of *samavāya* as a relation the Naiyāyikas have accepted the absence of a pot in a particular locus even after the pot is brought. Because this particular absence is connected with a particular time. Even after a pot is brought, the awareness of absence of it within that particular span of time cannot be lost and hence it is eternal.

If this standpoint of the Naiyāyikas is taken for granted, it may create problem in the case of *prāgabhāva* which is taken as having an end but no beginning (*anādīḥ sāntaḥ*). An effect is defined as the negatum (*pratiyogin*) of a prior-absence (*prāgabhāva*). The word 'pratiyogin' is used here in the context of an absence (*abhāva*). It means the negatum or that whose absence is spoken of or cognised. In the case of 'absence of a pot' (*ghatābhāva*), the pot is the negatum or the *pratiyogin* of the absence. So by the 'negatum' or '*pratiyogin*' of a prior absence would be meant 'that whose prior-absence is spoken of'. 'Prior-absence' (*prāgabhāva*) of x is the objective basis of a correct usage and cognition like 'x will be'. In other words, it is a factual situation answering to a correct usage or cognition like that. If we speak of 'prior absence of a pot', the prior absence would be the objective basis justifying such

speaking or cognition and the pot would be the negatum of such absence. Now an entity like a pot, a table or a tree etc. is said to be an effect. It comes into being at a certain time. Before that time the particular pot or table was not in existence; that is to say, before that time there was its absence. And as we have a feeling of the absence of a pot in a particular point of time, it would remain as such even after the pot is produced as per the logic involved in justifying eternality of *samavāya*. If it is accepted, the definition of an effect will fail.

Lastly, the Buddhist view that cause and effect relation cannot be accepted because it is seen that when a cause exists an effect does not and when an effect comes into being, the cause is not there is not true. For it gives us a partial view of the idea of cause and effect. It is true that a cause does not remain when an effect is produced; for example, mud, the material cause of a pot does not exist as soon as a pot is produced. But the fact is that it is true only in the case of material cause (*upādāna kāraṇa*) and not true in the case of auxiliary cause (*nimitta kāraṇa*). When a pot is produced, the *nimitta kāraṇa* like God, potter, wheel etc. are very much present, but not destroyed. In such case both cause and effect are found present. It is clear therefore that Dharmakīrti's account of causation is not flawless. It suffers from the defect of *avyāpti* (under-coverage).

Nature of causal relation whether it is a kind of *Svarūpa* relation or not

For all systems of Indian philosophy except the Buddhists, 'relation' is an existent category because without relation day to day behaviour through language becomes impossible. 'Relation', between things of our experience is a pervasive characteristic of any object of knowledge. It is a prescientific assumption of commonsense that the world consists of a number of interrelated things and events. Causal relation between successive events in time is one specific class of various relations that appear to hold between objects, like equality, identity, greater or less, to the north or south of, to the east or west of, above-below, right-left etc. In a relational situation, a relation cannot subsist without some terms of the relation, so that relation is not possible without terms. Relation plays an important role in our day to day behaviour in general. It is a tool to the communication of certain thought required to form a particular system.

In Indian system, though the Buddhists do not accept 'relation' as an existent category, the Navya Naiyāyikas, another system in Indian philosophy realise the fact that we cannot do anything without language. And language is not possible without relation. This is why the *Navya Naiyāyikas* accept relation between a word and its meaning (*śabdārtha*).

Now for the Naiyāyikas, the sense-object contact which is a cause of perpetual knowledge is of six kinds and conjunction and inherence are the two major relations – contact among them. In many cases these two relations – contact serve as an operative. But there are certain cases where these two relations-contact do not serve as operative. In such cases, the *Navya Naiyāyikas* accept a peculiar relation called *svarūpa* (self linking). This relation is inevitable in any philosophical discourse. Let us clarify such relation. It is a relation which is essentially an accepted object or identical with some accepted objects and at the same time it possesses the characteristic features of a relation having been qualified by a particular attribute. For example, the absentness (*pratiyogītā*) in the case of a negation exists in the absentee (*pratiyogī*) and hence it should be regarded as an accepted entity. In the same way, the absentness (*pratiyogītā*) may also be regarded as a relation from the standpoint of its being qualified by an extra-ordinary property called absenteeness. The absenteeness (*pratiyogītā*) exists in an absentee (*pratiyogī*) through the relation called absenteeness (*pratiyogītā*). Here we do not find any difference between *pratiyogītā* and its relata (*pratiyogī*). In the same manner, contentness (*viśayatā*) that is, the property of being the locus of the content (*viśayitā*) exists in self - linking relation with

content (*viṣaya*) and something having content (*viṣayī*). This type of relation is called *svarūpasambandha* according to the *Navya Nyāya*. Another example, namely, (*viśeṣanātā*) qualificierness exists in the absence of a jar through the self linking relation while qualificandness (*viśeṣyatā*) is related to ground (*bhūtala*) through the *svarūpa sambandha* as per the definition 'the property existing in the *anuyogi* or subjunct is called relation. In this manner, different self-linking relations can be established. *Putratā* (property of being a son), *pitṛtā* (the property of being a father) are the instances of self linking relations. Before having a child, an individual cannot be said to be a *pitā* (father) but he can be said to be a *putra* (son) of a father. And when he gets a son, he acquires a new property of being a father. Now it is true that the property of 'fatherhood' (*pitṛtva* or *pitṛtā*) does not exist in an individual when he is a son ; still this property exists in him implicitly. The property called 'fatherhood' (*pitṛtva*) exists in father directly by the self - linking relation called *āśrayatā* (i.e, the property of being a substratum) and indirectly in a son by the relation called *nirūpakatā* (the property of being a determinator). Substratumness exists in self-linking relation with substratum (*ādhāra*). In the same manner, the property of being a cause (*kāraṇatā*) and the property of being an effect (*kāryatā*) exists in the cause and the effect through the self linking

relation; that is, the property of being a cause (*kāraṇatā*) and the property of being an effect (*kāryatā*).

The fundamental characteristic of relation is that it exists in two relata (*dviṣṭhaḥ sambandhaḥ*) because, relation binds one with another. Relation also acts as a connector (*sannikarṣa*) and this *sannikarṣa* determines the property of being qualificand and qualifier between two objects totally different from each other.

Now the idealistic philosophers like Buddhists do not accept any relation because they do not accept the ultimate reality of this world. To him like other relations causal relation is a myth. Dharmakīrti, a celebrated Buddhist logician holds that there is no relation between cause and effect. He gives the following arguments in favour of his view.

1. For him, relation holds between two objects as existing simultaneously; but cause and effect do not exist simultaneously. Hence they are not at all *dviṣṭha* that is, existing in two at the same time. And if this be so, that is, if they are *advīṣṭha* (non-existing in two simultaneously), how can we say that there is a relation between cause and effect? “*Kāryakāraṇa bhāvopitayorasahabhāvataḥ/prasiddhyati katham dviṣṭho dviṣṭhe sambandhatā katham*.”⁴ According to the Naiyāyikas, any type of relation involves the characteristic of *dviṣṭhatva*—property of existing in two. If

'cause' and 'effect' these two relata do not exist simultaneously, there cannot be the property of *dvishāva*. In order to avoid this difficulty, if one accepts cause and effect as simultaneous occurrences, then also causality cannot be shown to be operative because mere simultaneity cannot regard an event as cause and the other effect. The left and right horns of a cow occur simultaneously, but neither of them is regarded as cause of the other.

