PHYSICAL DETERMINISM
AND
HUMAN FREEDOM

BY

C. VARGHESE

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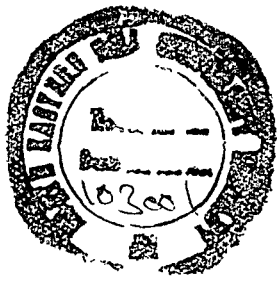

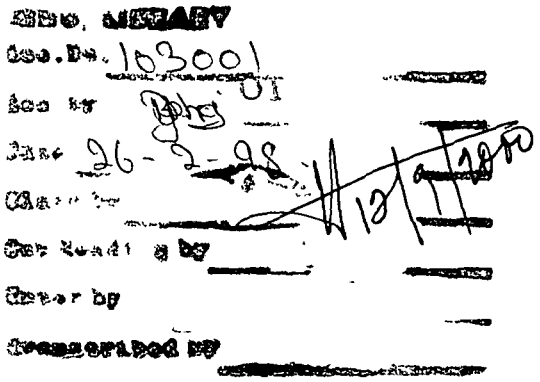

पूर्वोत्तर पर्वतीय विश्वविद्यालय
पू० प० विवि० परिसर, शिलांग - 793022 (मेघालय)
North-Eastern Hill University
NEHU Campus, Shillong - 793022 (Meghalaya)

Phone :
Grams : NEHU

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Certified that the subject matter of this dissertation is the record of work done by C.Varghese that the contents of this thesis did not form a basis of the award of any previous degree to him, or to the best of my knowledge, to anybody else, and that the dissertation had not been submitted by him for any research degree in any other University.

In habit and character C.Varghese is a fit and proper person for the degree of M.Phil.

(Prof. M. M. Agrawal)
Supervisor
Department of Philosophy
North-Eastern Hill University
Shillong-793014

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C O N T E N T S

CHAPTER - I

INTRODUCTION

There is nothing new here for a trained philosopher, who may indeed criticise the order of inquiry and find that some of the favoured arguments have been passed over in silence. It is important to realize that our essential part of the intellectual discipline that philosophy offers lies in acquiring a rational and dispassionate attitude to problems of all kinds, in being prepared to judge each issue presented on tne merits of the evidence that can be offered in its favour and most important of all, in being willing to remain in a state of uncertainty where this is all that the evidence can warrant. This toleration of ambiguity in a very important intellectual virtue which, like all virtues has to be acquired by practice. Only in this way can we learn to accept the conclusion. In Russell's words, "all human knowledge is uncertain, inexact and partial" (Human knowledge (London & New York 1948) P.527.

With these few words let me get into the introductory chapter.

In the early stages of civilization, in the primitive societies, that brought men's attention were focused on the obvious regularities of nature viz. night and day, the seasons, birth and death etc. The natural tendency of men of this age was to attribute all these changes to some conscious agencies.

Accordingly they attributed to the power of gods or demons for every nDticable natural event. The emancipation from this kind of animistic thinking came very gradually.

As the natural science developed it gave a very different kind of explanation to the natural events. The changes in the world, according to the scientist, are due to causal regularities that operate quite independently of anyone's conscious choice or purpose. This scientific approach succeeded in explaining, predicting and controlling nature. But at the early stages of science, i.e. in the seventeenth century, the attention was mainly focused on the physical world. The classical physics and astronomy that developed untill the end of the 19th century displayed the material world as a system of particles moving and interacting in accordance with natural laws.

The result of this approach had a serious set back on the human freedom since our bodies are a part of physical nature. If our bodies are part of this great machine nature then in what sense human beings can be said to be free ? But if we excempt ourself from the causal regularities human beings are in no way a subject for science.

The science that developed later than physics and astronomy namely Chemistry genetics, psychology, biology etc. tell the same story. All workings of the human body are necessarily dependent on chemical reaction. The process of digestion, respiration, growth and development, the working of brains and nerves etc. have the chemical basis identical with that of the animal and the inorganic world, following the ordinary laws of physics and chemistry.

And so the development of physical sciences have created problems on the concept of human freedom. It has brought doubt on the common sense distinction between actions and events. It does so by showing that all the events that go to make up actions are physical happenings.

So there is a debate about free will and physical determinism. It is a debate about whether there is freedom of choice for human beings or whether all we do is determined. That is to ask ourselves (1) Are we able to decide freely whether we will take this or that or some other apparently possible course of action ? or (2) Are what we call our free choice just the inevitable consequences of past states of the world and of ourselves so that there are never infact any genuine alternatives before us ?

In trying to answer these preliminary questions we quickly learn that they do not have unequivocal answers. Determinists find that they have difficulty in saying how their deterministic claims can be tested and the advocates of free-will, liberatrians, have difficulty in fitting their idea of what counts as free choice into what seem to be the everyday conditions of human existence. Hence the confusion.

