THE CONCEPT OF CAUSALITY IN INDIAN LOGIC :

A CRITICAL STUDY

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By

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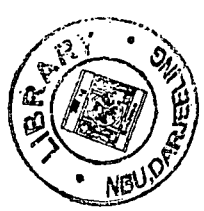

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In the loving memory
of my bosom friend
SUNANDA BHATTACHARYYA

CONTENTS

PREFACE

The present work entitled '*The concept of causality in Indian Logic : A critical study*' is an attempt to answer different problems concerning causal theories in Indian systems in a novel way. The discussions about this are arranged into five chapters. In the first chapter, I have tried to offer an account of the historical development of the causal theory in Indian Philosophical Systems and their metaphysical presuppositions behind the postulation of a particular theory. In the second chapter, I have tried to give an exposition of the nature of the concept of *Kāraṇa* and *Kārya,* the various forms of *Kāraṇa* & their philosophical significance from Indian standpoint. In the third chapter, an effort has been made to give a brief account of different causal theories in Advaita Vedānta, Buddhism, Sāṁkhya and Cārvāka. In the fourth chapter, I have tried to judge critically the opponents views concerning causation from Nyāya standpoint. In the fifth and concluding chapter, I have made an attempt to solve some philosophical problems, such as , whether causal relation is a kind of *Svarūpa* relation or not. Here I have also tried to make a brief comparison with some views of the Western thinkers concerning causation.

In writing out the thesis, I am deeply indebted to Dr. Raghunath Ghosh, Professor of Philosophy, University of

North Bengal, Darjeeling, W. B., India, specialised in Navya Nyāya system of logic, Indian Philosophy, and Modern Indian Philosophy without whose guidance and active co-operation, it would not have been possible for me to submit the research work. My words fail to express my deep sense of gratitude to him. In this connection I would also like to mention that I have consulted the writings of different authors who are connected directly or indirectly with the preparation of this paper, my debt to them all has been duly recorded in the bibliography.

At last I would like to express my deepest gratitude to my beloved family members and my devout parents whose eternal blessings are the inspiration of the way of my life.

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CHAPTER - I

HISTORICAL DEVELOPMENT OF THE CAUSAL THEORY IN INDIAN AND WESTERN PHILOSOPHICAL SYSTEMS AND THEIR METAPHYSICAL PRESUPPOSITIONS BEHIND THE POSTULATION OF A PARTICULAR THEORY

A conception which has played a very great part both in science and philosophy is that of cause. It is indeed sometimes said that science nowadays is able to dispense with cause, but what the people who say this have in view is some metaphysical conceptions of cause with which they do not agree. In one sense at least science cannot possibly dispense with cause, neither can the practical man. It is essential both to science and to practice that we should be able to go beyond what has actually been observed and make inferences from it, whether in the form of generalisations as to what usually happens or predictions as to particular facts. Now, whatever else the concept of cause involves, it involves this, that we can pass from what has happened in observed cases to what is likely to happen in cases which have not been observed, and this is absolutely necessary if we are to have any science at all or if we are to take any sensible practical steps. This has always been a difficulty for the empiricist: it cannot possibly be a merely empirical matter to predict, as science does, for we have not empirically

observed the future which we predict. Not that the topic is without difficulties for the rationalist also. However in modern philosophy it was hardly questioned till the time of Hume that we knew a priori the principle that every change had a cause and that this principle was a necessary presupposition of science. Even Hume did not, as he is often supposed to have done, reject it, but merely raised philosophical difficulties which he thought made it impossible to justify or defend it. The minimum sense of the principle of causation which must be accepted if we are to have science is then that the repeated occurrence of a certain kind of event under certain conditions is generally evidence which makes it likely that similar events will repeat themselves under similar conditions. Without assuming this much we can never make any scientific predictions whatever or pass from the observed to the unobserved. Besides this, things undergo change. But no change is considered to be automatic. Every change in an object is explained with reference to the conditions or circumstances that are known to have contributed to its occurrence. Thus change in one object is referred to the action of other things. In common parlance, change occurring to an object is said to have been caused by the action of some other thing or things, which to a great extent is ascertainable. Typhoid fever is ascertained to be due to the operation of a kind of living germs on the living body. Flood is known to have taken

place due to excessive rain and so on. A set of conditions or circumstances, so far as they have been ascertained to be responsible for the occurrence of certain changes in a thing or situation are said to be the cause of the occurrence of the latter. Thus the phenomena of change leads also to the concept of causality.

Causality, thus understood, is a relation of one sided dependence of the present event on certain past events, or of the future on the present. This is the general meaning ascribed to the concept of cause by common usage and science.

The concept of "cause" has been dealt with from different points of view both in Indian and Western philosophy. From the ancient times to the present, we find that there are different theories with regard to the problem of cause.

In Indian Philosophy, the Cārvākas think that the causal relation is not ascertainable, for, a causal or any other invariable relation cannot be established merely by repeated perception of two things occurring together. For, one must be certain that there is no other unperceived condition (*upādhi*) on which this relation depends. For example, if a man perceives a number of times fire accompanied by smoke and on another occasion he infers the existence of smoke on the perception of fire, he would be liable to error, because he failed to notice a condition (*upādhi*), namely, wetness of fuel, on

the presence of which alone fire is attended with smoke. And unconditionality or absence of conditions cannot be established beyond doubt by perception, as some conditions may always remain hidden and escape notice.

In Bauddha philosophy, causal theory is regarded as *Asatkāryavāda*. For the Buddhistic philosophers, a seed has no being (*sattā*) just before the production of seedling and that state of seed is called *abhāva* and this *abhāva* is the material cause of seedling.

The Mīmāṁsā formulates the theory of potential energy (*śakti*) in connection with the question of causation. A seed possesses in it an imperceptible power (*śakti*) with the help of which it can produce the sprout; when this power is obstructed or destroyed (as, for example, by the frying of the seed), it fails to produce that effect. Similarly, there is the property of burning in fire, the power of expressing meaning and inducing activity in a word, the power of illumination in light and so on. The necessity of admitting such unperceived potency in the cause is that it explains why in some cases though the cause (i.e. seed or fire) is there, the effect (i.e. sprout or burning) does not take place. The explanation is that in such cases though the cause-substance is there, its causal potency has been destroyed or overpowered temporarily, as the case may be, by some obstructing conditions obtaining these.

Besides this, there are two main theories of cause in Indian philosophy, viz., *Satkāryavāda* and *Asatkāryavāda*. According to *Satkāryavāda*, the effect exists in the cause prior to its production. Cause and effect are not two different things, but the two names of the same thing. This theory is also known as *pariṇāmavāda*. It is supported by the Sāṁkhya system.

But the theory directly opposed to the *Satkāryavāda* is known as *Asatkāryavāda* or *Ārambhavāda*. According to this theory the effect does not exist in the cause before its production. This view is supported by the Nyāya-Vaiśeṣika. Causation according to Sāṁkhya is *Abhivyakti* or manifestation. They hold that the effect pre-exists in its cause before its production. The new effect 'jar' is not a new production of its cause a 'lump of clay' but it is only the manifestation of what was implicitly contained in the cause namely, a 'lump of clay'. *Satkāryavāda* assumed two forms namely, *pariṇāmavāda* and *vivartavāda*. The former holds that the cause actually forms itself into the effect. It is advocated by the Sāṁkhya. The latter regards the change of the cause into the effect is apparent and not real like the change of a 'rope' into a 'snake' in illusion. It is advocated by Śaṁkara in the Vedānta system. According to this view the nature of the effect is indescribable (*Anirvacanīya*).

The causal theory in Vedānta system is known as *Satkāraṇauāda*. According to this theory this phenomenal world

as an effect is unreal from the transcendental point of view; but its cause Brahman is transcendentally real. The world is a *vivarta* of Brahman just like a snake is *vivarta* of rope in case of rope-snake illusion.

According to the popular view, a thing or a substance is regarded as a cause. When we say that the stone breaks the glass, here the stone is taken to be the cause. But the more logical notion is that a thing is not a cause, but it is the dynamic factor involved in the production of the effect that is regarded as the cause. The stone by itself is not the cause of the breaking of the glass, but the hurled stone in respect of its motion is the cause.

Let us consider the different theories of cause from Locke to Alexander in Western philosophy. Locke was the first philosopher to give causality a definite shape. Causality, according to him, means transference of energy 'or' power'. Martineau also said that causality implies force, which is purposive. In other words, cause involves choice or will. According to Locke, power is a simple idea which 'includes in it some kind of relation (a relation to action or change)'.[1] That is, it is a relation to produce something or to bring about something. Fire, for example, has a power to melt gold; (that is, it has a power to produce certain changes destroying the consistency of its insensible parts and consequently its hardness making it fluid) and gold also has a power to be

melted. The former is called active and the latter is called passive power. According to Locke, mind receives the idea of power more clearly from reflection than from sensation. As he writes: "we find in ourselves a power to begin or forbear, continue or end several actions of our minds and motions of our bodies, barely, by a thought or preference of the mind ordering or as it were commanding, the doing or not doing such or such a particular action". [2] This power is what Locke calls will. Causation involves ultimately will, will reside in mind; so mind should be regarded as the ultimate cause. According to Locke, a physical object cannot itself create motion, it can simply transfer motion to other physical objects. When a ball, for example, strikes another and sets it in motion, we do not find any active power in the first ball, but simply the transfer of motion it had received from another. To quote Locke's words: "we observe it only to transfer, but not produce, any motion".[3] From this, Locke draws the conclusion that physical objects account for the continuation of the passion and not for the production of action.

According to Berkeley, when an event, say A, regularly follows another event, say B, in such a way that given A, B follows and that in the absence of A, B does not occur, we call A the cause and B the effect. But by this Berkeley does not mean that A produces B; because producing, for him, requires power or activity which is found only in God. The

occurrence of A can be taken as a sign of the coming occurrence of B. As Berkeley himself says: "the connexion of ideas does not imply the relation of cause and effect, but only of a mark or sign with the thing signified. The fire which I see is not the cause of the pain I suffer upon my approaching it, but the mark that forewarns me of it."[4]

Mill, as an empiricist says. "the law of causation, the recognition of which is the main pillar of inductive science, is but the familiar truth, that invariability of succession is found by observation to obtain between every fact in nature and some other fact which has preceded it."[5] For him, a cause is an unconditional, invariable antecedent of an event; not only this, a cause, is the sum total of the conditions positive and negative taken together. The negative conditions, however, of any phenomenon may be all summed up under one head, namely, the absence of preventing or counteracting causes. Among the positive conditions, there are some, to which, in common parlance, the term 'cause' is more readily and frequently awarded, so there are others to which it is, in ordinary circumstances, refused. In most cases of causation a distinction is commonly drawn between something which acts, and some other thing which is acted upon; between an agent and a patient. Both of these are the conditions of the phenomenon; but it would be thought absurd to call the latter cause, that title being reserved for the former. That means, for

Mill, the distinction between agent and patient is merely verbal. In a great proportion, of all natural phenomena, they are so to such a degree as to react forcibly on the causes which acted upon them. All the positive conditions of a phenomenon are alike agents, alike active; and in any expression of the cause which professes to be complete, none of them can with reason be excluded, except such as have already been implied in the words used for describing the effect; nor by including even these would there be incurred any but a merely verbal impropriety.

Causation, according to Hume, is mere regularity of succession, when an event A, for him, is followed by another event B, we do not experience any force or power passing from the first to the second. Repeated experience of A being followed by B enables and impels us to connect the ideas of the two events in such a way that we believe, whenever A will be given, B will follow it, in future also. Regularity of sequence is the only thing that is observed empirically. The succession has been invariable so far as our experience has gone and nothing except the invariability of succession is connoted by causality.