2. One may argue that cause and effect may occur successively either in a cause or in an effect and not simultaneously ; therefore this relation does not presuppose two relata. This relation may occur in one in the absence of another one. And if this be so, no relation in the true sense of the term can be said to exist in one relatum. "*Krameṇa bhāva ekatra vartamāno 'nyanisprhaḥ / Tadabhāve' tadbhāvāt sambandho naikavṛttimān*"⁵. In fact, the concept of relation or *sambandha* implies certain questions as 'relation of whom' and 'relation with whom'. And if one of these questions is not answered the meaning of the term 'relation' will be insignificant . It is clear therefore that relation always presupposes two relata and not one.

3. Even if one argues that the causal relation exists either in a cause or in an effect successively, it follows that the relation is not concerned with either a cause or an effect ; that

is, it may exist even without connecting itself with both the relata at the same time. And if this be so, then the relatum cannot be accepted as a relatum because the concept of *kāryakāraṇabhāva* (cause and effect) relation implies the connection of both the entities — *kārya* and *kāraṇa* at the same time. But the fact is that when there is a cause, there is no effect and when effect comes into existence, the cause is not there. So how can we accept a relation abiding in one relatum? Hence No relation between cause and effect is possible.

Besides cause and effect, if we accept another entity, called relation, then the left horn will be the cause of the right horn due to having the connection with the property of existing in two. “*Yadye-kārthābhisambandhāt kāryakāraṇatā tayoh/ prāptā dvitvādisambandhāt savyetaraviṣṭāṇayoḥ*”⁶. The term ‘*ādi*’ in ‘*dvitvādi*’ denotes proximity, remoteness, distinction etc. If two objects are related by virtue of being related with the property of existing in two (*dvitvādi*), then proximity, remoteness, distinction etc. are also be regarded as relation because they are related with ‘two’ Proximity, remoteness etc. — these concepts are relative in the sense that they presuppose the existence of two entities. And these relative concepts are not relations at all, though they are connected with the property of ‘existing in two’.

4. Let us consider another problem : that is, whether the cause and effect are different or identical. If they are taken as completely different, there would be no relation between them. And if, on the other hand, they are taken as identical, they are no longer separated and hence, there is no scope for accepting any relation between them. In this way Dharmakīrti has refuted the reality of relation in cause and effect.

Now though Dharmakīrti has given much emphasis to refute the existence of any relation between cause and effect, the historical analysis of Buddhism shows that their philosophy is based on the law of causation. The causal theory in Buddhism is known as *pratītyasamutpāda* gives us the idea that everything in this world is dependent on another and hence it is relative, conditional and impermanent. The causal theory is the pillar of the four noble truths, law of karma etc. accepted by the Buddhistic philosophers.

According to Dharmakīrti, no relation can be hold between cause and effect as they do not exist simultaneously; at the same time, they do not have *dviṣṭhatva* in character.

But for the Naiyāyikas, this view is not tenable because mere simultaneous existence of two objects cannot be a criterion of determining cause and effect relation; other criteria must be fulfilled for being a cause and this criteria is that a cause must be free from superfluity (*anyathāsiddha*). Again,

dviṣṭhatva i.e., the property of being existent in two is not a definition (*lakṣaṇā*) but only a symptom that may be used by an individual for identifying the causal relationship. Not only this, the status of being a 'cause' or an effect' on the part of events is a situational matter; that is, it is the situation that determines which of the two events would be the cause or the effect. It can be said, therefore, that Dharmakīrti's critique of causal relation is based on misconception.

Apart from this, the property of being a cause (*kāraṇatva*) and an effect (*kāryatva*) are acquired properties and therefore whether an object is to be regarded as a cause and an effect depends on the situation. An object which is regarded as cause in a particular occasion may be taken as an effect in a different situation. It is essential to consider the given definition of cause while describing an object as the same. Two objects remaining simultaneously cannot always necessarily be a cause and an effect in a different case.

As the causal relation does not come under the purview of the wellknown relations like contact, inherence etc, it would be taken as a kind of *svarūpa* relation. Like other properties these *kāryatva* and *kāraṇatva* are acquired properties on account of which inherence is not applicable.

Comparison with some views of the Western thinkers

Human reason is troubled by certain questions, which it cannot avoid, because they spring from its own nature, and which at the same time it cannot answer, because they transcend its power.

The difficulty is not of its own creation. It starts with principles which are amply verified within experience, and one does not suspect that their use will be illegitimate in any case. One such principle is the law of causality which says that every event must have a cause. The validity of this law is well proved in experience. But as we go on asking for cause, we find that the causal chain cannot be completed. We therefore take refuge in a first cause to which we believe the causal series leads. But in so doing, we fall into obscurity and contradiction, because we do not understand how the first cause was led to begin its causal operation. As the first cause goes beyond all experience, we cannot verify any of our assertions with regard to it and so our controversies about it cannot be decided by any test of experience.

Now it is true that we cannot verify any of our assertions with regard to the first cause by any test of experience, but we can verify the validity of the general law of causality which says that every event must have a cause through our experience. In experience, we find that the events of nature exist in two

distinct relations to one another; that of simultaneity and that of succession. Every event is related in an uniform way to some other events that co-exist with it, and to some that have preceded and will follow it. Among all the uniformities in the succession of phenomena, we recognise a law which is universal. This law is universal in the sense that it is co-extensive with the entire field of successive phenomena, all instances whatever of succession, being example of it. This law is the law of causation. The truth that every fact which has a beginning has a cause is co-extensive with human experience.

Now if we analyse causation, we find two elements; cause and effect. The invariable antecedent is termed the cause; the invariable consequent, the effect. And the universality of the law of causation consists in this, that every consequent is related with some particular antecedent or set of antecedents. An analysis of 'effect' requires an analysis of cause because when we treat something as an effect, we search for the cause of it and we do not get relief until we show something as the cause of it. Regarding causation some fundamental questions arise, namely, what is 'cause'? What is meant by an 'effect'? How long may the time interval be between cause and effect ?

Different philosophers define cause in different ways. I

shall first consider here the view held by the empiricist philosopher David Hume who maintains the supremacy of sense experience over the faculty of reason. And then I will consider a comparative estimate of cause and effect both from the Indian and Western standpoints. I will specially devote my attention to Nyāya on the Indian side and to Hume on the Western side.

Regarding causation, Hume's view is that causes and effects are two distinct and separate events. So no amount of rational analysis would enable us to discover the one in the other. The effect is totally different from the cause, as such it is not discoverable in the cause by any apriori arguments whatsoever. If on the contrary, the effect is discovered in the cause there must be a tie or link binding the events together. As a result, cause and effect could not be separate. If they are not separate, we have no right to talk of cause and effect, but only of continuous process. Surely, to name one event as cause and to distinguish it from another called effect, we are to observe and depend on repeated successions between the two events, one preceding and the other following. Hume says that there is no necessary connection between the cause and the effect. On observing particular events repeatedly conjoined, we are, says Hume, determined as it were to draw an inference. And the principle which underlies such inference

is custom or habit. Our minds being influenced by the principle of custom or habit, at once jump to the idea of necessary connection where there is only customary conjunction. It is due to the principle of custom or habit that repetition tends to give rise to a tendency in the mind to renew the same act or operation without being impelled by any reasoning or process of the understanding. Hume concludes that all inferences from experience, therefore, are effects of custom, not of reasoning. He maintains that the analysis of causation simply reveals uniformity of sequence or constancy of conjunction between two events, say, flame and heat. We think that these objects, flame and heat have appeared in a regular recurrent order of contiguity and succession. So these objects become associated in the mind with the result that when one appears, the idea of the other occurs to us and is raised to the status of belief. In other words, if we always see flame followed by heat, we get into the habit of expecting heat when we see flame. The formation of this habit, according to Hume, is independent of rational choice. So causal inference is nothing more than custombred expectation.