The chief aim of the following chapters are to reach some understanding of what is at issue in the free will debate. We need to knew what is claimed by the determinists and the libertarians and why free-will problem is a problem. What the chapters cannot show are the vastness and complexity of this debate. Not only it has a long history but its subject matter is embeded with numerous other philosophical probems. Such as mind-body problem and with other branches of knowledge such as physical sciences.

It is an analytical approach. We must not expect to find ourselves with a neat arrangement of problem stated and an answer to it. In the philosophical Investigations Wittgenstein said: "The Philosopher's treatment of question is like the treatment of an illness" (Luduis Wittgenstein, Philœsophical Investigation, tran.G.E.M.Anscombe, Basil Blaekwell, 1968 p.255).

There are two points to take from the remark. The first is that just as an illness indicates that something has gone wrong with the body, so may a philosophical problem indicate that something is wrong with our thinking. The second point is about the treatment of the ilness, and by analogy of a philosophical problem. For illness treated successfully is not given an answer. It goes away.

And so our discussion on the topic is kept under the following heads:-

1) Explanations in Natural Science

2) Meaning and criteria of Determinism

3) Meaning and criteria of Free-will and

4) Limits of Physical Determinism and Human Freedom.

CHAPTER - II

EXPLANATIONS IN NATURAL SCIENCE

A scientist searches for the laws of nature. The basic assumption of science is that there are the laws of nature. Then what is a law of nature ? It is a general statement about the universe which is true. We know that these statements or theories are mathematical propositions which have been interpreted correctly. The laws of nature do not prescribe but, rather they describe what happens. A law of nature is but a description of what actually takes place. In contrast to this, whenever a human law is passed, then it must be possible to violate the law. The reason that the law of nature cannot be disobeyed since the law of nature is only a careful record of what actually happens, not only of the past, but also of the present and most important of all of the future and that there is no possible way of violating it. This law of nature is not a pure mathematical law, but an interpreted one. It presumably deals not with what nature is, but with our ability to comprehend nature.

Law.

Before we proceed further let me add a little on 'Law'. Science establishes empirical generalizations from observed facts and then explains these generalizations in terms of

an acceptable body of theory. For example Boyle's law or the laws of chemical combination or the law of supply and demand in the social sciences are such generalizations. The use of the term 'law' in science seems rather arbitrary and we shall not distinguish here between generalizations which are called laws and those which are not considered as laws. A law "is a true, contingent, universally quantified conditional statement which satisfies certain further conditions - to rule out vacuousness, triviality, eccentricity etc. which nobody has yet successfully formulated. (W.Kneale, 'Natural Laws and contrary to Fact conditionals, Analysis Vol. 10 (1950) reprinted in M.Macdonald (ed) Philosophy and Analysis (Oxford 1955).

Let us consider the law governing a stone that is thrown into the air. The law of Gravitation states that all objects heavier than the air fall if not supported. So the stone that was thrown into the air will drop. The scientist will tels us that the stone is an object heavier than air, and that all objects heavier than air fall if not supported. This law, essentially due to Galileo, is of considerable interest since, if we neglect air resistance, the law applies to any physical object, be it a heavy stone or a feather.

Cause.

The search for causal laws is deeply tied up with our subconscious tendency. In our lives we search for motivating forces for all our actions. We say that a man is irrational unless he has had a good reason or cause for what he did. We are constantly stating what caused us to act in the way we did. For example I voted the Congress because it's Foreign Policy and Financial Reforms in the Election Manifesto were better than any other political parties. or I believe in the United Nations because I believe that it is our only hope for peace. or I love tennis because my father taught me to love that game. In all above cases something happened in the past that caused the action in the present. or If we ask why does a ballon rise ? the answer is that it is because of the air pressure lifted it. In all cases we search for an event which brought about the result: which we call the cause of it.

Thus cause is generally understood as anything producing an effect. It is the essential condition of the existence of effect. So causality is understood as a philosophical category denoting the necessary genetic connection between phenomena one of which is called cause which determined the other is called the effect.

There is a difference between the complete cause and the specific cause. The complete cause is the sum total of all the circumstances necessarily give rise to the effect. The specific cause is the sum total of circumstances in the presence of many other circumstances already existing in the given situation even before the appearance of the effects and providing the conditions for the action of the cause. The establishment of a complete cause is possible only in comparatively simple cases, and usually scientific investigation is directed towards the disclosure of the specific causes of a phenomenon.

Materialism maintains the objectivity and universality of cause regarding causal relations as relations between objects themselves, existing outside and independent of consciousness. Subjective idealism either denies causality altogether, seeing it only the ordinary sequence of human sensations as in Hume or recognising causality as a necessary relation considers that it is introduced into the world of phenomena by the cognitive subject and that it has the a priori character as in Kant.