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 apriori category of the understanding. When we experience successive events we connect the events according to a rule. This rule is the law of causality. To say this is not to hold that we know in advance of experience what causes what. All that we know in advance in experience is that every thing that happens i.e. begins to be, presupposes something upon which it follows according to a rule. According to the law of cause and effect, we give them order and fixty. 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 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.

According to Alexander, a modern realist, causality is a necessary category which means continuity of connection between phenomena. Existents are, according to him, motions and every motion is continuous with other motions in the space-time continuum. So when a motion is viewed as continued into some other motion, the former is called the

cause in relation to the latter, which is the 'effect'. Alexander's conception of causality is, no doubt, marvellous, but we should make further improvement upon it by saying that a supreme spiritual dynamic reality moves itself through this material cosmos for its self-expression and when it expresses through this physical world it expresses a continuous motion. Hence the cause is a dynamic entity moving through the universe in producing manifold of objects related to each other.

Thus the discussion of the concept of cause from different points of view, Indian and Western, has thrown much light on the problem. But there is even now ample scope for developing the concept of Cause from the scientific point of view. Though science has been trying to investigate into the nature of cause, the most satisfactory theory of cause has not yet been established. Consequently the concept of cause is not only a philosophical problem but has given rise to scientific discussion also. So this may be regarded as a crucial problem both for philosophy and for science.

References :

1. John Locke : *An Essay Concerning Human Understanding*, London, Ward, Locke and Bowden Ltd., 1689 p. 194.
2. Ibid, p. 195.
3. Ibid, p. 194.
4. Jeorge Berkely : *Treaties Concerning the Principles of Human Knowledge* edited by Fraser, p. 294.
5. J. S. Mill : *A System of Logic*, Longmans, green and Co. Ltd. 1967 Book - III, Chap., V, p. 213.

Chapter II

THE CONCEPTS OF *KĀRAṆA* AND *KĀRYA* IN INDIAN LOGIC. THE VARIOUS FORMS OF CAUSE AND THEIR PHILOSOPHICAL SIGNIFICANCE.

Let us consider the nature of *kāraṇa* and *kārya* or cause and effect from the Indian standpoint with special reference to the Cārvākas, Buddhism, Mīmāṁsā and Naiyāyikas.

According to the Cārvākas, there is no reason to suppose that every event must have certain cause. Actually, what we perceive in this world are certain objects, such as pot, cloth, thread etc. We do not perceive any effect or any cause. In this world, we perceive the stream of objects. There is no causal connection among these objects. For them, an effect is produced accidentally. That is, production of an effect means its sudden appearance. Effects are produced at any time without depending on definite causes. An effect does not depend on any cause, but suddenly comes into being. Accidentalism believes in spontaneous generation of an event. According to this theory, effects like pointedness of thorns and the like are produced without any cause. It is no argument to say that our reasoning is not satisfied without determining the causal relation among objects or without naming the events as cause and effect. It is also no argument to say that without using the terms 'cause', 'effect', language would not be applied because

there is a possibility to construct a language without involving the terms, 'cause', 'effect'. etc.All these suggust that there is no causal connection among the objects in the world.

Now to this view, the Naiyāyikas raise a question. What is meant by the term 'accident' (*akasmāt*)? This term may signify different meanings : (1) an effect is not caused from its antecedent event; (2) an effect is produced out of nothing; (3) an effect is produced out of itself; (4) an effect is produced accidentally out of an event which is *asat* like hare's horn; or, (5) an effect is produced accidentally out of its own nature.

In the first alternative, according to the Naiyāyikas, *kāraṇatva* of effect is clearly denied. In the second alternative, since the production of effect is denied, so the existence of cause also is denied. In a word, these two alternatives, taken together, suggest *akāraṇatva* of effect. The third and the fourth alternative suggest the *alīkahetukatva* of effect in the practical world ; it is not possible for an effect to be produced out of itself or out of an event which is *asat* like hare's horn. If we analyse the fifth alternative, we find that here the Cārvākas want to mean that an effect is produced accidentally out of its own nature. The Cārvākas do not accept effect as *kādācitka* (*kādācitka* means that which exists at one time and not at other time). If they accept it, they cannot accept any of the above-mentioned five alternatives because that which is

kādācitka cannot be said to possess any of the above qualities. "The relation between *kādācitkatva* and *ahetukatva* etc. is contradictory. Hence, to say that an effect is *kādācitka* is to accept that it is *svakāraṇa* ;that is, it must have certain cause".[1]

According to Buddhistic philosophy, causality is not real production. It is only functional interdependence. The cause does not produce the effect. It has not time to do so. The cause only precedes the effect and the effect merely follows the cause. Existence is efficiency and efficiency itself is the cause. Things arise neither out of self nor out of not self nor out of both nor out of neither. They are not produced at all. The effects are merely functionally dependent upon their causes. The seeming contradiction that Reality is efficiency and that all elements are inactive is solved by the fact that there is no efficiency over and above existence, that existence itself is causal efficiency (*sattaiva vyāpṛtiḥ*)

Now to this view, the Naiyāyikas say that the Buddhists had upset all common sense convictions of cause and effect on the ground that all collocations are momentary; each group of collocations exhausts itself in giving rise to another group and that to another and so on. But if a collocation representing milk generates the collocation of curd, it is said to be due to a joint action of the elements forming the cause - collocation and the modus operandi is unintelligible; the elements

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composing the cause-collocation cannot seperately generate the elements composing the effect-collocation, for on such a supposition, it becomes hard to maintain the doctrine of momentariness as the individual and separate exereise of influence on the part of the cause-element and their co-ordination and manifestation as effect cannot but take more than one moment. The supposition that the whole of the effect collocation is the result of the joint action of the elements of cause-collocation is against our universal uncontradicted experience that specific elements constituting the cause (e.g. the whiteness of milk) are the cause of other corresponding elements of the effect (e.g, the whiteness of curd); and we could not say that the hardness, blackness, and other properties of the atoms of iron in a lump state should not be regarded as the cause of similar qualities in the iron ball, for this is against the testimony of experience. Moreover there would be no difference between material (*upadāna*, e.g.clay of jug), instrumental and concomitant causes (*nimitta* and *sahakārī*, such as the potter, and the wheel, the stick etc. in forming the jug), for the causes jointly produce the effect, and there was no room for distinguishing the material and the instrumental causes, as such.

Again at the very moment in which a cause collocation is brought into being, it cannot exert its influence to produce its

effect-collocation. Thus after coming into being it would take the cause collocation at least another moment to exercise its influence to produce the effect. How can the thing which is destroyed the moment after it is born produce any effect? The truth is that causal elements remain and when they are properly collocated the effect is produced. Ordinary experience also shows that we perceive things as existing from a past time. The past time is perceived by us as past, the present as present and the future as future and things are perceived as existing from a past time onwards.

According to the Naiyāyikas, the Sāṁkhya assumption that effects are but the actualized states of the potential cause, and that the causal entity holds within it all the future series of effects, and that thus the effect is already existent even before the causal movement for the production of the effect, is also baseless. Sāṁkhya says that the oil was already existent in the sesamum and not in the stone, and that it is thus that oil can be got from sesamum and not from the stone. The action of the instrumental cause with them consists only in actualizing or manifesting what was already existent in a potential form in the cause. This is all nonsense. A lump of clay is called the cause and the jug the effect ; of what good is it to say that the jug exists in the clay since with clay we can never carry water? A jug is made out of clay, but clay is not a jug. What is meant

by saying that the jug was unmanifested or was in a potential state before, and that it has now become manifest or actual? What does potential state mean? The potential state of the jug is not the same as its actual state ; thus the actual state of the jug must be admitted as non-existent before. If it is meant that the jug is made up of the same parts (the atoms) of which the clay is made up, of course we admit it, but this does not mean that the jug was existent in the atoms of the lump of clay. The potency inherent in the clay by virtue of which it can expose itself to the influence of other agents, such as the potter, for being transformed into a jug is not the same as the effect, the jug. Had it been so, then we should rather have said that the jug came out of the jug.

In connection with the question of causation the Mīmāṁsā formulates the theory of potential energy (*śakti)*. A seed possesses in it an imperceptible power (*śakti*) with the help of which it can produce the sprout; when this power is obstructed or destroyed (as, for example, by the frying of the seed), it fails to produce that effect. The necessity of admitting such unperceived potency in the cause is that it explains why in some cases though the cause (i.e.seed) is there, the effect (i.e.sprout) does not come into being . The explanation is that in such cases though the cause-substance is there, its causal potency has been destroyed or over-powered temporarily, as

the case may be, by some obstructing conditions obtaining there.

To this, the Nyāya objects that this is neither a matter of observation nor of legitimate hypothesis, for there is no reason to suppose that there is any transcendental operation in causal movement as this can be satisfactorily explained by molecular movement. There is nothing except the invariable time-relation (antecedence and sequence) between the cause and the effect, but the mere invariability of an antecedent does not suffice to make it the cause of what succeeds; it must be an unconditional antecedent as well ; (*anyathāsiddhiśūṇyasya niyatā pūrvavarttitā*). Unconditionality and invariability are indispensable for *kāryakāraṇa-bhāva* relation or cause and effect relation. For example, the non-essential or adventitions accompaniments of an invariable antecedent may also be invariable antecedents; but they are not unconditional , only collateral or indirect. In other words their antecedence is conditional upon something else *(na svātantryeṇa)*. The potter's stick is an unconditional invariable antecedent of the jar ; but the colour of a stick or its texure or size, or any other accompaniment which does not contribute to the work done, is not an unconditional antecedent, and must not therefore be regarded as a cause.

After explaining the inconsistencies of the analysis of

the nature of cause and effect of different Indian systems, the Naiyāyikas give us an analysis of the nature of cause and effect from their own standpoint.

According to them, it can be said that in this natural world, certain composite objects such as pot, cloth, tree etc. are produced at a certain time. They are also destroyed after sometime. That which is produced cannot be said to exist prior to its production. These objects are called effects. They exist for sometime and not forever. A pot, for example, exists at certain time and does not exist at another time. Such type of object is called *kādācitka* because it exists at one time and not at other time. So an effect is that which is *sat* after its production and prior to its destruction. An effect is called *sāpekṣa* in the sense that it depends on its cause. It is not *nirapekṣa*. That which does not depend on any thing must be said to exist forever; for example, *ākāśā* ; it does not depend on anything. Effect which is *asat* like hare's horn does not depend for anything because it does not exist at any time. Like wise, if effect was *sat* and at the same time *nirapekṣa*, it would have existence forever. And if it was *asat*, it would not have existence at any time. But neither of the alternatives is true regarding effect. An effect exists at one time and does not at other time. This is why, it cannot be said to be *nirapekṣa*. It depends on something which is not other than the cause.

An effect, a piece of cloth, for example, is called *kādācitka*, since it exists for sometime and does not exist at other time. It waits for its cause, namely, threads. If it does not wait for its cause, then it could have existed eternally. But effect is not eternal since it exists for sometime and does not exist at other time. A *kādācitka* effect is always *sahetuka*, that is having some cause. An effect being *kādācitka* is non eternal. So its cause cannot be said to be eternal. Now, to regard the cause as *kādācitka* is to hold that it is occasional, existing at sometime and 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 negated through experience. Hence, the second cause is likewise non-eternal and inevitably reguires a third cause, which, for the same reason, requires in its turn a fourth, and so on ad infinitum. To this, Udayanācārya replies, "*Uktamaṇāditvāt eti vījāṅkuravat prāmāṇikī yamanavasthā na doṣāyetyarthaḥ*"[2]. That means, the causal sequence is like a stream and is indeed without a beginning (*anādi*). This involves, no doubt, *infinite regress*, like that of seed (*vīja)* and seedling (*aṁkura*) is not vicious but an acceptable (*prāmāṇikī*) one.