Now before expand the discussion of the Nyāya theory of causality vis-a-vis Hume, let us consider some of the main points of resemblance between Hume and Nyāya.

Both Hume and Nyāya agree that the relation between

cause and effect is a factual relation, the knowledge of which is derived entirely from experience. Indeed from the first appearance of an event we cannot recognise it either as a cause or as an effect. The events do not at all bear such descriptions written on their face. That is why, to name an event as cause or as effect we need but take the help of experience. As Hume puts it; let an object be presented to a man of ever so strong natural reason and abilities if that object be entirely new to him, he will not be able, by most accurate examination of its sensible qualities, to discover any of its causes or effects. Thus both Hume and Nyāya, do not, unlike some rationalists, believe in the apriori status of cause. Another point worth observing in this connection is whether the cause and the effect are both regarded as events by Hume and the Naiyāyikas alike. Now both of them regard the effect as an event as it is an occasional occurrence. But it seems doubtful whether the cause is also an event for both, especially for the Naiyāyikas. For the Naiyāyikas, effects are of two types; positive and some are negative, for example, the destruction of the jar is a negative effect while the production of it is a positive one. The negative effect is always caused by an efficient cause (*nimitta-kāraṇa*) alone. But for the positive effect, the Naiyāyikas admit the necessity of three causes — *samavāyī* (inherent) *asamvāyī* (non-inherent) and

nimitta (efficient) *kāraṇa*. Thus production of a jar necessitates the different parts of the jar (*kapāla*), their conjunction (*kapālasamyoga*) and the potter together with his tools (*kumbhakāra, daṇḍa, cakra*, etc.). These different causes of an effect reveal the fact that the cause is not always an event for the Naiyāyikas. According to Hume also, cause is not always an event, the meaning of cause includes something more than an event. Regarding the definitions of cause, Hume writes in the Enquiry, a cause is “an object followed by another, and where all the objects similar to the first are followed by objects similar to the second.”⁷

In a similar way, Hume also writes in the Treatise that “the idea of causation must be derived from some relation among objects.”⁸ When, for example, Hume says that ‘bread is the cause of nourishment’ or ‘fire is the cause of burning’, he certainly means by cause not only an event. Therefore, there is really no substantial difference between the Naiyāyikas and Hume regarding the nature of cause and effect.

The striking resemblance between Hume and the Naiyāyikas perhaps centres round the definition of cause. Both of them maintain that a cause is an invariable antecedent of an effect “*Kārya-niyata-pūrvavartti kāraṇam*,”⁹ in the language of Nyāya. The temporal precedence of cause over the effect has been regarded by both as an essential feature of the causal relation.

There is also a similarity between the Naiyāyikas and Hume regarding the nature of effect. For both of them effect is entirely different from cause. According to the Naiyāyikas, there is no prior existence of an effect in the cause; an effect is a new creation. There is no necessary connection between cause and effect though cause and effect — these two are altogether different.

Hume also maintains that causes and effects are two distinct and separate events. So no amount of rational analysis would enable us to discover the one in the other. The effect is totally different from the cause, and as such it is not discoverable in the cause by any apriori argument in whatsoever. If on the contrary, the effect is discovered in the cause, there must be a tie or link binding the events together. As a result, cause and effect would not be separate. And if they were not separate, we would not have no right to talk of cause and effect, but only of continuous process. Surely, to name one event as cause and to distinguish it from another called effect, we are to observe and depend on repeated succession between the two events, one preceding and the other following.

There is another similarity between Hume and the Naiyāyikas regarding the meaning of a particular word used in a language. According to the Naiyāyikas, if a particular

word used in a language means something and the same word in another language means a different thing, we cannot say that they are inconsistent. Meaning depends on the systematic use and consistent interpretation within a given framework of language. Hume also says in the Enquiry “the whole controversy (with regard to necessity etc), has hitherto turned merely upon words.”¹⁰ So at this point we find a similarity between the Naiyāyikas and Hume.

Both Hume and Nyāya agree that the relation between cause and effect is a factual relation, the knowledge of which is derived entirely from experience. Indeed from the first appearance of an event we cannot recognise it either as a cause or as an effect. The events do not at all bear such descriptions written on their face. That is why to name an event as cause or as effect we need but take the help of experience.

As Hume puts it ; let an object be presented to a man of ever so strong natural reason and abilities — if that object be entirely new to him, he will not be able, by most accurate examination of its sensible qualities, to discover any of its causes or effects. Thus both Hume and Nyāya do not, unlike some rationalists, believe in the apriori status of cause.

Let us consider the difference between the Naiyāyikas and Hume regarding causation.

According to the Naiyāyikas no reasoning or inference can be said to be purely inductive or purely deductive. In order to be certain, any inference must not only follow the deductive principle or ideal, but also must conform to actual experience. In Western logic, the conclusion follows necessarily from the premises taken jointly; for example.

All men are immortal

Plato is a man.

Plato is immortal.

This argument is absolutely valid, being in the first figure of the mood *Barbara*. But according to the Naiyāyikas, this is one kind of fallacious reasoning; it is false as it is contradicted by actual experience. We have in fact experiences of men who are mortal. Hence the truth of the major premise being unproved, the entire argument is false, in the sense that it ends up with a false conclusion. We have keep in mind that *anumāna*, the Naiyāyikas' equivalent of inference, is always treated as a way of knowing, and as such, can contain true premises alone. That is why, in their explication of the different *avayavas* (members) of an inference, the Naiyāyikas lay much stress on *udāharāṇa* since it is used as a supporting evidence for the inference. For them, an inference consists of five essential and indispensable members and an *udāharāṇa* is one of them. The truth is that for the Naiyāyikas, every reasoning

must be both deductive-inductive, formally valid and materially true at the same time. That is, every reasoning must be a combination of formal material, deductive-inductive process. This formal-material or deductive-inductive procedure turns on the establishment of the invariable concomitance between the *hetu* and the *sādhya*. This *vyāpti* relation is confirmed by a concrete example that constitutes an indispensable step of inferential reasoning. With regard to the truth of the propositions occurring in an inference, the Naiyāyikas maintain that so long as the propositions are not falsified by our actual experience or that anybody else, it must be accepted as true. But this view, that is, every inference must be both inductive-deductive is contradicted by David Hume. That is why he failed to recognise any objective necessity in our knowledge of causal relation.

Let us consider another difference between the Naiyāyikas and David Hume. Hume starts his enquiry by making a fundamental distinction between two kinds of reasoning, namely, reasoning relations of ideas and reasoning concerning matters of fact. This distinction is fundamental in the sense that it paves the way for what Hume is going to put forward subsequently as his distinctive view on the nature of causal relation. These two kinds of reasoning, for Hume, are dissimilar. Of the first kind are, the sciences of Geometry,

Algebra and Arithmetic. Relations of ideas give us absolute certainty and require no help from experience. That is, the truths, concerning this group are deductive in character. Mathematical truths are those truths the opposite of which is inconceivable for it leads us to self contradiction.