Causality in Hume:-

According to Hume reality was only a stream of impressions whose causes are unknown and unknowable. He

considered the problem of the existence or non-existence of the objective world as insoluble. One of the fundamental relations established by experience is the relation of cause and effect. If one phenomenon precedes another it cannot be deduced that the former is the cause and the latter is the effect. Even the most frequent repetition of the linking of events in time does not give knowledge a hidden force with the help of which one object produces the other. Thus Hume denied the objective character of causality.

According to Hume, the stream of our impressions is not absolute chaos. Some objects appeared to us a bright, vivid and stable and therefore he maintained that this was sufficient for practical life.

Hume propounded two thesis - one about the meaning of the word 'cause' and the other about the source of our beliefs concerning causal connections. To him the word 'cause' meant all causal statements implicitly general. For example X is the cause of Y is to say that the sequence X followed by Y is an instance of the general fact that events of the type X are invariably followed by events of type Y.

By causal beliefs Hume maintained that we can never come to believe that an event X is the cause of another event Y merely by observing these two events. The facts relevant to causality is observation. X and Y (where X is the cause of Y by observing these two events) are spatially adjacent and temporaly antecedent to each other. This regular sequence we have noticed in the past leads us to the belief that from the type of event X, Y follow. There is no necessary connection. The connection here is the invariable relation. Therefore scientific cause does not involve necessity. The cause only describes how the universe moves. It does not necessitate the effect. As A. J. Ayer says 'Cause has no necessity but science takes it as necessity or as a hidden force'. Thus Hume define a CAUSE to be :

> "An object precedent and contiguous to another, and where all the objects resembling the former are placed in like relations of precedency and contiguity to those objects, that resemble the latter. If this definition be esteemed defective because drawn from objects foreign to the cause, we may substitute this other definition in its place viz. 'A cause is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other" Treatise, p.170.

For Hume causal relations are therefore, not matters of direct observation. The only reason we can have for believing that A was or will be the cause of B is that we have observed or have reason to believe that events of some type to which B belongs, have been regularly followed by events of some type to which B belongs. But regularly does not mean here by invariably. Our judgement that A is the cause of B is not normally, based on a known invariable sequence of B like events on A like events. Our judgements are based on approximate regularities, on generalizations with many exceptions, on sequences known to occur only in a proportion of cases, even sometimes a small proportion. But what typifies causal laws is that if we are furnished certain information about the present moment, the law will give us information about the future. The gravitational law we stated governing the tossed-up stone is in explicit form giving us information about the past, present and future.

If we carefully analyse the simple case of falling of stone if thrown and that of a simple case we can find that the pattern of explanation is the same. For example if we ask a scientist how he explains the tremendous amount of energy released by the Atom-bomb on Hiroshima-Nagasaki, his explanation may be very lengthy but he will take recourse

to a large number of physical theories, dealing with atomic phenomena, the materials used, the making processes, and the laws used in designing the bomb. These are the accepted laws that were used in designing the bomb because past experience has led us to assign high credibility to them. In addition he will supply us with the particulars of the bomb like the dimensions of the bomb, the amount of the various materials that went into it, and how these materials are distributed. Then he will prove that it follows from the theories that bomb of the given specifications releases a tremendous amount of energy.

The law we stated governing the tossed-up stone is in explicit form giving us information about past, present and future. But it is easy to change this into a causal law. Suppose we state merely that the acceleration is equal to minus gravitation, it will be objected that this is not a causal law since in it there is no "cause". But we can say that the acceleration is caused by a 'gravitational force'. i.e. by a force that causes the gravitational acceleration. Then how do we observe the force ? By observing the acceleration. How strong is the force ? Just strong enough to bring about the acceleration. This may seem superfluous

but this is what Newton exactly did. In every type of motion we can observe the acceleration and the mass of the moving particle. He then postulated a force causing the acceleration of strength. Since in many types of motion the acceleration is inversely proportional to the mass of the moving particle Newton accounted for a constant force governing the motion. In our example even this satisfaction is missiong. The acceleration is independent of the mass of the falling body-, but there is no difficulty in overcoming this if we accept that the acceleration is constant. Then the postulation that the gravitational force is proportional to the mass of the falling body is true. Together with the fact that the acceleration is constant. The only possible justification for this kind is that we take that our laws be in the form of causal laws.

There have been many philosophers who have tried to take the fact that scientists use causal laws and draw far-reaching conclusions from them. It is to be noted that the only legitimate conclusion to be drawn from the existence of causal laws is that scientists like to put their laws into causal form.