The Nyāya-Vaiśeṣika thinkers, define cause as "*anyathāsiddhiśūnyasya niyatā pūrvavartitā*".[3] By *anyath-*

āsiddhiśūnya , they mean an indispensable antecedent. Hence, that which is proved to be antecedent through another is not an indispensable antecedent. But what is meant by 'invariability'? An effect must have certain antecedent events but which of them is invariable ? An antecedent event is called invariable when it is immediately present before the production of an effect without fail ; for example, where there is smoke, there is fire. On the other hand, where there is no fire, there is no smoke. Hence, fire is invariable antecedent of smoke. Similarly, potter, earth are the invariable antecedents of pot.

According to the Naiyāyikas, it is not necessary to perceive all of the objects in order to say something about all of them. Taking the stock example, when, one infers the existence of smoke from fire, one relies on the condition of fire to smoke, since fire is attended with smoke on the condition of its being fire from "wet fuel". Here the condition "wet fuel" is alwalys related to smoke as there are cases of fire without "wet fuel". Hence, to eliminate the suspected conditions of an invariable relation between two things we must make repeated observations (*bhūyodarśana*) of agreement in presence and in absence under varying circumstances. It is clear therefore that the effect is that which is *kādācitka* and

the cause is that which is invariable antecedent of the event.

Gangeśa also defines a cause "as a necessary invariable antecedent which is synchronous and co-existent with it"[4], that is, with its effect. Now if we analyse the definition of cause given by the Naiyāyikas, we find certain characteristics of it. The first essential characteristic of them is that a cause is an antecedent ; that is, it precedes the effect (*pūrvavṛtti*). The second is its invariability; it must invariably precede the effect (*niyatapūrvavṛtti*). The third is its unconditionality or necessity ; it must unconditionally precede the effect (*anyathāsidha-śuṇya*). The Naiyāyika's definition reminds us Mill's definition of cause as an unconditional invariable antecedent. 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 experince. But we do not regard the one as the cause of the other. The truth is that they are co-effects. In other words, our experience of the invariable relation between day and night is conditional being dependent upon the rotation of the earth on its own axis. So, one cannot be the cause of the other. The cause must, therefore, be an unconditional 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. But how do we come by the

knowledge of unconditionality? The notion of unconditionality is, on Mill's view, derived from experience. But as our experience is finite and limited, we cannot hope to know that our experience is truly unconditional. For, what appears as unconditional now, may not be so in future. So the only way to determine the unconditionality and invariability of causal relation is to take resort to an intuitive perception of *sāmānyalakṣaṇa* type.

Nyāya recognises five kinds of invariable antecedents which are not real causes : (1) that which is antecedent to an effect by virtue of its relation to its inherent cause is accidental. The colour of stuff depends upon its inherent cause in order to be invariably followed by a jar. But it is not the real cause of a pot. (2) That which is known to be antecedent to an effect after it is known to be antecedent to some other effect as its cause is regarded as its unnecessary antecedent. Ether is already known to be an antecedent event of sound as its inherent cause. So it is an unnecessary antecedent of a jar, though it is its invariable antecedent, since it is not necessary for its production. A cause is determined by its presence and absence both— not by its presence only. Eternal and ubiquitous substances, which cannot be eliminated, are not real causes. (3) That antecedent, which is other than the invariable, necessary antecedent of an effect, is its unnecessary

antecedent. The prior non-existence of colour is an unnecessary antecedent of smell due to heating, since the prior non-existence of smell is its invariable, necessary antecedent or cause. (4) That which cannot be known to be antecedent to an effect without knowing its antecedence to its cause is its unnecessary antecedent. The cause of a cause is not the real cause of an effect, but its unnecessary antecedent. A potter is the efficient cause of a jar and hence, its invariable necessary antecedent. But the potter's father, who is a cause of the potter is an unnecessary antecedent, it is not the real cause of the effect, pot. A cause is not a remote antecedent, but an immediate antecedent of its effect. (5) That which is antecedent to the effect, together with a cause, is its unnecessary antecedent. A stuff is an auxiliary cause of a jar, whose presence is followed by its production, and whose absence is followed by its non-production. It is its necessary antecedent. But the generic character of stuff is not followed by the production of a jar independently of the stuff. Hence, it is its unnecessary antecedent. A cause is an unconditional, invariable, immediate antecedent of an effect.

The Nyāya regards a cause as an aggregate of indispensable, invariable and immediate antcedents. They are also regarded as positive conditions of an effect. When they are present, an effect is produced ; when they are absent, it is

not produced. There is no causal power in addition to them. Straw, fire and blowing taken together are the cause of burning, each of which singly is not its cause. But they are its positive conditions only, which can produce its effect when its negative conditions are absent. A fire-extinguishing gem is its negative condition which must be absent in order that burning may be produced. Just as the presence of the positive conditions is a cause so the absence of the negative conditions is a cause. The absence of any number of the aggregate of causal conditions— the principal cause and the auxiliary causes is the main counter acting cause.

The Nyāya rejects plurality of causes. The same cause produces the same effect, and the same effect is produced by the same cause. But sometimes we find that the same effect is produced by a variety of causes, for example, burning is produced by straw, fire and blowing together, or by two pieces of fire-wood and intense friction together, or by a fire exciting gem and concentration of the rays of the sun on it. The Nyāya argues that the specific causes produce specific effects which appear to be the same because they have special attendant consequences. If they are considered with their distinctive features, then specific effects have specific causes. If there is a specific difference in the causes, there must be a specific difference in the effects, even though they appear to be

homogeneous. If specific effects are not due to specific causes, the specific characters of effects will be uncaused. The specific differences in the effects are due to the specific differences in the auxiliary causes which produce different peculiarities in the same homogenous cause and diversity in it. A specific cause has a specific effect. "Diversity of effects require diversity of causes"[5]. The cause of a generic effect is regarded as generic. The generic character of fire is the effect of conjunction of a combustile substance with light ended with a particular degree of heat. Specific effects cannot be produced by a generic cause.

Along with an analysis of the nature of *kāraṇa* as an unconditional and invariable antecedent, the Naiyāyikas propose to undertake an analysis of the nature of *kārya* or effect. For they believe that a definition of *kāraṇa* or cause cannot be framed without any reference to the effect or *kārya*. As a matter of fact, 'cause' and 'effect' are correlative terms and as such a proper understanding of the concept of cause demands an enquiry into the nature of the effect. The only point of distinction between a cause and an effect is that while the cause precedes, the effect follows. Western philosophers, such as, Hume, Mill and others maintain only a temporal difference between the cause and the effect. The Naiyāyikas too insert the term *purvavṛtti* (antecedent) in their

definition of cause, and this they do to exclude the effect itself. But the Naiyāyikas attempt a definition of an effect as well. An effect is customarily defined as "an entity which is counter-correlative of its antecedent-non-existence (*Kāryaṁ prāgabhāva-pratiyogī*)." [6] To understand the technical expression involved in the definition, let us consider an example. A jar, for example, is an effect. For it comes into existence at particular point of time and was not before its emergence.To say that the jar was not there before it was produced is the same thing as saying that it has got its prior non-existence (*prāgabhāva*). If, on the otherhand, the effect does not exist prior to its origination, it must have a beginning (*ārambha*), it begins to exist when it is actually produced. Now, an effect having a beginning is contradictory (*pratiyogī*), to *prāgabhāva*. The word '*pratiyogī* ' is used in the context of negation. In this sense, a jar is said to be the *pratiyogī* of the absence of jar. That is why, a *pratiyogī* is regarded as the counter-correlative to its negation. *Prāgabhāva* has no beginning (*anādi*), though it has an end (*sānta*) as soon as the product comes into being. Thus we find that the antecedent non-existence of the effect in question is also regarded by the Naiyāyikas as a necessary part of causal mechinary. In the causal mechinary, the Naiyāyikas include several positive antecedents determined by *niyata-pūrvavṛttitva* and *ananyathāsiddhatva* and two negative

antecedents (*kārya-prāgabhāva and pratibandhakābhāva*) as essential. According to the Naiyāyikas, the cause must be free from any counter-acting influence in order to be able to produce the effect. Fire is said to be the cause of burning. But if fire be accompanied by a jewel known as *Candrakāntamaṇi*, it cannot produce burning. *Candrakāntamaṇi* then appears to be an obstacle to the production of the effect. But it is not a true *pratibandhaka*, since as if another jewel known as Sūryakāntamaṇi. Hence *pratibandhaka* or *siddhi* is defined as '*siṣādhayiṣā-viraha-sahakṛta-siddhi*'[7]. By '*siṣādhāyiṣā*', is meant the strong desire to infer serving as *uttejaka* (impetus) which inspite of the presence of an apparent obstacle gives rise to an effect. By '*viraha*' is meant absence. Hence, *siddhi* or *pratibandhaka* is characterised by the absence of *uttejaka*. The Naiyāyikas also try to give an analysis of the nature of cause and effect in respect of both property (*dharma*) and relation (*saṃbandha*). For them, the cause and the effect must co-reside in the same locus. This is called *sāmān-ādhikaraṇya*. This simply means that the cause and the effect must be co-present in the same locus (*tādādhikaraṇa* vṛttittve). Let us suppose, a jar is produced, its cause then must be present invariably and immediately before the effect in the same locus. The cause and the effect must therefore stand in some definite relation to the locus. The cause is limited by the property of causeness ; *kapāla*, that is, the components of the jar is limited

by the property of *kapālatva*. Similarly, the effect is limited by the property of effectness (*kāryatāvaccehedaka*) ; jar is limited by the property of jarness. Now, the jar characterised by jarness resides in the *kapāla* which is its locus and the relation between the jar and its parts, that is, *kapāla* remains in its lower half through *samavāya or inherence*.

Here the jar is determined both by a property and by a relation. On the otherhand, the *kapāla* which is the cause of the jar, characterised by the property of *kapālatva* resides in the *kapāla* where the jar is present in the relation of inherence ; but the relation of *kapāla* to itself is one of identity (*tād-ātmya*). Hence, both the cause and the effect are determined by a property and a relation.

According to the Naiyāyikas, the relation between the cause and the effect is reciprocal and this relation is called *nirūpya-nirūpaka-bhāva saṃbandha*. A cause determines, and is determined by, the effect. Hence each is both *nirūpaka* i.e. determinater and *nirūpya* i.e. determined of the other. Thus we have *kāryatānirūpita kāraṇatā* (where the effect is the *nirūpaka* and the cause is nirūpya) and *kāraṇatānirūpita kāryatā* (Where the cause is the *nirūpaka* of the effect which is *nirūpya*). In either case, the cause and the effect must co-reside in the same locus (*adhikaraṇa*). Here we must note that the *kāryatāvacchedaka* as well as the *kāraṇat-*

āvacchedaka saṃbandha in the case of *samavāyī kāraṇa* would be *samavāya* and *tādātmya* respectively. But in the case of *asamavāyī kāraṇa*, however, the relation is different. When, for example, the conjunction of potsherds (*kapāla saṁyoga*) is regarded as the *asamavāyī kāraṇa* of the jar, both the *kāryatāvacchedaka* and *kāraṇatāvacchedaka saṃbandha* would be *samavāya*. The jar stands in the relation of *samavāya* to the *kapāla* where saṁyoga (conjunction) stands in the same relation.When, however, *kapālarūpa* (the colour of the potsherds) is regarded as the *asamavāyī kāraṇa* of the *ghaṭarūpa* (the colour of the jar), the *kāryat-āvacchedaka saṃbandha* will be *samavāya* whereas the *kāraṇatāvacchedaka saṃbandha* will be *svasamavayisam-avāya*. The colour of the jar is inherent (*samaveta*) in the jar and as such the relation between them is *samavāya* ; but the colour of potsherds (*kapālarūpa*) is inherent in the potsherds where the jar is also inherent. Here the relation is *svasamav-āyi-samavāya*. The *ghaṭa* is *samaveta* in *kapāla* where the *rūpa* is present in *samavāya* relation. In short, in the case of *asamavāyī kāraṇa* we have two types of *pratyāsatti* in the *samavāyī kāraṇa* ; *kāryaikārtha pratyāsatti* (co-presence in the same locus with the effect) *kāraṇaikārtha pratyāsatti* (co-presence in the same locus with the cause). In the former case, both the *kāryatāvaechedaka* and the *kāraṇat-āvacehedaka saṃbandha* are *samavāya saṃbandha* whereas

in the latter case the *kāraṇatāvacchedaka saṃbandha* would be *svasamvayisamavāya* although the *kāryatāvacehedaka saṃbandha* is *samavāya*. In the case of stick (*daṇḍa*) as the *nimitta kāraṇa* of *ghaṭa* the relation is indeed conceived in a different way. According to the *Naiyāyikas*, here the relation is *svajanyabhrami-janyatva-saṃbandha*. The stick produces relation in the axle (*cakra)* which in its turn produces the jar. So we see that the *Naiyāyikas* want to analyse both the cause and the effect in respect of property and relation alike. But we do not find such a thorough analysis of either cause and effect in Western philosophy.