Matters of fact which are the second objects of human reason are not ascertained in the same way. No propositions about matters of fact are absolutely certain, for we can very well conceive their opposites without involving us in self-contradiction. That the sun will not rise tomorrow is no less intelligible as proposition and implies no more contradiction than the affirmation, that it will rise. All reasonings concerning matters of fact seem to be founded on the relation of cause and effect. By means of that relation alone we can go beyond the evidence of our memory and senses. In Hume's own language "if you were to ask a man, why he believes any matter of fact, which is absent, for instance, that his friend is in the country, or in France; he would give you a reason and this reason would be some other fact; as a letter received from him, or the knowledge or his former resolutions and promises. Or, a man finding a watch or any other machine in a desert island, would conclude that there had once been men in that island. All our reasonings concerning matters of fact are of the same nature." ¹¹ Hence truths relating to matters of fact fall short of deductive ideal.

But according to the Naiyāyikas, mathematical truths are not exempt from experience; the very essence of knowledge for the Naiyāyikas, lies in revealing the objects (*viṣayāprakāśa-svabhāva*), that is, there is no objectless knowledge. All our objects must be derived from experience. Again, it is also not true to say that mathematical truths are absolutely certain; that is, we cannot conceive the opposite of mathematical propositions. In experience, we find that the children and sometimes even the grown up do commit mistakes in solving a sum. This is clear proof that we conceive the opposite of mathematical truths. Had it not been so, we could not have even erred any time during our entire existence in solving any mathematical problem. Again, it can be said that the mathematical truths have no speciality or distinctiveness which is demanding in the case of truths concerning matters of fact. In mathematics, first we define symbols and then we use them; that is, we apply them in a systematic way. If we accept different symbols, than the familiar ones, define them precisely and apply them consistently, we can develop an alternative mathematical system. In this way, one system is not contradicted by another because each system uses special symbols and notations. Our task is to see whether in a given system, the symbols are all used consistently. The same is true about factual truths. Here we use different words which

stand for different objects and we see whether the words are all used accurately. If we use a particular word now in one sense and afterwards in a different sense, we will involve ourselves in contradictions. But if a particular word in a language means something and the same word in another language means a different thing, we cannot say that they are inconsistent.

The difference between the Naiyāyikas and Hume is that where the Naiyāyikas regard the proposition “the sun rises in the east tomorrow” is as certain as “two plus two make four”, Hume regards mathematical proposition like “two plus two make four” as absolutely certain because we cannot conceive the opposite of it. For Hume, the proposition, “the sun rises in the east” is not absolutely certain as “two plus two make four” because the latter proposition is concerned with matters of fact. No propositions about matters of fact are absolutely certain, for we can very well conceive their opposites without involving us in self-contradiction. But according to the Naiyāyikas, the east, west are nothing but limitations of one space which is all pervading. It is no matter whether or not the sun actually rises in the east. For, the direction in which the sun will be seen in the morning is to be regarded as the east and the west only. Therefore, there is no justification for arguing that the sun will rise in the east or in

the north. That is, the proposition, the sun will rise tomorrow in the east is a certain proposition as it conforms to, and is validated by our actual experience. We cannot doubt the truth of this proposition, because if we doubt it, we have to state the ground for such doubting. Endless doubting, for the Naiyāyikas, without any solid ground is a mark of mental disorder. It is not enough to say that the opposite of any factual statement is conceivable. We have to state on what ground such statement in fact is made. According to the Naiyāyikas, if any proposition in question is never falsifiable by our experience or that of anybody else, it must be accepted as true. And there cannot be any ground for doubting the truth of the proposition.

Now both Hume and the Naiyāyikas maintain that it is necessary to discuss first of all two important principles of causality: general and particular principle *sāmānya kārya-kāraṇa-bhāva* and *viśeṣa-kārya-kāraṇa-bhāva*.

Let us begin, in the Humean fashion, with the discussion of the second question first, namely, why do we hold that such particular causes must have such particular effects from the Naiyāyikas' stand point, because this will help us to understand the total force of the argument implied in the first question. The first point worth mentioning in connection with *viśeṣa-kārya-kāraṇa-bhāva* is that both the Naiyāyikas and

Hume argue that our belief in particular causalities is derived from experience. That fire causes smoke is derived, from our repeated observation (*bhūyodarśana*) of two entities smoke and fire. Of these two entities, fire is said to be the cause of smoke since it is always found to precede smoke. A cause is, therefore, an antecedent event in relation to its effect which is always a consequent event. There is no otherway to exclude the effect from the cause than to maintain the temporal priority of the cause over the effect. That is why Annambhatta remarks that the word *pūrvavṛtti* (antecedence) is inserted in the definition of cause only to exclude the effect itself. In order to determine, which one, if any, of the antecedent events, is the cause, both the Naiyāyikas and Hume refer to the invariable, as against variable, antecedents (*niyata-pūrvavṛtti*). By invariable antecedent is meant that if the cause is present, the effect is present (*kāraṇasatte kārya sattā*), and if the cause be absent, the effect is likewise absent (*kāraṇāsattve kāryasattā*). For example, fire is said to be the invariable antecedent of smoke. For whenever smoke occurs, we find that fire invariably precedes it; and whenever there is absence of fire, we experience that there is absence of smoke as well. In otherwords, smoke is never found to be perceived without fire and the absence of fire is never found to give rise to smoke. This is confirmed by our experience and we have never

seen an exception to this.

Let us consider the following sets of antecedent events as examples.

I	II	IIa
AMN BCD	AMN BCD	AMN BCD MNO CDE
OPQ EFG	AOP BEF	AOP BEF NOP DEF
RST UVM	APQ BFG	APQ BFG PQR FGH

It is clear from the set 1 that A and B are related only once but not related at other times. Their relation is variable for the two are not always associated. A variable relation can be defined in this way : the relation between two things is variable if one is present but the other is not or if one is absent but the other is present. An invariable relation, on the contrary, is agreement in being co-present or co-absent. In the set II, for example, A and B are invariablely related since both of them agree in being co-present, that is, when A is present, B is also present. This invariable relation between A and B would be further strengthened if we take into account negative instances as well along with positive ones. Thus in the set II a, not only do we observe positive instances where A and B are both present, but observe the negative instances as well where the absence of A is followed by the absence of

B.

Now from this, it is clear to us that the causal relation between A and B cannot be ascertained without test of several instances. From the first appearance of A and B we cannot take them to be causally related. In order to do so we need the help of repeated observations. In other words, the invariable relation between A and B can only be known from the constant conjunction between them. By constant conjunction is meant the constant repetition or regular recurrence of two kinds of similar events according to a constant pattern of contiguity and succession.