All scientists do believe and Einstein has repeatedly emphasized that science must start with facts and end with facts, no matter what theoretical structures it builds in between. First of all the scientist is an observer. Next he tries to describe in complete generality what he saw, and what he expects to see in the future. Next he makes predictions on the basis of his theories which he checks against facts again. So the basic purpose of science is to form theories which will explain the facts of our Universe.

What is Fact ? :

It is taken for granted that a scientist starts with hard facts and build up theories. But it is doubtful that can there be a fact entirely divorced from theoretical interpretations. We might feel that when we see a table, we have a hard fact but in actuality we have made use of certain theories thoroughly accepted and assimilated that we use them sub-consciously. There is nothing in our visual image that makes it logically certain that we see a solid object.

In fact under certain circumstances as in dreams and mirages, one can put his hand through a seen table. It is a theory based on past experience that certain visual images

are associated with solid objects. One can also assume that the top of the table looks four-sided from all points of view, but that while it looks like a rectangle from above the angles will vary as one walk around it. In other words one can assume certain primitive optical laws. While there are primitive hard facts in our experience, our report of our experience always contain an interpretation of what we think and what we saw.

We can also distinguish between objective and scientific facts. An objective fact is an event or fragment of reality that is an object of man's practical activity or knowledge. A scientific fact is the reflection of an objective fact. In human consciousness. That is its description in a definite language. Scientific facts are the basis for theoritical constructions which would be impossible without them. As an individual phenomenon or event the fact is necessarily connected with other facts through various relations. Scientific knowledge should give as full a picture as possible of facts, with all their interrelations and interconnections. An aggregate of scientific facts forms a scientific description. A scientific fact is inseparable from the language it is expressed in and therefore from the terms in which the concepts are formulated.

An idealistic interpretation of the facts going from Hume and empirical criticism to neo positivism treats facts

as something existing only in man's sensations. According to this conception the world is seen as an aggregate of isolated facts, elements of sense experience connected with each other through the subject.

Facts and Theory.

Theory is a system of generalised authentic knowledge which gives an integral picture of the regularities and essentialities of reality. The term theory has different connotations as opposed to a hypothesis. Theory differs from hypothesis since it mentally reflects and reproduces reality. At the same time it is inseparably linked with practice which places pressing problems before knowledge and requires it to solve them. For this reason practice or hypothesis or its summarised results are part and parcel of every theory. Both scientific and social theories are determined by the historical conditions in which they originate, by the historically given level of production, technology, experiment and science and also the dominant social order, which may favour or contraryly hamper the creation of scientific theory. Thus only in the 19th century with the emergence of marxism, sociological views turned into scientific theory of the laws of social development. Theory may and

actually do play a big role in scientific knowledge and the transformation of society by revolutionary means. Thus while appearing as a generalisation of the cognitive activity and results of practice theory is conducive to transforming nature and social life.

If the mathematical record of a fact is expressed as $x = 3.5$ then a theory may be an equation like $xy - z^3 = t - 20$ If we allow this then the only difference between a fact and a theory is that a fact is something that we already know, while a theory also states things not yet observed. Again, though not in all cases, a fact reports a single event, while a theory reports an unlimited number of events. A fact is always a single thing like 'there is a sun in the sky now, and a theory is generally a statement like 'the sun rises every 24 hours'.

The Scientist makes some observations (even with planned experiments) and records these in the mathematical language devised by the theoretician. The theoretician tries to formulate a general mathematical proposition, incorporating these facts. Then he develops this theory mathematically deriving certain predictions or facts.

Explanation and Prediction in Natural Sciences:

Science makes prediction from the established laws.

That means that if we knew the theories in time and had all presently known facts available to us, we could have predicted that his particular event of something very much like that would take place. This kind of explanation that Science offers let us call good scientific explanations.

If we accept the Scientific explanation is correct that is that every fact in the universe is guided entirely by law then the future is determined. But we know that all scientific facts are subject to small errors, governed by statistical laws. Hence the best we can ever hope to achieve is to explain why something very much like what happend did happen. The same explanation would apply if a slightly different event took place. This may be a good explanation.

But atimes we find that some explanations are bad explanations or pseudo-explanations. In fact it is only a classification. For example if we say that a certain lady is ineffective as a medical practitioner. The explanation could be that 'she is a woman, and all women have weakness for men and that is why she is ineffective as a medical practitioner. It is true that she is a woman and it is equally true that women have weakness for men but absolutely nothing follows from this about her effectiveness as a medical practitioner. So we have incomplete explanations.