THE VARIOUS FORMS OF CAUSE AND THEIR PHILOSOPHICAL SIGNIFICANCE

The Naiyāyikas admit three kinds of causes - *samavāyi, asamavāyi* and *nimitta*. The first is the *samavāyi* or the inherent cause.It is the substance out of which the effect is produced. For example, the threads are the inherent cause of a cloth and the clay is the inherent cause of a pot. The effect inheres in its material cause. The cloth inheres in the threads. The effect cannot exist separately from its material cause, though the cause can exist independently of its effect. The material cause always is a substance (*dravya*).

The second kind of cause is *asamavāyi* or non-inherent. It inheres in the material cause and helps the production of the effect. The conjunction of the threads (tantusaṁyoga) which inheres in the threads is the non-inherent cause of the cloth of which the threads are material or the inherent cause. The colour of the threads *(tanturūpa)* is the non-inherent cause of the colour of the cloth. The cloth itself is the inherent cause of its colour. The colour of the clay which exists in the clay in inseparable relation is the cause of the colour of the pot. This colour of the clay is thus called the *asamavāyi* cause of the pot. Any quality (*guṇa)* or movement which existing in the *samavāya* cause in the *samavāya* relation determines the characleristics of the effect is called the *asamavāyi-kāraṇa.*

The third kind of cause, according to the Naiyāyikas, is *nimitta* or efficient. It is the power which helps the material cause to produce the effect. The weaver is the efficient cause of the cloth. The efficient cause includes the accessories (*sahakārī*), for example, the loom and shuttle of the weaver or the stuff and wheel of the potter. The efficient cause may be a substance, a quality or an action.

Aristotle also admits four kinds of causes; material, formal, efficient and final causes. For him, "In every case of the existence or production of a thing, all four causes operate simultaneously. Moreover, the same four causes are to be found both in human and in cosmic production, in the making of manufactured articles by man and in the production of things by nature."[8] "The material cause of a thing is the matter out of which it is composed. It is the raw material which becomes the thing."[9] For example, in making of a bronze statue, the bronze is the material cause of the statue.

The efficient cause is always defined by Aristole as the cause of motion. It is the energy or moving force required to bring about change. It must be remembered that by motion, Aristotle means not only change of place but change of any sort. The alteration of a leaf from green to yellow is just as much motion, in his sense, as the falling of a stone. The efficient cause, then, is the cause of all change. In the example

taken, what causes the bronze to become a statue, what produces this change, is the sculptor. He is, therefore, the efficient cause of the statue. "The formal cause, Aristotle defines as the substance and essence of the thing." [10]

And "the final cause is the end, purpose, or aim towards which the movement is directed. When a statue is being produced, the end of this activity, what the sculptor aims at, is the completed statue itself. And the final cause of a thing in general, is the thing itself, the completed being of the object." [11]

We find that Aristotle's conception of causation is much wider than the modern conception.

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Chapter III

CAUSAL THEORIES IN ADVAITA VEDĀNTA, BUDDHISM, SĀṂKHYA AND CĀRVĀKA.

According to the Naiyāyikas, all effects are due to certain *nimitta kāraṇa* which may otherwise be called material cause. The world is an effect and hence it must have an efficient cause. This intelligent agent is God. The order, design, co-ordination between different phenomena comes from God. But many Indian thinkers do not accept this view. For them, we should not imagine any extraordinary cause for a *laukika padārtha* or an ordinary effect like this world.

Sāṁkhya is one of them. The Sāṁkhya philosophers do not accept the view that this world as an effect is due to Omnicient God. For them, the actual existence of God cannot be verified either by perception or by inference. So God cannot be said to be the efficient cause of the world. God is *Puruṣa* or Self and God cannot be any doer. Self is inactive. *Puruṣa* or Self has no authority. It is imposed on *Puruṣa*. Just like a crystal seems to be red in the presence of red flower, similarly *Puruṣa* or Self according to Sāṁkhya, unfortunately, seems to be doer, though actually, Self is not doer. Actually, this indifferent *Puruṣa* is only silent *sākṣin*. So God or *Puruṣa* cannot be the agent of this world. This world is an effect or consequent of the root cause *Prakṛti*. *Prakṛti* is an equilibrium

of three gunas ; *svatta, rajaḥ* and *tamaḥ*. *Prakṛti* is not the object of our perception. It is inferred. But what is that inference ?

In order to answer this, let us first see in what way *sattva, rajaḥ* and *tamaḥ* — these three attributes are considered in Sāṁkhya system and then analyse their view about causal relation. *Sattva, rajaḥ* and *tamaḥ* are the constituents of *Prakṛti* and through it of the worldly objects are originated. All worldly things possess certain common characteristics by which they are capable of producing pleasure, pain and indifference. If this be so, can't we say that there must be a common source composed of three *guṇas,* from which all worldy things arise ?

To get the answer of this question we should consider the relationship between an effect and its material cause. If we analyse the causal relation, we find two relata, effect and cause. Now we can think of an effect as *ṡat* (existent) as well as *asat* (non-existent). Same is true about cause. So regarding the relation between effect and its material cause we get four major theories as follows : (1) *Satkārya* is produced out of *asat kāraṇa.* (2) *Asatkārya* is produced out of *asat kāraṇa.* (3) *Satkārya is* produced out of *sat kāraṇa.* (4) *Asatkārya* is produced out of *sat kāraṇa.* Accordingly, we find four types of causal relation.

1. *Satkāraṇavāda* - This theory is proposed by the Vedāntins.

2. *Asatkāraṇavāda* - It is proposed by the Buddhistic philosophers.

3. *Satkāryavāda* - The Sāṁkhya philosophers are the founders of this theory.

4. *Asatkāryavāda* - This theory is proposed by the Nyāya philosophers. Besides this, we must see the nature of causal relation in Cārvākas system. Regarding causation, Cārvākas view is called accidentalism.

Let us consider the fundamental tenets of these different types of causal relation.

Satkāraṇavāda — This theory is proposed by the Advaitins. Saṁkara maintains *Brahma- Kāraṇa-vāda* as he recognises that Brahman is the cause of the world. But his theory is called *Brahmāvivarta vāda* because it takes the world to be only a phenomenal appeạrance of Brahman. Saṁkara is opposed to Brahman — *parināmavāda*. For him the world is neither a real creation by Brahman nor real modification of Brahman.

Brahman associated with its power *Māyā* is the ground on which the phenomenal world is super - imposed. When true knowledge dawns and the essential unity of the *jīvātman* with the *Paramātman* is realised, the world is sublated. Modification or change in a realistic manner, like the change

of gold into ornaments or of clay into pots or of milk into curd is called *pariṇāma* or *vikāra.* Unreal change or seeming modification, like the appearance of water into waves, bubbles, foam etc, is called *vivarta.* In case of rope-snake illusion, snake is *vivarta* of rope; rope appears as snake; but actually, there is no snake. Similarly, this world appears to be real, but actually it is not real. It is not fictitious, but it has no real existence. From the phenomenological standpoint, this world is real; but transcendentally it is unreal. So effect, from the phenomenological standpoint is non-existent, *asat.* But the cause or the locus of it cannot be called *asat.* The cause or the locus of effect is more real than the beingness of imposed object. In short, this world as an effect has phenonenological reality; but such effect is not real from the transcendental standpoint . It is *asat*; the locus of it or Brahman is transcendentally real. Therefore we can say that effect which has *vyāvahārika sattā* is produced out of that cause which has *pāramārthika sattā*. But the Sāṁkhya philosophers do not accept this theory, i.e., *Satkāraṇavāda* . For them, there is no proof in favour of the unreality of this world. In case of rope - snake illusion we say that it is unreal in the sense that after knowing that it is a rope, not snake, our knowledge of rope invalidates our previous knowledge of rope as snake. Now the Sāṁkhya philosophers say that we cannot have any invalid knowledge about the world. Our knowledge of clay

does not involve such knowledge that it is not clay, but Brahman. That is to say, our knowledge of clay is not invalidated by our knowledge of Brahman. So long the potentiality of pot implicitly remains in its material cause clay, our knowledge of clay remains as knowledge of clay, not as knowledge of pot. When pot is produced out of clay then we get the knowledge of pot. But such knowledge of pot does not invalidate our knowledge of clay. Generally we say that a piece of shell appears as silver; but we never say that pot appears as clay. Similarly, we can have knowledge like this 'it is not silver', but we can't have knowledge like this 'It is not the world'. So we cannot say that this world is only empirically real. Actually, the question is : how can we impose the world on Brahman? We can impose the characteristics of silver on a piece of shell as there are some similarities between the two. But is there any similarity between the world and Brahman? Brahman is pure consciousness whereas the world is material. Just like darkness cannot be imposed on light, similarly, this world cannot be imposed on Brahman. So we cannot say that this world is not real. Hence, *Satkāraṇavāda,* for the Sāṁkhya cannot be accepted as flawless theory.

Asatkāraṇavāda : The founders of this theory are the Buddhustic philosophers. For them, *bhāva padārtha* is produced out of *abhāva.* Generally we say that a positive

effect is produced out of a positive thing; for example, seedling is produced out of seed. Here both seed and seedling are *bhāva padārtha.* That is to say, a positive effect is produced out of a cause which itself is positive. But the supporters of *Asatkāraṇavāda* do not accept this view. For them, it is not true that a seedling is produced out of a seed.On the other hand, it is obviously true that a seedling is produced after the destruction of a seed. It implies that the production of seed depends on the destruction of seed otherwise a seedling could have been produced out of a seed without its accessories. But actually this does not happen. Hence we have to say that just before the immediate production of seedling, a seed has no being at all ; it becomes non-existent and out of that non-existence of seed, seedling is produced. This non-existence of seed is regarded as the material cause of seedling. Same is true in case of a piece of cloth. Destruction of thread is the material cause of the production of a piece of cloth. It is true that this *abhāva* (destruction of thread) is not perceptible; but that does not mean that it can be denied.It can be known through inference. In short, according to the Buddhistic Philosophy, all positive effects are produced out of *asatkāraṇa.*

But the Sāṁkhya philosophers do not accept this view. For them a *bhāva padārtha* cannot be said to be produced out of *abhāva-padārtha.* Though it is true that a seedling is produced out of the destruction of seed, still, only for this

reason we cannot say that production of seedling is due to dertruction of seed. For them, seed with its *avayava*, as *bhāva padārtha* is the material cause of seedling. Destruction of seed does not mean a 'nothing' or an 'empty' or 'void'. Here destruction of something does not mean a 'negative abyss'; we find, actually the opposite of it. After destruction of a positive thing, the residual portion remains as positive ; e.g., we find threads as remaining portion after the destruction of a piece of cloth or clay remains after the destruction of a pot etc. So no destruction involves 'negative abyss'. Every object which waits for its cause is an order or permutation of its constitent parts. Out of its constituent parts every object is placed in order. This order may be destroyed, but its constituent parts remain as it is. In the same way a seed becomes destroyed, but its constituent parts remain undestroyed. The order of the constituent parts of seed becomes destroyed and this destruction helps those constituent parts to make a new order. Hence we see that a seedling cannot arise without the destruction of seed. Destruction of seed is necessary for the production of seedling. But that does not mean that a seedling can be produced out of the destruction of seed. In fact, seedling is produced out of the constituent parts of seed. Truly speaking, if we say that a postive effect is produced out of *abhāva*, then *abhāva* will be regerded as the cause of every positive effect.