Now one may raise a question here, viz, how can we be sure of the invariability of two events in face of the fact that constant conjunction on which invariableness depends is derived from experience? Hence what is observed as constantly conjoined now may possibly be overthrown, in the light of fresh experience later. So, there is no knowing that what is invariant now, and thus appears to be invariable now will continue to be invariant in future as well. To circumvent this difficulty and also to establish the causal relation, the Naiyāyikas recommend the formula : *sahacāra-darśane sati vyabhicārādarśanam*. By *sahacāra*, they mean both *anvaya-sahacāra* (i.e, observation of instances of agreement in presence) and *Vyūtireka - sahaçāra* (i.e, observation of

instances of agreement in absence). *Anvaya* is usually stated as *Sa sattā niyata sattākatva*. This simply means that the existence of an effect must invariably be preceded by the existence of the cause. On observing, for example, a regular and uniform agreement in presence between smoke and fire, we conclude that whenever the cause invariably precedes, the effect (smoke) follows. That Hume admits this as a sound method becomes evident from his definition of cause as “an object followed by another, and where all the objects similar to the first are followed by objects similar to the second”.¹² *Vyatireka* is defined by the Naiyāyikas as *sa vyatireka prayukta -vyatireka -pratiyogitva*. This simply means that the absence of a cause will lead to the absence of the effect as well. On observing, for example, a regular and uniform agreement in absence between (non-fire) not-A and (non-smoke) not-B, we conclude that whenever the cause A (fire) does not occur, the effect B (smoke) does not follow. Hume seems to agree with this when he says that “a cause is an object followed by another, and where if the first object had not been, the second never had existed”.¹³

By *Vyabhicārādarśana* the Naiyāyikas mean the non-observation of any contrary instance. If, for example, we find an instance where smoke is present while fire is not, or observe a case where fire is not present and yet smoke is, that will

constitute an exception (*vyabhicāra*) ; here *vyabhicāra* is of two types *anvaya vyabhicāre* (when, for example, A is present but B is not) *vyatireka-vyabhicāra* (when for example, A is absent but B is present). The presence of such contrary instances will show the absence of the causal relation. That is why there must be absence or non-observation (*Vyabhicārādarśana*) of such contrary instances in case of causal relation between A and B. Let us put the argument in tabular form :

<i>Anvaya</i>	<i>Vyatireka</i>	<i>Anvaya</i>	<i>Vyatireka</i>
<i>sahacāra</i>	<i>sahacāra</i>	<i>vyabhicāra</i>	<i>vyabhicāra</i>
A B	\bar{A} \bar{B}	A \bar{B}	\bar{A} B
A B	\bar{A} \bar{B}		
A B	\bar{A} \bar{B}		

A is the cause of B.

From the above table, it follows that constant conjunction depends not only on the relation of agreement in presence and agreement in absence between two instances ; it should also refer to the non-observation of any contrary instances. Such constant conjunction is the basis of our notion of causality. Observation of constant conjunction of A and B makes us feel this relation will continue to hold between A and B in the unobserved instances as well. In other words, constant

conjunction of A and B gives rise to an expectation in our mind and in the absence of contrary instances, we firmly believe that there is a necessary connection between A and B. Therefore, the idea of necessary connection in causal relation depends on two factors: (1) constant conjunction and (2) the feeling of necessitated transition from the observed to the unobserved. The former is the conditioning and the latter is the constituting factor of the idea of necessary relation. Now though it is true that the feeling of necessitated transition comes out of a subjective belief, still we must remember that this feeling of necessitated transition which is due constancy of conjunction is present in all cases of causal inference and hence common to all human beings. This feeling is not peculiar to any particular subject, but to everyone placed under similar situations. So the idea of necessary relation is not totally subjective; it is better to call it intersubjective. We know that Hume does not believe in the a priori status of causal relation because he is a naturalistic philosopher; but he certainly discovers its origin in a universal 'principle of human nature'. It follows therefore that our idea of necessary relation is also in a sense objective. This is clear from Hume's definition of cause as "an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form idea of the other, and the impression of the one to

form a more lively idea of the other.”¹⁴ That the idea of causality implies necessity follows from Hume’s acceptance when he says that “a cause is an object followed by another and whose appearance always conveys the thought to that of other.”¹⁵

Now a contemporary logical empiricist may say that a statement that is not confirmable by sense experience is non-sensical. To this, we can say that experience is not the only source of knowledge. That rationalists say that Hume searched for causation in a wrong place. If causation is nothing but regular sequence, winter would be the cause of summer and a flash of lightning would be the cause of a peal of thunder. Mill held that cause is not only invariable but unconditional antecedent. It is a set of antecedent events which, without any further condition, is sufficient to give rise to the effect. Bread, for example, is a necessary condition of nourishment though not a sufficient condition. The organism which is nourished by bread must also be included in the set of conditions that is sufficient for the effect. If the condition of the organism be different (e.g. weak and disabled), it is always possible that bread will do harm. Thus Mill seems to admit the necessity of causal relation indirectly.

Of course causal necessity is not identical with logical necessity. Hume is quite right when he says that cause does

not logically entail the effect, the way the properties of a triangle are entailed by the definition of triangle. Logico-mathematical necessity involves no temporal wear and tear; and causal relation is temporal. A.C. Ewing and C.D. Broad think that in some other sense at least, the effect is entailed by the cause. They, therefore, reject, as wholly inadequate, the view that all that is meant by saying "A causes B" is "B regularly follows A". Even if it is not quite clear what this other sense of causal necessity is, it does not follow that the regularity view is adequate.

Actually Hume's psychological atomism (the doctrine that particular impressions or sensations as given in experience are distinct and separate) destroys the very foundation of our knowledge of a systematic world. Starting with atomic bits of experience without any connection, the theory makes causal connection entirely subjective — a fiction of mind. Hume starts by cutting all ties and bonds amongst events and then complains that they have no connection whatsoever.

On Hume's theory we have no rational basis of calculation, prediction and inductive generalisation; for all these processes assume that the same cause will always produce the same effect. According to Hume we have no more reason to expect that the kettle will boil when it is put on fire than when it is put on ice. This seems odd. Russell contends

that higher physics can do without the idea of causation in the sense of necessary connection. Even then, there are sciences other than higher physics. When the bio-chemist studies the action of chemicals on living organisms, he must assume "causal connection".

If causality is mere sequence, no human action would ever spring from a motive or a character; there will be no connection between volition and behaviour. The sense of moral responsibility would then be meaningless. Hence cause is more than regular sequence. It implies a necessary order of events that is strictly irreversible. The effect always upon the cause but not conversely. The necessary order is not a fiction of the mind, but is objectively real.

Immanuel Kant held that cause is an a priori concept which is the precondition of our experience of objective succession. It is not given in experience but comes from within and is subjective in origin. It is an a priori category of the understanding. When we experience successive events we connect the events according to the law of cause and effect and thus give them order and fixity. This necessary order makes the succession objective and real. The ordered world of knowledge is thus made by the understanding. Causation is thus subjective in origin. But Kant makes a distinction between phenomena (categorised experience) and noumena. For Kant,

causality is valid only within the world of experience and not in the world of thing-in-itself. This may be called disguised subjectivism, for necessary connection is not admitted in reality. But if thought and reality are identical, cause as the category of mind is also a category of reality. The necessary order amongst events which we know, is also objective and real.

These arguments, therefore, support the view that the idea of causality implies necessity.