In a complete explanation the event to be explained is deduced from certain theories and from known facts. In an incomplete explanation some theory or fact is omitted. Suppose we say 'All men are crooked and that's why Johny is crooked'. The missing fact is that Johny is a man. This is rather typical or incomplete explanations. The missing factor is so obvious that we do not bother to supply it. There are so many more complex cases of incomplete explanations. In fact a scientist to explain a certain fact, is most likely to get only an incomplete explanation. The theories of Science are so strongly interrelated that even a relatively simple explanation may make use of all the theories of at least one given branch. When a biologist explains a certain fact about micro-organisms, the biologist is likely to use the observations make through a microscope and his biological theories but he is unlikely to state the optical laws governing the microscope eventhough these are needed for a full explanation. That is why it is hard sometimes to judge whether a scientific explanation is adequate ?

What then explains the predictive power of scientific generalizations ? Even if two scientists agree as to what we can expect from our theories, they may disagree as to the predictive power on the basis of varying views as to the possibility of finding the necessary facts to apply the

theory. For example Newton's laws tell us all about the future of the solar system if we know just where the planets are at a given moment in relation to the sun. Errors in prediction may be due to the inaccuracy of the law on the one hand and on the other hand it may be due to the inaccuracies in determining the positions of the planets, which can be reduced but never entirely eliminated. It is well known to anyone that the so-called rounding errors may become very significant in a long computation. Similarly a very small error in calculation may be magnified as the result of being used over and over again. Introducing a small error of observation is like introducing a calculating error into the calculation of prediciting.

The problem of predicting is further complicated by the celebrated Uncertainity principle. When we come to atomic and sub atomic phenomena, we find that our methods of observing and measuring are so crude that we cannot help disturbing the system to be observed. According to the Uncertainty Principle there is an absolute limit to the accuracy we can achieve. This shows that whether our laws are statistical or causal, there are severe limitations to the accuracy of our predictions.

Again we have limitations on our powers of analysis. To derive predictions from a given theory often requires

long and difficult mathematical arguments. Given Newton's laws, it is easy to show how two bodies move relative to each other, each attracting the other one. But when we ask the same question for three bodies, the answer has still not been found in complete generality.

It is also seen that though the time element does not affect predictability in principle, it does affect the practical problem. It is true that with our present theories we can predict tomorrow's weather. But if it takes our calculating machines a full month to carry out the necessary prediction, then it is a very little practical use. Though machines saves time at times, the possibility of machines taking more time than it takes for the event to happen cannot be ruled out. For example in the case of predicting human decisions.

Explanations and Predictions Distinguished.

Do explanations realy explain facts ? For example the law of gravitation as exemplified in the falling of a stone really explains anything since every why is not able to explain and give the answer. In fact our explanations amounts to showing that the new fact fits into the general pattern of knowledge available to us. But if we expect something of this sort to happen in the future too we are coming to predictions. On the basis of past experience we

formulate a general theory as applying not only to the past and the present but also to the future and on this basis we make a prediction to the effect that the event in question would take place.

Then what is the essential difference between an explanation and a prediction. While the explanation refers to something already known to be true, the prediction is a commitment to knowing what is going to happen in the future. This may be a difference superficially from out-side but if we look at the internally of explanations and predictions we fail to find any essential difference. In either case we have a general theory available which must be well confirmed. We have facts which we can start with and from the theories and facts known to us we deduce a certain new fact. Here the logic of the problem is concerned, there is no essential difference.

However the difference between explanation and predictions we can account for in the fact that while explanations are retrospective, predictions are prospective. Explanations are retrospective since it consists in revealing the essence of the object studied showing that the object that is explained obeys a certain law or laws. Explanation is closely connected with description. But prediction is prospective since it looks towards the future with scientific

rectitude, that is on the basis of past experience we formulate a general theory as applying not only to the past and the present but also to the future and predict that the event in question would take place.

It is also to be noted that there are no general characteristic features of all explanations. Every explanation is different from the next, different in purpose and so usually different in structure. Explaining something is not to imply that we could have predicted it, nor is it to imply that we can predict future cases like it. But a prediction is often possible without any explanation being intended at the same time.

To Sum Up:

We stated with the basic assumption of science that there are laws of nature. On the discussion of it we saw what is 'Law' and that led us to the search for causel laws. We also discussed the complete cause and the specific cause. Then we saw the different views on causality that of materialism which maintains the objectivity and universality of cause while subjective idealism which denies causality. Whereas Hume recognised causality as a necessary relation. We dealt in details Hume's causality. For Hume a cause is

an object precedent and contiguous to another and so united with it, that the idea of the one determined the mind to form the idea of the other, and therefore causal relations are not matters of direct observation, and ~~the basis his~~ So he stress on invariable relation and regularity.

We proceeded to understand the terminologies that underline the above discussion viz., about Fact and Theory. And we came to the conclusion that 'a fact is always a single thing while a theory is generally a statement.