That means, if the destruction of an object means the total destruction of a thing, then we cannot expect any positive effect out of that destruction. Just like hare's horn cannot do harm to any one or sky lotus is not used for the purpose of worship; similarly, no object is produced out of *abhāva*. Hence *asatkāraṇavāda* is not acceptable.

Satkāryavāda : The basic question involved in any theory of causation is : does the effect exist in its material cause prior to its production? Those who answer the question in the negative are called *Asatkāryavādins* and those who answer in the affirmative are called *Satkāryavādins*. The theory of *Satkārya* is proposed by the Sāṁkhya philosophers. According to this theory an effect is not a new creation, but only an explicit manifestation of that which was implicitly contained in its material cause. The effect and the cause are equally real, the former being a modification of the latter.

The Sāṁkhya offers the following arguments to prove the pre-existence of the effect in the cause. "*Asad Akaraṇāt, Upādānagrahaṇāt, Sarvasambhavābhāvāt, Śaktsya śakyakaraṇāt kāraṇabhāvāt ca satkāryam.*" [1]

1. *Asadakaraṇāt* : If the effect is non-existent in the cause prior to its operation, none can bring it into existence out of the cause, blue cannot be turned into yellow even by a thousand artists. The effect is related to its cause. If it is non-existent

prior to the operation of its cause, it cannot be related to it. The causal relation exists between two entities which are existent. So the effect exists both before and after the operation of the cause. Effectuation is nothing but manifestation. All that is done by the cause is the manifestation of the pre-existent effect. A pot is produced out of clay. A non-entity is never found to be manifested or produced. So the effect pre-exists in the cause in a latent or unmanifested condition.

2. *Upādānagrahaṇāt* : The *Satkāryavādins* say that there is an invariable ralation between a material cause and its effect. Only that which has an invariable relation with a particular effect is capable of producing that effect; e.g., a jar is produced from a lump of clay. Otherwise, what is there to prevent the production of a piece of cloth from a lump of clay or the production of a jar or from a number of threads? The presence of such a relation, however, proves nothing but the pre-existence of the effect. There can be no relation between the existent and the non-existent, for relation is never possible in the absence of either of the relata (*saṁbandhin*).

Now one question may be raised here namely, what is meant by the term '*grahaṇa*' ? To this, the Sāṁkhya philosophers say that generally the term '*grahaṇa*' is used in two senses : *grahaṇa* means (1)'taking'; (2) *grahaṇa* means relation. Here this particular term is used in the sense of

relation. '*Upādāna*' means cause. Relation always implies two elements: pot is related with the clay . There is a causal relation between the two. And in order to admit the causal relation between them prior to the production of effect, we must admit the *sattā* of pot because of the two relata of that causal relation. A particular effect can be said to be produced out of a particular material cause. If the effect is not related to its material cause in any way, it cannot be said to be produced. Such relation is not possible if the effect is pure non-existent. Here the 'relation' involves the relation of identity.

(3) *Sarvasambhavābhāvat* : The *Satkāryavādins* here say that if the effect unrelated to the cause could be produced, then every effect would arise from every cause; for example, curd would arise from threads inspite of milk and cloth from milk inspite of threads. But in the actual world, we do not find this. So the effect is pre-existent in the cause and the cause produces that effect with which it is related. A non-existent effect unrelated to the cause cannot be produced by the cause unrelated to the effect; only an existent effect related to the cause can be produced by an existent cause related to the effect.

(4) *Śaktsya śakyakaraṇāt* : The effect pre-exists in the cause, since it can be produced by a potent cause only. A potent cause has causal energy to produce a particular effect.

The causal energy in the cause is inferred from the perception of the effect. This accounts for regularity in the production of particular effects by particular causes. The causal energy to produce a particular effect resides in a potent cause only. If it resides in all causes, then any effect will arise from any cause. If it resides in the potent cause only, the cause cannot be unrelated to the effect; the causal energy unrelated to the effect cannot produce it. So the causal energy residing in the cause must be related to the effect, and the effect must be existent in the cause. If it is non-existent, the causal energy cannot be related to it. If the causal energy is unrelated to the effect then any effect will arise from any cause. Fire is said to be the cause of burning. Fire, when it is attached to a fire - extinguishing jewel known as *Candrakāntamaṇi* cannot produce burning because of the destruction of its power favourable for burning. Hence, we have to accept that this power of fire is the cause of burning and it is something different from fire itself.

(5) *Kāraṇa-bhāvāt ca sat kāryam* : That the effect is non-different from the cause is further shown by the fact that there is a relation between them. Relation presupposes the existence of both terms, for there cannot be any relation between terms one of which is non-existent. The cause being existent, the effect cannot but be existent at one and the same time. The effect is the essence of its material cause and as

such identical with it. When obstructions in the way of manifestation are removed, the effect naturally flows out of its cause. The cause and the effect are the implicit and the explicit stages of the same process. The cloth is contained in the threads, oil is in the oil-seeds, curd is in the milk. Hence it is proved that the effect pre-exists in its material cause.

According to the *Satkāryavādins*, the effect is identical with the cause in essence. They offer the following arguments to prove the identity of the material cause and the effect.

(1) The effect is not different from its material cause, since it is a property of the cause and inheres in it. A piece of cloth is not different from the threads which constitute it, because it is a property of the threads and inheres in them. If an object is different from another in essence, it can never inhere in it. A cow is different from a horse, and so cannot inhere in the latter. But a cloth inheres in the threads, and so does not differ from them in essence.

(2) The *Satkāryavādins* argue that the material cause and its effect are essentially identical. Their argument can be stated in Kantian Fashion. According to Kant, space and time are empirically real, but transcendentally ideal. Apart from our faculty of knowing, they have no being as things in themselves. They are merely ideal, that is, belong to our faculty of knowledge and not to things in themselves. But there can

be no object of outer experience which is not in space and time. This means that they are empirically real. Similarly, the causal relation, according to the *Satkāryavādins*, holds good between events which are essentially identical, but apparently different. "A jar and a piece of cloth, for instance, is proved, ultimately to be nothing different from a lump of clay and a cluster of threads which are their material causes. Thus, since the material cause exists even before the production of the effect, the effect too — being essentially identical with the material cause --- cannot be totally absent prior to its production." [2] Vācaspati Miśra also says : "*Kāryasya kāraṇatmakatvāt na hi kāraṇāt bhinnam kārya kāraṇam ca sat eti kathaṁtad abhinnam kāryam asat bhavet.*"[3]

(3) Arguing from the Sāṁkhya standpoint, Vācaspati Miśra says that "a cluster of threads and a piece of cloth are not proved to be different in spite of their serving different ends because even the same object can serve different ends under different circumstances. A palanquin - bearer cannot carry the palanquin individually, though he can act as guide for the road. The same bearer, however, can carry the palanquin when other bearers join him. In the same way, the threads taken singly cannot cover anything ; yet when they jointly form a piece of cloth, they can serve that purpose."[4]

ACCIDENTALISM AND NATURALISM

The Śvetāśvatara Upaniṣad refers to accidentalism (*yadṛacchāvāda*). Saṁkara explains it as the doctrine of accidental production of effects. They are due to chance. It is the doctrine of accidental conjunction of two events. Production of an effect is its sudden appearance. Accidentalism is also called the doctrine of sudden emergence (*ākasmikatvavāda*). It is the doctrine that effects are produced at any time without depending on definite causes. An effect does not depend on any cause, but suddenly comes into being. Accidentalism believes in spontaneous generation of an event. It had antecedent non existence and has subsequent existence at any time. A thing by its nature comes into existence at a particular time without any cause. Its appearance is uncaused. Accidentalism is also the doctrine that an effect is produced without any cause like sharpness of thorns and the like. The Cārvākas are accidentalists.

Naturalism or *svabhāvavāda* is the doctrine that all effects are produced by their very nature, and that they cannot be produced voluntarily. Sharpness of thorns and various colours of beasts and birds are due to their inherent nature. They are not produced by anybody. Fire is hot, water is cool and air has cool touch. Who has made them various ? Their differences are due to their inherent nature. Some entities are

eternal beings, others eternal non-beings. Different things have different characteristics. Their pecularities are due to their different natures inherent in them. The Cārvākas are naturalists.

They do not believe in causality and its universality. Causality is an imaginary relation between antecedents and consequents, which are perceived together on many occasions. Only antecedence of one event and consequence of another event are perceived. Invariable antecedence of one event and invariable consequence of another event are never perceived. Perception is confined to particular instances. It can never apprehend all instancs in the present, past and future. The sequence of two events perceived in the past on numerous oceasions may fail in future under unforeseen circumstances. No necessary connection can be known to exist between an antecedent and a consequent. Repeated observation of one event being followed by another produces an expectation in the mind that the antecedent will be followed by the consequent in future on all occasions. Conjunction of two events on numerous occasions produces an expectation that they will be conjoined. The Cārvākas do not believe in the production of an effect by a definite cause and in necessary and invariable connection between them.

References :

1. Iśvarakṛṣṇa : *Sāṁkhakārikā* edited and translated by S.S. Suryanarayan Sastri, University of Madras, 1948, Kārikā 9.

2. Gautama : *Nyāyasūtra* , Jīvānanda, Calcutta, 1919 translated by Phanibhusana Tarkavagiśa. Fourth Adhyaya, First Ahnika, Sūtra - 49

3. Vacaspati Miśra : *Sāṁkhyatattvakaumudī*, (A commentary Iśvarakṛṣṇa's Kārikās) edited with the commentary 'Adhyāpanā' in Bengali by Prof. N. C. Goswami.

4. Under Iśvarakṛṣṇa's *Sāṁkhakārikā*, edited and translated by S.S. Suryanarayan Sastri, University of Madras, 1948, Kārikā 9 Vacaspati Miśra says this.

Chapter IV

A CRITICAL EVALUATION OF THE OPPONENTS VIEWS AND A DEFENSE OF NYĀYA POSITION

Before considering the Nyāya position regarding the theory of causation, let us first evaluate the different theories namely, *Satkāraṇavāda*, *Asatkāraṇavāda*, *Satkāryavāda*, *Asatkāryavāda* from the Nyāya standpoint.