Now one may raise a relevant objection here. He may argue that there is really no invariable antecedent of a non-eternal effect. We find in our experience that a particular effect is connected with different causes. (This doctrine is called plurality of causes by Mill, Bain etc). Death, for example, may be due to disease, old age, accident and various other causes. Similarly, fire may be produced by straw (*tr̥ṇa*) in one case, by tinder - sticks (*araṇi*) in another and by lens (*maṇi*) in a third circumstance.¹⁶ These examples point to the fact that none of the antecedents is really invariable. We do not have any agreement in presence (*anvaya*) and agreement in absence (*vyatireka*) in such cases. It is true that there is agreement in presence between fire and straw, that whenever straw is present, fire is produced. But there is no agreement in absence between them; for fire may be produced (for

example, by lens or tinder sticks) even when the straw is absent. Same thing happens in other cases as well. According to the Naiyāyikas, this difficulty can be removed if we treat the effect not as same in all cases but only similar. Let us illustrate it with examples. Fire produced by tinder-sticks is different from fire produced by straw. There is agreement both in presence and in absence between straw and fire produced by straw, between lens and fire produced by lens; between tinder-sticks and fire produced by tinder-sticks. We can testify that one fire is different from another through our experience. Suppose, I want to light my room, here I must seek fire produced out of flame and not fire present in red-hot iron ball. Now if we recognise the differences in fire (*vahni vaijāṭīya*), then no difficulty will arise regarding the invariable antecedence of fire. Some Western Logicians also maintain the view that if we specialise the cause, we must specialise the effect in order to overcome the difficulty arising out of the plurality of causes. This is called specialising the effect. The Naiyāyikas remove the difficulty in another way. Like the Western logicians, they hold 'if we generalise the effect, we must generalise the cause as well'. This is called generalising the cause. To fire in general (*vahni-sāmānya*), the Naiyāyikas maintain that '*vijāṭīya uṣṇa sparsavat teja*' is the cause of fire in general. The feeling of heat is there in

fire, but fire as hot is not the cause of fire because one is not of different nature (*vijātiya*) from the other. In other words, the significance in adding the component ‘*vijātiya*’ (heterogeneous) is to exclude the possibility of fire which feels hot, that is, *uṣṇa sparśavān* as the cause of itself. The fire which feels hot (*uṣṇa sparśavān tejah*) is homogeneous (*svajātiya*) with fire (*vahnī*) in general. Hence, by ‘*vijātiya uṣṇa sparśa*’ we mean the feeling of heat as present in *trna*, *araṇi* and *maṇi* (straw, tinder sticks and lens). In short, the fire which is present in straw, tinder sticks and lens is not homogeneous but heterogeneous relation to the effect, fire and so is regarded as the cause of the latter.

Now, it is clear that both for the Naiyāyikas and David Hume, cause is an invariable antecedent. But this criterion is not enough; mere invariability cannot constitute cause. Two things may be invariably connected without one being the cause of another. For example, the colour of the thread is invariably present in the thread which is the cause of the cloth. But the colour of the cloth by itself can never be the cause of the cloth. Similarly, threadness (*tantutva*) being invariably related to thread appears to be an invariable antecedent to any effect whatsoever. For, *ākāśa* is *nitya* (eternal) while the effect is *anitya* (non-eternal). And an eternal entity must always invariably precede a non-eternal effect. Still *ākāśa* cannot be

regarded as the cause of the cloth or jar. Again, the weaver's father being invariably prior to weaver, appears to be an invariable antecedent to the cloth produced. Yet weaver's father is not the cause of the cloth. That is why the Naiyāyikas define a cause as '*anyathāsiddhisūnyasya niyatā purvavartitā*'¹⁷.

By *anyathāsiddhisūnya*, they mean an indispensable antecedent. In the above illustrations, the alleged causes are proved to be antecedent through others and so they are not indispensable. An antecedent is called indispensable when it is not dependent on any other prior event.

This definition reminds us of Mill's definition of cause as 'an unconditional invariable antecedent.'¹⁸ For Mill also, mere invariability of sequence cannot give rise to causal relation. We repeatedly observe a regular sequence between day and night, summer and winter in our experience. But we do not regard the one as the cause of the other. The truth is that they are co-effects. Our experience of the invariable relation between day and night is conditional being dependent upon the rotation of the earth on its own axis. The cause must, therefore, be an unconditional antecedent besides being an invariable one. By unconditional antecedent Mill means only that group of conditions which, without any further condition, is sufficient to give rise to the effect. We may define, therefore, the cause of a phenomena to be the antecedent or the

concurrency of antecedents, on which it is invariably and unconditionally consequent.

Now to some it may appear that the sequence between night and day being invariable in our experience, we have much ground in this case for recognition the two phenomena as cause and effect; and to say that more is necessary — to require a belief that the succession is unconditional, or, in other words, that it would be invariable under all changes of circumstances—is to acknowledge in causation an element of belief not derived from experience. The answer to this, according to Mill is, that it is experience itself which teaches us that one uniformity of sequence is conditional and another unconditional. When we judge that the succession of night day is a derivative sequence, depending on something else, we proceed on grounds of experience. It is the evidence of experience which says us that day could equally exist without being followed by day. But the question is: how can we hope to know that our experience is truly unconditional since our experience is finite and limited? It may happen that what appears as unconditional at present may not be so in future. It is not possible for us to perceive all cases of fire and all cases of smoke as such in past, present and future. How are we then justified in maintaining that fire as such is an invariable antecedent to smoke as such? Our experience at best warrants

us in concluding that particular cases of observed fire are invariably related to the observed cases of smoke. But from this observed particular to the universal, there is no thoroughfare. Moreover, Hume admits that on seeing fire as invariably preceding smoke in one or more instances, we get into the habit of associating them together.

The Naiyāyikas try to resolve this difficulty. For them, the only way to determine the unconditionality and invariability of causal relation is to take resort to an intuitive perception of *sāmānyalakṣaṇa* type.

Sāmānyalakṣaṇa is a variety of extraordinary (*alaukika*) perception of a whole class of objects through the class-essence (*sāmānya*) present in any individual member of that class. So it is not imperatively needed to perceive all the members of a class in order to be able to talk about them. On perceiving smoke issuing forth from fire in the kitchen in one occasion, we can conclude that fire is the invariable antecedent of smoke. If perception of one instance be not considered as enough, we cannot even hold that repeated observation of smoke and fire will yield the conclusion. For, repeated observation amounts to many singular observations, each being piled upon another. Repeated observation is in fact unique observation made many times. Hume seems to be at one with this when he remarks that “what we learn not from one object,

we can never learn from a hundred, which are all of the same kind, and are perfectly resembling in every circumstance.”¹⁹ It is of course true that we take resort to repeated observation to settle a doubt with regard to the invariable antecedence of the cause over the effect. But it is equally true that there is a limit to doubting and that it must have sufficient basis. Doubting without an end or sufficient basis is condemned as useless. The Naiyāyikas further argue that when we perceive an individual smoke (*dhūma-vyakti*), we also perceive in an extraordinary way all cases of smoke through the perception of its class-essence, smokeness. An individual smoke, according to Nyāya, is perceived as such because of its similarity with, and inherence in, universal smokeness. Hence, in perceiving a particular smoke, we perceive its class-essence, smokeness, and through the perception of smokeness we perceive in a non-sensuous way all smokes possessing the universal smokeness. Similarly, in the perception of an individual fire, we perceive in an extraordinary way all cases of fire through the perception of the class essence or *sāmānya*, namely, fireness. Hence, the universal proposition “all smoky objects are fiery” is intuitively known by a non-sensuous perception of all smokes as related to fire through the perception of smokeness as related to fireness. Hume fails to admit the possibility of an intuitive experience of the

sāmānyalakṣaṇa type and thus could not prevent causal reasoning from being merely probable.

Let us consider Hume's second objection, ~~namely,~~ how do we know that fire and smoke are related objectively?