Then we concentrated on explanations and predictions in natural sciences. We saw of good and bad explanations. And our concern was whether a scientific explanation is adequate ? We saw many difficulties in the adequacy of scientific explanations and predictions like inadequacy of law, inaccuracies of facts at hand, rounding errors, errors in calculation and the uncertainity principle. So we came to the conclusion that our laws whether statistical or causal suffer from severe limitations in prediction and its accuracy.

And finally we distinguished between explanations and predictions. And we saw that while the explanation refers to something already known to be true, the prediction is a commitment to knowing what is going to happen in the

future. And a prediction is possible without any explanation. Which now leads us to the need to understand the meaning and criteria of determinism.

CHAPTER - III

MEANING AND CRITERIA OF DETERMINISM

In ordinary parlance we could make a distinction between two kinds of events that places all the occurences of our universe exclusively and exhaustively into two classes, namely 'actions and events' . When we think of human actions we intend to think of bodily movements and physical changes that take place. For example voting in an election, making promises signing a contract or deed, choosing a pair of shirts catching a train, paying a bill etc. All these certainly involve physical mogements and is ofcourse the outcome of human decisions and choices. Examples of events or happenings are eclipses of the sun or moon, showers of rain, earthquakes, heart beats, sunrise or sunset etc. that occur characteristically without human intervention.

We all know that some events are within our full control and some partially within our control and some not within our control. The happenings of the world that occur according to the Laws of nature and even this could be controlled by applying the scientific knowledge. Only the first group is a field for choice. The other two requires more than choice to be brought under our control. The problem of free will has arisen in part from putting under critical scrutiny the naive distinction between actions and happenings

or events with which we have started. The necessity for this critical scrutiny has arisen from two main sources namely the growth of natural science and some considerations about the future events. So there is the debate about free will and determinism.

The debate can often end in confusion since we do not take the trouble to get clear about the meanings of the terms used in the questions. As is the case, before we can tackle the main issue we have to ask a whole range of preliminary questions like what exactly is to count as 'choosing freely' in a situation ? And what precisely is 'determinism' ? How can we know if something is an 'inevitable consequence' of what precedes it ? etc. and so our attention shall focus in this chapter on the meaning and criteria of determinism.

To say that the human action is determined means that a) 'events' have causes i.e., an action or event is a member of causal sequences that it follows that with causal necessity from the precedent factors which are identified as its causes. b) determinism implies that the agent '<u>could not have done other-wise</u>. That it was impossible to choose an alternative course of action. In this argument the question about the logical status of 'could' arises. What kind of

'could not have done ' ? Is it a logical could ? We shall discuss it in the chapter on Free Will.

For our purpose we shall keep the meaning of determinism as that 'we are causally determined in every respect. If follows from this that we do not choose freely and so are not responsible.

Varieties of Determinism:-

There are at least five varieties of determinism we might examine namely: 1) Logical determinism 2) Psychological determinism 3) Theological determinism 4) Ethical determinism and 5) Physical Determinism.

We shall just pass by the first four varieties of determinism and discuss in detail our topic i.e., the physical determinism.

Logical Determinism:

The principles of logic are presupposed in all human thought and discourse. They appear to be necessary and true. Let us begin with the three Laws of Thought laid down by Aristotle.

1. The Law of Identity (A is A)
2. The Law of Non-contradiction (Nothing can be both A and not - A)
3. The Law of Excluded Middle (Everything is either A or not-A).

They are fundamental because if they were not true, none of the other truths could be formulated or even thought of. In everything we say we presuppose that A is A. For example if we speak of a table, we are presupposing that the table is a table. If the table were not a table then what could we even be talking about ? Again if we say that a square is a circle, we are in effect saying that the figure is both four-sided and not four-sided which is to contradict ourselves. That is, we are violating the Law of Non-contradiction which says that nothing can be both A and not-A.

As we have stated the three laws, they have to do with things, relations, properties etc. in the world. Sometimes, they are formulated as truths about propositions.

Law of Identity : If p then p

Law of Non-contradiction : Not both p and not-p

Law of Excluded Middle : Either p or not-p

In other words: if a proposition is true, then it is true: No propositon is both true and not-true and every proposition is either true or not-true. There is an advantage in this formulation in that the three laws can now be used as rules of inference in the logical deduction of propositions.

The man in the street who says 'What is the use of worrying ? What will be, will be' is certainly true and indeed is a truth of logic. Thus we end up in the hard form of 'determinism' namely 'fatalism' which states either empty logical truths that cannot bear on the realities of experience or else realies on false or incomplete premises. By looking at the fatalist argument we can see that though it is logically true it tells us nothing about our real world. For example the sailor who says that it is pointless for him to learn to swim because if he is not going to be drowned, the skill will be unneeessary and if he is going to be drowned, it will be useless, is not simply reiterating the logical truth that the future will be as it is going to be. He is neglecting an important factual truth namely that the possession of the skill may actually save his life.