The Naiyāyikas do not accept the Vedantin's theory *Satkāraṇavāda*. For the *Naiyāyikas*, it cannot be said that this world has only *vyāvahārika sattā*. Actually the Nyāya cannot divide *sattā* into phenomenal (*vyāvahārika*) and transcendental (*pāramārthika*) aspects. It is meaningless to do so. Whether a particular experience (*anubhava*) is valid or not is determined by our behaviour. According to the Advaitins, something is called transcendentally real if it remains (*avādhita*) unvalidated in past, present and future, *Trikālāvādhitatva*. But for the Naiyāyikas, in order to be something existent, it is not essential for that thing to remain uncontradicted in past, present and future. For them, something can be said to be *sat* (existent) if it appears as *sat*. A piece of cloth is *sat* as well as a pot. Hare's horn, sky-lotus – these are called absolutely false or absurd (*alīka*) though hare is not false as well as horn. Hence nothing can be said to be absolutely false. In case of rope - snake illusion, our knowledge of snake is false but that does not mean that the

object 'snake' is false. We cannot say that our knowledge of true object is true and knowledge of false object is false. Rope appears as snake is not false. This snake is beyond time and space. Our knowledge of snake instead of rope implies our knowledge of snakehood in rope in samavāya (inherence) relation. But in fact, there is no such snakehood in rope in *samavāya* relation. This is why our knowledge of snake instead of rope is false. So it is not necessary to say that our knowledge of snake is false as it is due to our ignorance. The Naiyāyikas say that something which appears as false does not signify its falsity. We cannot have false knowledge of that thing which is actually false. Rope - snake illusion presupposes our valid knowledge of snake otherwise such type of illusion will not arise. That means we have to say that false knowledge of a particular thing requires true knowledge of that thing which actually exists in the world. Hence it is clear that in order to say that this phenomenal world is false or the object of false knowledge, then we have to admit that this world is true. Therefore, we cannot accept that theory which says that a physical effect is produced out of a cause which is not physical, but transcendental.

Asatkāraṇavāda is also rejected by the Naiyāyikas. For them, *abhāva* (absence)is a seperate category. Just like a positive entity becomes an object of knowledge, similarly

abhāva or a negative fact becomes an object of knowledge. *Abhāva* also becomes a cause because it is always present before the production of any effect. Ether is activityless, still it is regarded as a cause of sound. Similarly, *abhāva* is regarded as cause though it is free from activities. For the Naiyāyikas, it is also a *padārtha* (category) . It can only be a *nimitta kāraṇa* (auxilliary cause) though it cannot be *samavāyī* (inherent) or *upādāna kāraṇa* (material cause). This is why *Asatkāraṇavāda* is not acceptable. According to the Buddhistic Philosophers, destruction of seed is *samavāyī kāraṇa* of seedling. But for the Naiyāyikas, destruction of seed is *nimitta* or *sahakārī kāraṇa* of the effect seedling. The Naiyāyikas admit that seedling is produced after the destruction of seed. But they do not admit that the destruction of seed (which is called *abhāva*) is the material cause of seedling. They also say that when the previous constituent parts of seed is destroyed, a new order among the constituent parts is made and seedling is produced out of that new order. So we cannot say that seedling is produced out of the destruction of seed. Not only this, we cannot also say that the destruction of seed is the cause of the production of seedling. If we say that the destruction of seed is the cause of the production of seedling, then we have to say that the dust of seed is also the cause of seedling. But actually we do not find

so. We find that seedling is produced out of the perished seed in presence of *sahakārī kāraṇa* (associate causes) such as, earth, water, air etc. What is the cause of this difference? The difference between the two lies in the fact that we must note that seedling is produced not from the destruction of seed , but from the new order of the coustituent parts of destroyed seed. This new order is not produced from the dust of seed ; because the grinded condition of seed cannot create any favourable condition out of which this new order can be produced. This new order is produced when seed becomes, destroyed with the help of its *sahakārī kāraṇa* (associate causes) such as, air, earth, fire etc. So it becomes clear that seedling is produced out of the new order of the constituent parts of the destroyed seed. *Vījābhāva* (the absence of seed) is not the material cause of seedling. In fact, a positive substance is regarded as a material cause or *samavāyi kāraṇa*. *Vījāhāva* cannot be said to be *samavāyī* or *asamavāyī kāraṇa* of an effect. *Vījābhāva* is the efficient cause of seedling. A positive effect cannot be produced out of a negative cause. Therefore *Asatkāraṇavāda* cannot be accepted at all.

Let us consider whether *Satkāryavāda* can be accepted or not.

If we analyse causation, we find two elements cause and effect. For the Naiyāyikas, a cause like an effect may be of

both positive and negative character (*bhāva padārtha and abhāva padārtha*). As Udayana writes : "*Bhāvo Yathā tathā bhāvaḥ kāraṇaṁ kāryavān mato*"[1] .The production of a jar, for example, is a positive effect while its ceasing to be or destruction is a negative one. According to the Naiyāyikas, a negative effect is always caused by an efficient cause (*nimitta kāraṇa*) alone. But for a positive one, we require the conjunction of three causes — *samavāyi, asamavāyi* and *nimitta* besides some negative causes. The Naiyāyikas are of the opinion that *prāgabhāva* (prior absence) and *pratibandhakābhāva* (absence of an impediment) are to be regarded as essential and indispensable for the production of an effect. To illustrate, burning is usually caused by fire. But the mere presence of fire will not produce burning when fire is accompanied by *Candrakāntamaṇi* (or moon stone). So *Candrakāntamaṇi* (moon stone) is regarded as a *pratibandhaka* or obstruction. Hence the absence of *Candrakāntamaṇi* is also to be regarded as a cause. It may be mentioned here that if another *maṇi*, known as *Sūryakāntamaṇi*, (sun stone) gets associated with *Candrakāntamaṇi*, (moon stone) fire is seen to produce burning. It follows, therefore, that *Candrakāntamaṇi* is not the real *pratibandhaka*, for even in the presence of *Candrakāntamaṇi*, fire may produce burning. So the real *pratibandhaka* should be *Candrakāntamaṇi* as characterised

by the absence of *Sūryakāntamaṇi* (*uttejakābhāva-viśiṣṭa - pratibandhakābhāva*). Hence the positive cause of an effect is the threefold causes while its negative cause is *prāgabhāva* and *pratibandhakābhāva*. For the Naiyāyikas both cause and effect are real and existent.

Regarding causation, there are two principal theories : *Satkāryavāda* and *Asatkāryavāda*. The Sāṁkhya admits the doctrine of *Satkārya* as distingnished from the Nyāya doctrine of *Asatkārya*.

The *Satkāryavādins* say that if the effect is non existent in its material cause prior to its operation, none can bring it into existence out of the cause, blue cannot be turned into yellow even by a thousand artist. Now the *Asatkāryavādins* say that it is true pure non-existence cannot be said to be produced. It is also equally true that which is existent in its cause prior to its production cannot also be said to be produced. For how can that be produced which is already existent ? Production according to the Naiyāyikas, simply means the origin of that which was not before.

To this, the *Satkāryāvādins* may say that the term 'production' means not origin, but manifestation. Prior to such production an effect remains latent in the material cause in a very subtle form. The material cause of a particular effect is constituted by the particular substance in which that particular

effect remains latent. Thus a piece of cloth appears out of the threads only and not a lump of clay or anything else, since it remains latent in a very subtle form in the threads, which are its material cause.

Now if a pot exists in its material cause prior to its production, then we have to say that it exists as *asattāviśiṣṭa* (qualified by its nonexistence) and after its production, it is called *sattāviśiṣṭa* (qualified by its existence) and to say this is to impose two contradictory qualities on the same pot.

To this, the *Satkāryavādins* reply that to say that an effect is *asattāviśiṣṭa* prior to its production and *sattāviśiṣṭa* after its production is meaningless because if there is no pot, (*dharmin*), then how can we say that its *dharma*, namely, *asattā* exists in it ? To say that pot exists as *sattāviśiṣṭa* and *asattā-viśiṣṭa* at two different times, that is, prior to and after its production, is to accept pot as existent. '*Dharma*' means that which inheres in a substratum *vṛttimattvaṁ dharmattvaṁ* ; *asattā* inheres in a pot. We cannot have knowledge of a pot if two properties *asattā* and *sattā*—are not related with each other. So it is better to call an effect *prāgasat* (non existent in prior stage) rather than pure non-existent.

Now one may say that if the effect pre-exists in its material cause prior to its production, then what is the necessity of efficient cause? If the pot already exists in the clay, why should

the potter exert himself and use his implements to produce it? To this possible objection, the *Satkāryavādins* reply that an effect pre-exists in its material cause in a latent or unmanifested condition. The activity of efficient cause like the potter and his tool is necessary to manifest the effect, pot, which exists implicitly in the clay.

The Naiyāyikas do not accept the theory of Satkārya. For them it is true that prior to its production, an effect is called prāgasat. It is also true that an effect is characterised successively by both the properties of non-existence (*asattā*) and existence (*sattā*) — so long as it is not produced, it is characterised by the former and from the moment it is produced to the moment it is destroyed, it is characterised by the latter. Therefore, prior to its production, it is possible for an effect to become dharmi (bearer of the property) *asattā dharma* (property of non-existence). "But that does not mean that *dharmī* means that which carries *dharma* on its back just like a horse carries a passenger on its back. *Dharmī* means the relata of *dharma*"[2]. A pot may be *sattā* and *asattāviśiṣṭa* at two different times. We know that pothood resides in pot. The Satkāyavādins cannot say that a pot, limited by pothood is present in its material cause, namely, clay, then we could not have knowledge of the absence of pot. Same is true to other effects. Hence, it is proved that an effect can be said to possess two qualities, *sattā* and *asattā* at two different times.

According to the Satkāryavādins, if we accept the Naiyāyikas theory viz., *Asatkāryavāda*, then we cannot say whether the cause related to the effect produces effect or it produces effect when there is no relation between cause and effect.

In answer to this, the Naiyāyikas argue that since the effect is not an absolute non-entity, there can be a relation of the cause with the effect inspite of its absence prior to production. From the moment a positive effect is produced, there subsists, between the effect and its material cause, the 'relation of inherence' (*samavāya-saṃbandha*). Such a relation which determines the material cause and the effect respectively as the substratum (*ādhāra*) and the superstratum (*ādheya*) is not possible in the absence of the superstratum or the effect. But this does not imply a total absence of relation between the cause and its non-existent effect, for on the basis of inference, it is established that a particular kind of object only and thus, the general relation of being an effect to a cause is well proved between two entities even before the one is actually produced by the other. In other words, the effect is said to be related to the cause, since it is the locus of an "effect - hood conditioned by the cause-ness resident in (a particular) cause". [3] (*kāraṇa - gata-kāraṇatva nirūpita-kāryatva*) and such an effect - hood would act as the relation for the effect. Similarly,

the cause is said to be related to the effect, since it is the locus of a "cause-ness as conditioned by the (said) effect hood" (*Kāryatva-nirūpita-kāraṇatva*) and such causeness would act as the relation for the causes. Such relations unlike the relations of conjunction and inherence — do not characterise the relata as substratum-superstratum and hence, they can relate even what would be produced in a later moment. Besides, it cannot be argued that an object to be produced in the future can have no relation with any other existing object. Every piece of knowledge is admitted to have a relation with the object it reveals, for, otherwise, each and every piece of knowledge would have revealed each and every object. Again when the *Satkāryavādins* say that an efficient cause, for example, a potter is necessary to produce a pot which is present in its material cause, namely, clay in the unmanifested condition, the Naiyāyikas reply that the *Satkāryavādins* then would have to accept the view that the changed or unmanifested form of the effect was absent in its material cause. In short, the *Satkāryavādins* would have to admit that there is something in the effect which is absent in the cause. Hence, *Satkāryavāda* cannot be accepted at all.

Again the *Satkāryavādins* say that there is an invariable relation between a material cause and its effect. Only that which has an invariable relation with a particular effect is capable of producing that effect, for example, a jar is produced

from a lump of clay. Therefore it is true that a particular effect can be said to be produced out of a particular material cause. If the effect is not related to its material cause in any way, it cannot be said to be produced. Such relation is not possible if the effect is pure non-existent . Here the 'relation' involves the relation of identity.