To this, the Naiyāyikas reply that knowledge itself is formless. It takes the form of that which becomes its object. Hence there can be no objectless knowledge. We have different knowledge because there are different objects of knowledge. Knowledge of jar is different from the knowledge of cloth, not in respect of knowledge but in respect of the object of knowledge. It is not possible for us even to think of the objects as subjectively associated if they are not objectively related. Grasping knowledge without the object of knowledge is simply impossible. Knowledge cannot create any new relation; but it can rearrange the objects and their relation. It is true that knowledge sometimes relate objects which do not have any objective existence at all. The hare's horn, sky-lotus etc. are examples to this point. But even here the hare and the horns, the sky and the lotus are all objectively real; but the relation between them is unreal. But how do we come to know that the relation in such cases is unreal? The answer is that experience does not reveal such a relation. We can relate horns even to hare because in our experience we find that certain animals such as cows, buffaloes etc., possess horn. It follows therefore

that sometimes knowledge introduces a relation which is not found among objects. But that does not mean that it creates altogether new relations. Knowledge only reveals the relation which only binds the objects as found in nature. Knowledge reveals, for example, a pot as characterised by pothood. And the relation between pot and pothood is *samavāya*. That is, if knowledge reveals pot and pothood, it also reveals the relation between the two. Hence, it can be said that if there is no defect in knowledge, then it binds the objects in such relation as is found in nature. There is no sound basis for doubting whether such objective relation between objects exist — a relation which is really discovered, and not invented by knowledge. Let us come back to the discussion of *sāmānya-kārya-kāraṇa-bhāva* (general principle of causality). The problem under this principle, according to the Naiyāyikas is: why everything whose existence has a beginning must have a cause? In Humean fashion, for what reason we pronounce it necessary, that everything whose existence has a beginning should also have a cause? The general principle is the basis of the particular cases of causal relation because if there be no general principle of causality, there is no point in seeking for the cause of a particular effect. It is our natural tendency to ask for the cause of a particular event when it comes into existence. This tendency will be approved

provided we show that there are no uncaused effect that which has a beginning in time must have a cause for its existence. The Naiyāyikas try to prove this by means of an inference, namely, “*kāryam sahetukam kādācitkatvāt, bhojanajānyatrīptivat*.”³⁰

This inference is put in condensed form. But when fully stated, it must assume the following form which has five indispensable members, known as its *avayavas*.

Kāryam sahetukam (All effects are caused) — is called *pratijñā* or statement of the proposition to be established ; *kādācitkatvāt* (because they are occasional or non-eternal) is *hetu* or the reason for such statement. *Yatra yatra kādācitkatvam tatra tatra sahetukatvam, bhojanajanyatrīptivat* (wherever there are occasional or non-eternal entities, there are causes, for example, satisfaction arising out of taking food) — *udāharana* or statement of a universal proposition showing the connection between the reason and the fact stated as clenched by a known instance ; *tathā cāyam* (this effect is also of the same nature, that is, *kādācitka*) — is called *upanaya* or the application, that is, the ascertainment of the existence of the mark in the present case ; *tasmāt tathā* (therefore, the effect is caused) — is *nigamana* or the conclusion that follows from the preceding propositions.

Now to understand the certainty of this inference, let us first of all analyse the significance of different technical

expressions. In this inference, *kārya* (effect) is the *pakṣa* or the subject of inference. It is here where the existence of *sādhya* (that which we want to infer) is being doubted (*sandigdha-sādhyavān pakṣa*).

‘*Sahetukatva*’ stands for *sādhya* for it is what we want to establish in respect to an effect, (*kārya*). Here an important question arises, namely, on what ground do we infer that the effect is caused? For the Naiyāyikas, the ground of such inference is to be found in *Kādācitakatva* while acts as a *hetu* (sign) here. All effects are caused because they exist at sometime, but do not at some other time. It is the *Vyāptijñāna* on which all inferences, according to the Naiyāyikas are based. *Vyāptijñāna* is an invariable and unconditional concomitance (*niyataḥ anantapādhikaḥ sambandhaḥ*) between a *hetu* and a *sādhya*. *Vyāpti* literally means *vyāpya-vyāpakasambandhaḥ* that is, a relation between that which pervades and that which is pervaded. The *vyāptijñāna* in the above inference is expressed in the form : whenever there is a non-eternal or occasional entity, there is a cause (*yatra yatra kādācitkatvam tatra tatra hetukatvam*). In the above inference, satisfaction is a *kādācitka padārtha* and so also is caused. Our experience shows that satisfaction does not exist forever ; it arises only when, on being hungry, we take food. For the Naiyāyikas, like the effect, cause also is a *kādācitka*

padārtha. A *kādācitka padārtha* is non-eternal in the sense that it has a beginning and an end. A non-eternal effect being *kādācitka* depends on its cause. We can say, therefore, that every effect being of the nature of *kādācitka* must have a cause for its *kādācitkatva*. Our experience shows that the effect appears when the cause appears and it disappears with the disappearance of the cause. It is by means of the methods of anvaya and vyatireka along with the absence of any contrary instance that the Naiyāyikas establish the causal connection between the cause and the effect. Now to regard the cause as *kādācitka* is to hold that it is occasional, existing at sometime but not existing at some other time. We must then seek a second cause to account for the first, the second cause again cannot be eternal; for in that case, its effect would have been eternal — a possibility which is negatived by experience. Hence the second cause is likewise non-eternal and inevitably requires in its turn a fourth, and so on ad infinitum. The Naiyāyikas in reply maintain that this causal sequence is like a stream and is indeed without a beginning (*anādi*). It involves infinite regress. But this infinite regress, like that of seed (*vīja*) and seedling (*aṃkura*) is not vicious but an acceptable (*prāmāṇikī*) one.

Besides such a straightforward inferential reasoning, the Naiyāyikas take the help of another indirect proof called *tarka*

by means of which they try to prove that every effect is caused, the parallel of which is not to be found in Hume. *Tarka* by itself is not treated as a source of valid knowledge (*pramāna*); but it is certainly looked upon as an aid to *pramāna*.

The Naiyāyikas usually resort to *tarka* when there arises any apprehension about the conclusion being vitiated by the presence of contrary instances. *Tarka* puts an end to all such apprehension or suspicion.

The argument from *tarka* in the case of general principle of causality runs like this :

kāryatvam yadi sakatkr̥atvavyabhicarisyat, kartr̥janyatavacchedakam na syat. If the effect in question is possible without assuming an agent (*kartā*), then the - effect is *sakatkr̥atva vyabhicāri* because it is always due to a *kartā* (*kartr̥janya*). It follows from the very etymological meaning of *kārya* itself. The word *kārya*, for example, is derived from the root *kr* (to do) . Hence its etymological meaning suggests that there must be an agent (*kartā*) of every action. An action without an agent to perform it is simply unthinkable. So every effect (*kārya*) logically implies an agent (*kartā*) to perform it.

A Nyāya philosopher would not say that the concept of cause is an apriori concept. Even he would not understand

the distinction between logical and psychological necessity. He would understand certainty, but not necessity, and would not distinguish between logical and psychological certainty. He would say that when there is no doubt, there is certainty and that certainty is *visayitā viśeṣa* — a characteristic of knowing or as an epistemic concept. In short, a Nyāya philosopher would disagree with the critics of Hume who hold that the causal relation is necessary in that the words 'necessity, and 'entailment' are not in his vocabulary. But then he would not hold that anything that is invariably present when event occurs is its cause. Similarly he would distinguish between a causal relation and an accidental relation. A Nyāya philosopher explains the causal relation in a realistic way. He would hold that a cause as well as its effect is an event. A Nyāya philosopher does not think that a cause is always an event. Now Hume had no trust in abstract properties or universals. He would not have held that the events between which an invariable relation obtained were determinate events or *dharma*s as a Nyāya philosopher would put it. Accordingly, a Nyāya philosopher would hold that when A is a cause, it has a property of a sort, or that it is in a state of being a cause. This property is specified by (*nirūpita*) and also specifies (*nirūpaka*) the state of being an effect owned by B (its effect). Let us illustrate it with an example. We hold that a pair of

potsherds is a cause of a jar. Hume would not admit that a pair of potsherds is a cause of a jar. For he analyses the causal relation with reference to what Aristotle would have called an efficient cause. Indeed other kinds of causes as recognised by Aristotle were not considered as cause by the science of his time. But, we for the reasons of convenience are not considering a cause like a stick that Hume would also have recognised to be a cause of jar. The convenience consists in introducing the limiting relations in respect of the said state being of a cause. In the case of a stick, the relation is so complicated and the statement of it is so crowded with technical term that we are not considering the case of a stick. Be that as it may, such a state of being a cause is limited both property - wise and relation - wise . It cannot be said that the said state of being a cause is not limited by a property, for that would blot out the distinction between a causal sequence and a causal sequence or that it is limited by a more extensive or a less extensive property.