Thus relying only on accepted principles of classical logic, the logical determinists try to establish that if any event in the future will in fact occur, then it is true

at any time, prior to or subsequent to the event, that it occurs. Thus if propositions about the future can be true or false, the events to which they refer must occur by necessity.

Psychological Determinism:

Psychology is a science dealing with the laws governing the origin and functioning of the psychic reflection of objective reality of man's activity and behaviour. Its natural scientific basis is the theory of the reflectory mechanisms of the brain.

The defenders of psychological determinism refer to thw working hypothesis of psychology that there is no mental state without a corresponding brain-state, that the brain-state is to be regarded as explanation of the mental state. The successive mental states have no quantitative measurable relations and that to the preceding mental state. Thus the chain of physical causation is unbroken.

Theological Determinism:

God is omnicient. He therefore knows what I am going to do before I do it and there is nothing for me to do except what He knows I am going to do. This doctrine of the

foreknowledge of God is held to exclude the freedom of man's choice. But to deny that God has foreknowledge would be derogatory to His dignity.

Ethical Determinism:

A man's character determines his acts and he is responsible for the act of his own. He committed it because being man he is he could not have done otherwise. All our instruction, re-proof and correction of others pre-supposes that they may be determined by such influences. Thus the whole outfit of ethical categories may be read in deterministic terms and indeed are so read by many ethical thinkers beginning with Socrates who held that right ideas determine right conduct.

Since our main concern being physical Determinism we shall not discuss at length the above types of determinisms. Only a bare line thought is given. Of course the arguments from the above different sources are not and do not establish the notion of determinism de facto, which we shall not deal with. And so now we shall focus our attention on what physical Determinism is ?

PHYSICAL DETERMINISM.

Physical Determinism is the view that every event in the universe is the inevitable outcome of previous conditions. It

is implicit in this formulation of determinism is that Every event has a cause, i.e., every event in the universe is the inevitable outcome of previous conditions.

To say that an event has a cause is to say that there are universal laws together with statements about initial conditions prevailing at particular times, and that from these two together we can predict an event which we will call an effect. For example given that under the conditions x,y,z, iron expands when it is heated, and given that conditions x,y,z, prevail and that this is a case of iron being heated, we can make the prediction that iron will expand. Here we have a typical causal relation. The so-called 'cause' is then the event referred to in the statement of causal conditions. And these conditions are regarded as being sufficient to explain the effect, if it is a ful-blooded causal explanation.

We may therefore formulate the idea of a cause as a sufficient condition, that is, as a state of affairs which is sufficient to produce a certain effect. But the notion of a sufficient condition is not without its problems. If we think for a moment of all the necessary conditions which together would count as a sufficient condition for, say the proper functioning of a car we will realize what kind of problems these are. The numerous parts of the machine must be correctly assembled, and they must be working well. They

must be air in the tyres and oil where it is needed. Then we might want to go on to say that even given that one had a machine in perfect running order, the sufficient conditions of its proper functioning must include that there be a suitable surface on which to ride it, and a rider etc. Thus a statement of 'initial conditions' could become infinitely expandable and the idea of a sufficient condition meaningless. The only simply stated sufficient conditions are those describing negative effects. For example, to state that one one has removed one of the wheels' of the car is to state a sufficient condition for its not functioning properly.

Therefore, what we may understand from the discussion of a cause as a sufficient condition is that its effect must follow its occurrence. Since its occurrence is seen as sufficient to guarantee that effect. We might therefore say that given certain initial conditions that it is raining here is a sufficient condition for my garden paths being wet. The initial conditions that have to prevail can be summed up by saying that the path must be exposed to the rain, or that the rain must have access to the path. And so it must not have been covered by a waterproof covering it or arranged for many people to hold umbrellas over it, or invented a low-level hot-air device that evaporated the rain just before it reaches the path.

Coming back to the basic assumption of the science that every event has a cause it was believed that events occurred in orderly patterns which could be formulated as causal or natural laws. On the basis of these laws and knowledge of the actual causes at work accurate predictions would be made. In principle any event could be predicted. It was only the lack of knowledge of the laws or the present causes that limited prediction. The theory assertaining universal causation and total predictability has been called determinism.

For the determinists, human actions are events as predictable as any other type of event just as the behaviour of water heated 100° centigrades can be predicted so in principle the behaviour of the persons too. The determinist would admit that at the moment the latter sort of prediction cannot be made reliably because we lack the necessary exact laws of human behaviour. But it is believed that the social sciences may find such laws and correct predictions will become possible.