To this the Naiyāyikas argue that there is also a causal relation between our future inevitable death and our knowledge of that death. If there is no relation between knowledge and object of knowledge, then we cannot say 'I have knowledge of this object' or 'I do not have any knowledge of that object'. So there is a relation between the particular object and knowledge of that object. Similarly, we must accept the relation between our future death and our present knowledge of death. Such a relation, again, presupposes the pre-existence of future death, which, however, can hardly be accepted, for it leads to an absurd position, that a living person is dead already. This proves that *Satkāryavāda* cannot be accepted as a plaushible theory.

Besides this, the Naiyāyikas do not accept causal energy or *śakti* as something diferent from cause. *Śakti* (poteney) is not different from its substratum. It is true that burning cannot be produced in the presence of fire-extinguishing jewel, namely, *Candrakāntamaṇi*. *Candrakāntamaṇi* then appears

to be an obstacle to the production of the effect. But it is not a true obstacle inasmuch as if another jewel known as *Sūryakāntamaṇi* be present even when *Candrakāntamaṇi* accompanies fire, there is the usual effect of burning. Hence a real obstacle is not *Candrakāntamaṇi* by itself, but *Candrakāntamaṇi* being characterised by the absence of *Sūryakāntamaṇi*. Fire, then, in the absence of fire extinguishing jewel and other obstacles is the cause of burning. It is not true that fire as a substratum of the *śakti* for burning is the cause of burning. Fire as such is the cause of burning. We know that no cause can produce an effect in the presence of obstacles. So how can fire produce burning in the presence of fire-extinguishing jewel? Hence, there is no need to accept *śakti* as something different from cause.

To this, the *Satkāryavādins* may argue that how can we say that the absence of fire extinguishing jewel is the cause of burning? We find that only the existent objects are the cause of the effects : for example, clay, potter etc., are the existent causes of pot. That which is nonexistent cannot be said to be the cause of something because it has no power to produce an effect. Hence, absence of fire-extinguishing jewel cannot be said to be the cause of fire.

To this objection, the *Asatkāryavādins* reply that that which is nonexistent can be regarded as an effect; for example,

a pot may be destroyed after its production. When it is destroyed, and its specific nature lost, it has posterior non-existence; that is, *dhvaṁsābhāva*. The production of *dhvaṁsābhāva* is also called effect. So if non-existence can be regarded as an effect, why not can it be a cause? In this world, we find different events which are called *kādācitka*. From the one point of view, they are called cause and from another, they are effects. Hence, *Satkāryavāda* can not be accepted at all.

Still the *Satkāryavādins* may argue that if the effect be really non-existent in the cause, then we have to say that when it is produced, the non-existence comes into existence, that is, something comes out of nothing which is absurd. The *Satkāryavādins* do not accept *abhāva* as a separate category. For them, in experience, we do not find any *abhāva padārtha* as a cause of something. It is not possible for an *abhāva padārtha* to produce something which is called *bhāva padārtha*. Only *bhāva padārtha* can produce something; so it can be called a cause of something.

In reply to this, the Naiyāyikas say that a cause is an antecedent event in relation to its effect which is always a consequent event. Although anecedent to the effect, the cause is not merely so. It must be invariable also. By invariable antecedent is meant that if the cause is present, the effect is

present (*kāraṇa-sattvekāryasattā*) and if the cause be absent, the effect is likewise absent (*kāraṇāsattve kāryāsattā*). 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. That means smoke is never found to be perceived without fire and the absence of fire 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.

Therefore, in order to establish causal relation, the Naiyāyikas insist on the formula : *sahacāra darśane sati vyabhicārādarśanam* (that is , observation of instances of agreement in presence) and *vyatireka sahacāra* (that is, observation of instances of agreement in absence). *Anvaya* is usually stated as : *sā sattā niyatasattākatva*. 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 (fire) inveriably precedes, the effect (smoke) follows. *Vyatireka* is often stated by the Naiyāyikas as : *sa vyatirekaḥ prāyukta vyatireka pratiyagotva*. This simply means that the absence of a cause will lead to the absence of the effect as well. On observation, for example, a regular and uniform

agreement in absence between non-fire and non-smoke, we conclude that whenever the cause (fire) does not invariably precede, the effect (smoke) does not follow. By *vyabhicāradarśana*, 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, that will constitute an exception (*vyabhicāra*); and the causal relation will at once be vitiated by the presence of such contrary instances. Hence, to establish the cause as an invariable antecedent to the effect, we must be assured of the fact that no contrary instance is involved in the case under consideration.

The *Satkāryavādins* say that the effect is identical with the cause in essence. But the Naiyāyikas do not accept their view. For them, cause and effect are not identical because the essence of these two is not the same. *Avayavī* is something more than the *avayava*. Just like quality and that in which quality inheres; action and that in which action inheres are different from each other; so also *avayava* and *avayavī* . The relation between *avayava* and *avayavī* is inherence. An effect, for example, a piece of cloth is produced out of the conjunction of the threads. In short, any effect must have certain constituent parts which constitute a composite body. The relation between the composite whole and its constituent parts is inherence. The composite body is something more than its parts. Hence

it is proved that material cause and its effect are not identical.

Still the *Satkāryavādins* argue that the material cause and its effect are essentially identical. Their argument can be stated in Kantian fashion. According to Kant, space and time are empirically real, but transcendentally ideal. Apart from our faculty of knowing, they have no being as things in themselves. They are merely ideal, that is, belong to our faculty of knowledge and not to things in themselves. But there can be no object of outer experience which is not in space and time. This means that they are empirically real. Similarly, the causal relation, according to the Satkāryavādins, holds good between events which are essentially identical, but apparently different. "A jar and a piece of cloth, for instance, is proved, ultimately to be nothing different from a lump of clay and a cluster of threads which are their material causes. Thus, — since the material cause exists even before the production of the effect, the effect too — being essentially identical with the material cause — cannot be totally absent prior to its production"[5]

Such a contention, however, is refuted by the Naiyāyikas on the ground that the material cause and the effect are established to be different on the strength of perception. It is, in fact, proved by observation that a jar with its peculiar configuration is something quite distinct from a lump of clay

out of which it is shaped; they are understood to be identical only because an effect always inheres in— that is, is inseparably connected with its material cause. Nor does the fact that both a lump of clay and a jar made of it share the same universal of earthness (*pṛthivītva*) disprove the individual distinction between the two, for, in that case, one would be faced with the absurdity that all objects are identical, since all of them equally share the universal of probability *(prameyetva)*. Besides, a jar and a lump of clay are proved to be different on the ground that they serve quite different purposes, the former helps one in collecting water but the later does not.

Now to this, *Vācaspati Miśra* says that "a cluster of threads and a piece of cloth are not proved to be different inspite of their serving different purposes because even the same object can serve different ends under different circumstances. A palanquin - bearer cannot carry the palanquin individually though he can act as guide for the road. The same bearer, however, can carry the palanquin when other bearers join him. In the same way, the threads taken singly cannot cover anything; yet when they jointly form a piece of cloth, they can serve that purpose." [6]

But it is to be noted, however, that the instance does not disprove the Nyāya standpoint. The bearers can carry the

palanquin jointly, though they are not inseparably linked with one another. A cluster of threads, however, can cover an object only when they are conjoined with one another in some specific way— and not arbitrarily — as constituting a compact and distinct entity in the form of a piece of cloth. That is why the threads when clustered together in the shape of a ball, for instance, cannot serve as a covering for anything. Thus, the distinction between the threads and their effect, a piece of cloth, can hardly be denied.

As a further argument against the theory of *Satkārya*, the Naiyāyikas point out that it is self - contradictory to say that 'production' and 'destruction' — these two activities exist in the same cause at the same time. Same material cause cannot be a substratum of the two self - contradictory activities like 'production' and 'destruction'. According to the principle of production, an effect, for example, a piece of cloth is produced out of threads. If cause and effect, that is threads and cloth -- these two are identical — then how can we say that cloth is produced out of threads because one thing cannot be said to be produced out of itself ? The same is true to destruction. If a piece of cloth and threads are identical, then the former cannot be said to be destroyed in the latter. Again, when we say that a piece of cloth is contained in the threads, we mean the former is *ādheya* (superstratum) and the latter is *ādhāra* (substratum).

And the relation between them is *ādhāra — ādheya —* relation. But if cause and effect are identical, then the relation between *ādhara and ādheya* will not hold good on them. But at the same time we cannot deny this relation.

Now the *Satkāryavādins* say that the above argument suggested by the Naiyāyikas cannot prove that cause and effect are not identical. Two different or self - contradictory activities like production and destruction can exist in the same cause at the same time because of the persistence of a material identity between cause and effect. A tortoise, for example, can expand and withdraw its limbs according to its own will. But neither it creates its limbs nor destroys them. When its limbs appear as manifested from its body, then it is called *āvirbhāva* and when they disappear in it, it is called *tirobhāva.* Its limbs are not different from its body. A gold ring is not different from its material cause. So the Naiyāyikas' argument does not hold good.

But this argument, according to the Naiyāyikas does not prove that material cause and effect are essentially identical. We cannot say that effect is the extended form of the cause and sometimes it is contracted in it like the limbs of a tortoise. In our experience, we do not find any effect like a pot limited by pothood resides in its material cause, namely, clay. Hence it is true that the material cause, and the effect is identical.

Now against the view of the prior non-existence, of the effect, Vācaspati Miśra raises some objections. First, if every effect be really non-existent before production, the production (*utpatti*) itself of the effect too must be non-existent and one would have to admit a further production of that production itself. Again , on the same ground, further and further productions would have to be admitted for each successive production and there would be no escape from the fallacy of *infinite regress*. To avoid this fallacy one may try to maintain that the production of the jar is something identical with the jar itself and hence, the question of a further production of the production does not arise. But such an admission involves another difficulty. In this view, statements like 'the jar is produced' etc. involve tautology and become meaningless because, the jar and its production being identical, the use of only either of the terms 'jar' and 'produced'would suffice. Even if we admit the distinction between the effect and its production, the Naiyāyikas have to define production only as the inherence of the universal of existence (*sattā*) in the effect. And since inherence is admitted as eternal, so the production of the effect too becomes eternal. If this be so, what then, would be the necessity of a causal operation according to Naiyāyikas themselves ?

To the above question, the answers given by the Naiyāyikas are as follows.

First, even if the production of the jar etc. be admitted as a form of inherence which is eternal, the causal operation would be necessary for bringing the jar etc. themselve into existence, which are non-eternal and absent prior to their production.

Secondly, production may also be defined as a temporal 'relation' with the first moment of existence (*ādyakṣaṇa- sambandha*) and such a relation is really identical with the effect . Thus the success of the causal operation would lie in making such a relation a possibility. The charge that, on the identity of the effect and its production statements like 'the jar is produced' etc. involve tautology is not justified, because the terms 'jar' and 'produced' though referring to the same object (*dharmin*), characterise it quite differently --- the former as a locus of the property of producedness (*utpannatva*). So the objections are plaushible. Therefore, the theory of *Satkārya* as proposed by the *Sāṁkhya* philosophers can not be accepted in all its aspects.

An effect is a new creation. It is non-existent in its material cause but it is produced a new out of its material cause owing to the rearrangement of its atoms. Curd is non-existent in milk, but it is produced from milk owing to the disintegration of its parts and a fresh collocations of its atoms. The particles of milk endoued with a particular colour and a particular taste

produce curd with a particular taste due to the pecularity produced by heating. Likewise a sprout is produced from a seed owing to the rearrangement of its atoms due to heat. The atoms are qualified by a pecularity due to heat and produce a new effect. They produce a first peculiarity in the shape of the first swollen condition, then an intermediate swelling, and then the last peculiarity in the shape of germination. A peculiarity is an aid produced in the material cause by the auxiliary causes for the production of an effect, which is therefore not momentary. It is an intermediate aid favourable to the production of an effect.