We see therefore that a Nyāya philosopher would not introduce necessity to distinguish between a causal relation and a chance relation. He would do it in terms of the limiting property of the state of being a cause. No doubt, he would also introduce the limiting property of the state of being an effect. For similar reasons, he would also hold that the said

state of being an effect are not limited by any relation. And in this way he would exhibit the co-residence (*sāmānādhikarāṇya*) of cause and effect. We do not think that Hume can introduce such a limiting property and such a limiting relation. So when a Nyāya philosopher states that a pair of pot-sherds is a cause of a jar what he means that a pair of pot-sherds owns a state of being a cause that is specified by a state of being an effect limited by the relation of identity and the property of being pot-sherds (*samavāyasāmbandhāvacchinna-ghatvāvacchinna-kāryatā-nirūpita tādātmya - sāmbandhāvacchinna- kapālatvā-vacchinna kāraṇatāśhaya*).

Besides this, a Nyāya philosopher would also argue that when a cause is said to be an invariable antecedent, it is meant that it is an antecedent that comprehends or is a *vyāpaka* of its effect.

Now when A comprehends B it is not the case that a negation of it resides in the locus of B. So if we leave out the causes that are compresent with their effects, we should say, to say that A is a cause of B is to say that it is not the case that a negation of A resides in the moment immediately before the moment its effect B occurs. But if we take into such causes as well, we should have to add 'the moment the effect occurs'. True, we should introduce in this case as well the limiter of

the negativeness concerned, Again he does not hold that every invariable relation is a causal relation. Thus, *ākāśa*, though invariably present whenever an effect occurs is not treated as a cause of every occurrent. Similarly, the property of being a stick, a class-property owned by every - stick as its invariable antecedent; but is not regarded as a cause of such occurrents on the ground that it may be dispensed with (*anyathāsiddha*) in the causal account of such occurrents. But his doctrine of what may be so dispensed with and also if a cause may be defined exclusively in terms of such dispensability, namely, as what is not so dispensable with (*anyathāsiddhibhinnatva*) demand separate discussion. And what is non-ubiquitous but eternal may also be said to be an invariable antecedent of every occurrent and so of a jar. We may rule out that it is a cause of the jar on the ground that it does not satisfy the condition of co-residence, or that it does not satisfy the spatio-temporal condition. A Nyāya philosopher while spelling out his attitude to Hume would not introduce necessity. He would introduce limiting relations and limiting properties, the condition of co-residence and also space and time as appropriately limited as causal factors.

Let us consider the reactions of Sāṃkhya philosophers against Hume's theory of causality. Unlike Hume, the Sāṃkhya philosophers do not recognise causes and effects to be

altogether different. For them, effect is not a new creation but the manifestation of that which is already contained in the cause. We experience that particular effects are only produced by particular causes. For example, the pot can be produced only from the lump of clay, curds only from milk and so on, but not pot from milk or curds from lump of clay. Here also it is proved that there is a fixed, unalterable and necessary relation between a cause and an effect, and an effect is capable of being produced by that cause only with which it is related.

The Buddhist philosophers also admit that there is an invariable and necessary relation in the case of causal connection. When two things are related as cause and effect, they are always and everywhere related to each other. To ascertain whether two events are causally connected the Buddhists apply the test of *pañcakāraṇī* which is as follows. (1) the effect cannot occur before the cause; (2) the cause occurs, (3) immediately, the effect occurs, (4) the cause disappears; (5) immediately the effect disappears.

Let us turn to some modern critics of Hume and see how they react against Hume's theory of causality.

It is widely held that Hume denied not only the conception of cause as power or activity but also the necessary connection between a cause and an effect. Experience for Hume, reveals merely the succession of two events, but no

connection between them. It is we, who by virtue of habit and association, read ~~into~~ the objects the idea of necessary determination, which is not really there. In answer to Hume's question, namely, with what right to we add to our experience of uniform succession the idea of necessary connection, Kant says that we can only get the experience of objective succession if we have presupposed the principle of necessary determination. Without the presupposition of the principle of causation, we cannot distinguish between mere succession in our apprehension and apprehension of succession, i.e., subjective and objective succession. In the perception of a house, for instance, we are compelled to look first at one part and then at another, for we cannot apprehend the object all at once. We may begin with the roof and end with the basement, or we may, reversing the order as well, begin with the basement and end with the roof. Here, therefore, there is succession in our apprehension of the object. But there being no succession in the object, the order in which we apprehend the different parts is quite arbitrary — the parts all exist simultaneously. But where there is succession in the object itself, the order of our apprehending is fixed. In the case of a movement of a ship going downstream, we perceive its position higher up the stream first and its position lower down the stream only afterwards. We can in no way reverse the order, for what we

are apprehending is actually successive ; here we put the time into the object. Thus subjective succession is reversible, not following any fixed order, whereas objective succession which is bound to a fixed order, is not so. Hence , the law of causation is not derived from our experience of objective succession, as Hume has supposed. It is, on the contrary, the very basis of or the presupposition of such experience. It is therefore a priori.

Among the critics of Hume over causality, the name of prof. Alfred North Whitehead deserves special mention. All existence, according to whitehead, is continuous. So Nature cannot be a mere collection of static objects. It is, on the contrary, a continuous system of events. Failing to grasp this dynamic character of events, Hume has in fact made nonsense of modern science. Hume's atomistic view of Nature prevents him from finding any connection between the cause and the effect. If objects of experience are, from the very start, isolated and independent, we cannot, on whitehead's opinion, deduce any systematic uniformity on the ground of experience. "This uniformity does not belong to the immediate relations of the crude data of experience, but is the result of substituting for them more refined logical entities, such as relations between relations, or classes of classes relations".²¹ For whitehead causal relation is an objective relation. It obtains between

two events ; the preceding one is called the cause which is continuous with the succeeding one, known as the effect. Hume fails to provide experience with any objective content. The result is a solipsist subjectivism. ²²

Causality, according to samuel Alexander, is nothing but the relation of continuity between two different motions. The motion which in order of time precedes that into which it is continued or prolonged is called the cause; the latter is the effect. Causality is thus the relation of continuity between one substance and another within a space time whole. But Hume's whole theory of causality is based on the assumption that the causal process is not continuous. Hume's atomistic analysis prevents him from finding the simple element of continuity in our experience. That is why he fails to find any connection between the cause and the effect.

All these views suggest that the causal relation is an objective relation. It does not consist in the repetition of the pair of similar events though the repetition of events may enable us to discover causal laws.

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