Regarding causation the Naiyāyikas also do not accept accidentalism proposed by the Cārvākas. For the Naiyāyikas, an object which exists at a certain time and does not exist at another time is called *kādācitka*. This *kādācitka* (effect) object proves that nothing happens accidentally in this world. It is self contradictory to accept *kādācitka padārtha* on the onehand and not to accept causality on the other. So the accidentalists cannot deny the fact that this world is full of *kādācitka padārtha* which has an occasional occurrence as an event. They cannot also deny the fact that these *kādācitka padārtha* is not free from antecedent events. A pot, for example, is a *kādācitka padārtha*. The production of a pot necessitates the different parts of the pot, (*kapāla*), their

conjunction (*kapāla saṁyoga*) and the potter together with his tools (*kumbhakāra, ḍaṇḍa, cakra* etc) which are also *kādācitka*. It is clear therefore that there are many antecedent events before the production of effect and these antecedent events as well as the series of events become our object of knowledge.

Let us consider whether these *kādācitka padārtha* have any antecedent which we call *niyata pūrvavṛtti* or *niyata pūrvabhāvī*. We know that an invariable relation is agreement in being co-present or co-absent. There is an invariable ralation between smoke and fire. Whenever, we see smoke, we find fire. Wherever there is no fire, no smoke. Again, when we see that production of a pot, we find certain antecedent events of pot like *kapāla*, potter etc. always present. These antecedent events are called *niyata pūrvabhāvī* according to Nyāya philosophy and there is a relation between the effect and its antecedent events out of which the effect is produced.

Here the accidentalists may raise a question: how can we be sure about the invariability of the effect such & antecedent events which we call *niyata pūrvabhāvī* in all cases of past, present and future?

To circumvent this difficulty, the Naiyāyikas say that it is not necessary to perceive all instances in order to assert

something about all of them. We can conclusively say that fire is the invariable antecedent of smoke on perceiving smoke issuing forth from fire in the kitchen in one case. Repeated perception of smoke and fire cannot help us to draw the conclusion because repeated perception amounts to many singular perceptions, each being piled upon another. Repeated observation is, in fact, unique observation made many times. Therefore, perception of one case should be considered as enough. 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. Now one may ask that if perception of one instance is enough then what is the necessity of repeated observation (*bhūyodarśana*)? To this, the Naiyāyikas say that in order to remove doubt, whether, fire is the invariable antecedent of smoke, repeated observation is needed.

Still a question arises: namely, what is its use of perception of one case of fire and smoke is considered enough? In answer to this the Naiyāyikas say that it is true that we take the help of repeated observation in order to settle any doubt with regard to the invariable antecedent of the cause over the effect. But that does not mean that doubting should be endless. There must be a limit to doubting and it must have a sound basis. Endless doubting without any apppreciable ground is

meaningless. Hence, so long as no sufficient ground is being shown to the contrary, we must maintain that fire is an invariable antecedent of smoke. And this can be done on the basis of perception of one single instance. Still, the accidentalists raise another question . They say that it is due to our habit or custom that we associate fire with smoke. Hence, there is no point in asking whether we do this. The question lies deeper : whether we are justified in substituting an objective relation for subjective expectation. In otherwords, how do we know that fire and smoke are related objectively?

To this, the Naiyāyikas argue that it is not possible for us even to think of the objects as subjectively associated if they are not objectively related. We know that knowledge itself is formless; it takes the form of that which becomes its object. Hence, there can be no objectless knowledge . Knowledge becomes different because of its different objects. Knowledge of a pot is different from the knowledge of a piece of cloth and the difference lies not in knowledge, but in objects. Grasping knowledge without the object of knowledge is simply impossible. The nature of knowledge is such that it cannot create any new relation which appears in knowledge. It can just change the order of objects and their relation, but cannot form any new relation. Now one may say that sometimes knowledge creates new relation which does not have any

actual existence ; for example, hare's horn, sky-lotus etc. To this, the Naiyāyikas say that here the hare, the horn, the sky, the lotus have objective existence but the relation between them is unreal. And the question is: how do we know that the relation between them is unreal ? The answer is that this is because in our experience we do not find such 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 knowlege.

Now one may raise a relevant objection here. He may argue that there is really no invariable antecedent of an effect which is non-eternal. In our experience, we find that a

particular effect may be produced out of different causes. "Death, for example, may be due to diseases, accidents and other causes. Likewise, fire my be produced by straw (*tṛṇa*) in one case, by tender-sticks (*araṇi*) in another and by jewel (maṇi) in a third circumstance"[7]. But none of the antecedents is really invariable. We do not have any agreement in presence (*anvaya*) and agreement in absence (*vyatireka*) in such cases. Of course, there is agreement between fire and straw;that is, fire is produced in the presence of straw. But there is no agreement in absence between fire and straw, because fire may be produced out of tinder-sticks in the absence of straw. 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 jewel and fire produced by jewel, 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 (*vahnivaijātya*), then no difficulty will arise regarding the

invariable antecedence of fire. Some Western logicians also maintain the view that we can 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 that, 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 '*vijātīyoṣṇasparśavat 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 (*vijātīya*) from the other. In other words, the significance of adding the component '*vijātīya*' (heterogenous) is to exclude the possibility of fire which feels hot, that is, (*uṣṇa sparśavān tejo*) is homogenous (*svajātīya*) with fire (*vahni*) in general. Hence, by '*vijātīyoṣṇasparśa*' we mean the feeling of heat as present in *tṛna, araṇi* and *maṇi* (straw, tinder-sticks and jewel). In short, the fire which is present in straw, tinder sticks and jewel is not homogeneous but heterogeneous relation to the effect, fire, and so is regarded as the cause of the latter.

It is clear , therefore, that *kārya* is that which is *kādācitka* and *kāraṇa* is that which is invariable antecedent to the effect. Every effect exists for sometime. This is why,

we must have to accept that nothing happens, accidentally in this world. Hence accidentalism cannot be accepted at all.

The Naiyāyikas theory of causation is called *Astkāryavāda*. For them, an effect is a new creation. It is non-existent in its material cause, but it is produced anew out of its material cause, owing to the rearrangement of its atoms. Curd is non-existent in milk, but it is produced from milk owing to the disintegration of its parts and a fresh collocation of its atoms.

The particles of milk endowed with a particular colour and a particular taste produce curd with a particular taste due to the pecularity produced by heating. Likewise a sprout is prouduced from a seed owing to the rearrangement of its atoms due to heat. They are qualified by a pecularity due to heat, and produce a new effect. This new effect is distinct from its cause and can never be identical with it. It is neither an appearance nor a transformation of the cause. It is newly brought into existence by the operation of the cause.

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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 (*anythāsiddha*) 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 anteeedent 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 sitnational. 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 (*svarūpa yogya*). 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, relationhood

with respect to y is that contentness of a cognition which is conditioned by the qualifierness 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-saṁyoga*) 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*. (*ābhyāṁ samavāyikāraṇāsamavāyikāraṇābhyāṁ paraṁ bhinnaṁ kāraṇam tṛtīyaṁ nimittakāraṇaṁ ityarthaḥ*).[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 *Nṛsiṁhaprakāśikā* on *Tarkasaṁgrahadīpikā*, we find another definition of *Nimittakāraṇa* which also cannot solve the problem raised above. The chief qualifierness (*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-śabdādhīna–Jñānīya-prakāratvaṁ prākāratā sambandhena tādṛśa-jñānavattaiṁva nimitta-kāraṇatvasāmānya-lakṣaṇaṁ) 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. Praśastapāda 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 begining (*anādiḥ 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' (*ghaṭābhāva*), 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 absentiness (*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 absentiness (*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 (*viṣayatā*) that is, the property of being the locus of the content (viṣayitā) 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, (*viśeṣaṇatā*) qualifierness 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 sambandhah*) 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 *adviṣṭha* (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 no exist simultaneously, there cannot be the property of *dvisthatva*. In order to avoid this difficulty, if one accepts cause and effect as simultaneous occurences, 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 'nyanispṛhaḥ / 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 tayoḥ/ prāptā dvitvādisambandhāt savyetaraviṣāṇayoḥ* "[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 (*dviṣṭhatva*), 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 simultanously 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 transend 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 empericist 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 customery 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 raveals 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 occurence. 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 (*kapālasaṁyoga*) and the potter together with his tools (*kumbhakāra, ḍaṇḍa, 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 dervied 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."[1a] 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 abilites — 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 *Barbar*a. 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 *udāharaṇa* since it is used as a supporting evidence for the inference. For them, an inference consists of five essential and indispensable members and an *udāharaṇa* 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 occuring 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 Arithmatic. 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 inportant 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 Annaṁbhatta 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 invariabley 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 otherwords, 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 invariablity 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 recomend the formula : *sahacāra-darśane sati vyabhicārādarśanam*. By *sahacāra*, they mean both *anvaya-sahacāra* (i.e, observation of instances of agreement in presence) and *Vyātireka - sahacāra* (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 :

Anvaya sahacāra		*Vyatireka sahacāra*		*Anvaya vyabhicāra*		*Vyatireka vyabhicāra*	
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 otherwords, 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 apriori 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 empericist 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 whatsover.

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 apriori 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 apriori 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 fixty. 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 disguished 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 (*tṛṇa*) 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 vaijātīya*), 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 '*vijātīya uṣṇa sparśavat 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 (*vijātīya*) from the other. In other words, the significance in adding the component '*vijātīya*' (heterogenous) 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 tejaḥ*) is homogenous (*svajātiya*) with fire (*vahni*) in general. Hence, by '*vijātīya uṣṇa sparśa*' we mean the feeling of heat as present in *tṛna, 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 '*anyathāsiddhiśūṇyasya niyatā purvavartitā*'.[17]

By *anyathāsiddhiśūṇya*', 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

concurrence 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 begining must have a cause? In Humean fashion, for what reason we pronounce it necessary, that everything whose existence has a begining 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 begining in time must have a cause for its existence. The Naiyāyikas try to prove this by means of an inference, namely, "*kāryaṁ sahetukaṁ kādācitkatvāt, bhojanajānyatṛptivat*".[20]

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*.

Kāryaṁ sahetukaṁ (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, bhojanajanyatṛptivat* (wherever there are occasional or non-eternal entities, there are causes, for example, satisfaction arising out of taking food) — *udāharaṇa* or statement of a universal proposition showing the connection between the reason and the fact stated as clenched by a known instance ; *tathā cāyaṁ* (this effect is also of the same nature, that is, *kādācitka*) — is called *upanaya* or the application, that is, the ascertainnent 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 anaupādhikaḥ sambandhaḥ*) between a *hetu* and a *sādhya*. Vyāpti literally means *vyāpya-vyāpaka-sambandhaḥ* 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 dissappearence 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 negativated 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 sakatrkatvavyabhicarisyat, katrjanyatavacchedakam na syat. If the effect in question is possible without assuming an agent (*kartā*), then the - effect is *sakatkartva vyabhicāri* because it is always due to a *kartā (kartrjanya)*. 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 *dharmees* 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 (*sāmānādhikaraṇya*) 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 (*samavāyasaṁbandhā-vacchinna-ghatvāvacchinna-kāryatā-nirūpita tādātmya - saṁbandhāvacchinna- kapālatvā-vacchinna kāraṇatā-śraya*).

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 limitor of

the negatumeness 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 occurent. 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 occurents on the ground that it may be dispensed with (*anyathāsiddha*) in the causal account of such occurents. But his doctrine of what may be so dispensed with and also if a cause may be defined exclusively in terms of such dispensiability, 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 occurent 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 Sāṁkhya philosophers against Hume's theory of causality. Unlike Hume, the Sāṁkhya 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 sucession 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 distingnish 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 succcession, 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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