The deterministic notions first appeared in ancient philosophy and were most clearly postulated by Atomism. The conception of determinism was substantiated and developed by Natural science and materialistic philosophy in the modern

times. Baplace,Bacon, Spinoza etc. championed the cause of deterministic philosophy. Their determinism was necessarily machanistic and abstract in confirmity with the level of contemporary Natural Science. They believed that the forms of causality to be absolute and governed the laws of machanics. They identified causality and necessity and denied the objective character of chance.

The primitive societies attributed the observable natural changes to conscious agencies like the power of gods or demons. But the rise of natural science gave a very different kind of interpretation to the natural events. To the natural scientists the changes in the universe are the outcome of causal regularities that operate quite independently of anyone's conscious choice or purpose.

In the early stages of development of natural science attention was on the physical world. The science that developed during the nineteenth century shows that the material world as a system of particles moving and interacting according to the laws of nature.

A nineteenth century mathematician Pierre de Laplace believed that our bodies are a part of the physical nature. the workings of the human body necessarily depends on chemical reaction. Digestion, respiration, growth and development

can all be shown to have a chemical basis identical with that of the animals or plants or of the organic world. Thus even the workings of our brain and nerves on which actions and consciousness in all its forms depend on the ordinary laws of physics and chemistry. He wrote thus:

> "We ought then to regard the present state of the universe as the effect of its antecedent state and the cause of the state that is to follow. An intelligence knowing, at a given instant of time, all things of which the universe consists, would be able to comprehend the actions of the largest bodies of the world and these of the lightest atoms in one single formula, provided his intellect were sufficiently powerful to subject all data to analysis; to him, nothing would be undertain, both past and future would be present in his eyes. The human mind in the perfection it has been able to give to astronomy affords a feeble outline of such an intelligence" (Quoted in Free Will, D.J.O.'Connor p.10).

Scientific determinism therefore depends upon facts about human knowledge. The quotation from Laplace cited above is the classic statement of this position. In recent

times too this determinist thesis has been stated in such form. For example, Prof. Bridgman, in The Logic of Modern Physics wrote, "By Determinism, we understand the belief that the future of whole universe or of an isolated part of it, is determined in terms of a complete description of its present conditions". And according to Moritz Schlick Determinism ~~for~~ means ~~Moritz Schlick~~ "the future can be completely predicted from the present"[5](Philosophy of Nature (trans. by A.Von Zeppeline) p.58. Therefore if we know the exact description of the present condition of a system and the laws governing the system then we can predict the future system.

Now let us make a query about the status and justification of deterministic view that every event in the universe is the inevitable outcome of previous conditions i.e., every event has a cause. That every event has a cause is a view which is commonly held and through which we tend to regulate all or most of our activities. So what I want to consider is its entitlement to such widespread acceptance. What is it that leads us to acknowledge the principle so readily in our daily lives ?

Let us begin by asking what kind of claime 'Every event has a cause' ? Is it a claim which depends on observation of what goes on in the world around us, the kind of claim I could check up on in the same way as I could check up on a claim like every church has more than one door or is it a claim not dependent on observation but on something else ?

The answer is that the claim seems to be able to be of either kind in that it may depend either on observation or not on observation. If it can be tested by the acquisition of knowledge through observation then given certain features it is an empirical hypothesis. That is a theory based on observed facts. But, if this particular claim does not depend on observation of what takes place in the world, then it is a metaphysical claim.

Metaphysical claims.

Metaphysics is sometimes described as the study of 'what is there', but this can be confusing since the physical sciences, in studying the physical universe, also study what is there. The metaphysician distinguishes between physical facts and other kinds of facts and although he does not ignore the first it is with the second kind that he is most concerned. One way of recognizing a metaphysical question is by recognizing that it is one which probably cannot be settled by observation of the physical world, and indeed, is not put forward as a question to be settled in that way but only by what has been called the systematic exercise of the understanding. We may think therefore of metaphysics as seeking an understanding of the conceptual scheme through which the world becomes intelligible to us.

The concept of causality belongs with this scheme and a metaphysical study of it might consider what we mean by causality and examine just how we use the causal pattern to organize our conception of the physical universe. The examination would include an assessment of the scope and limits of the concept and this would help our understanding of its place in our scheme of 'what is there'. This kind of metaphysics has been called 'descriptive metaphysics' by Prof. P. F. Strawson which aim to lay bare the most general features of our conceptual structure and distinguishes it from 'revisionary metaphysics'.

The positive assertion that every event has a cause belongs with revisionary metaphysics which as its name suggests. It aims to provide us with new or revised schemes for understanding the world. The metaphysical systems of Spinoza and Leibniz are the most obvious examples of revisionary metaphysics. Spinoza's conception of the universe as being one substance with infinite attributes of which two, thought and extension was a revision of the Cartesian two-substance scheme which left us with the tricky problem of explaining how two distinct substances could interact. Leibniz's revision of the two-substance scheme was a scheme of an infinite number of different substances, and his solution of the problem of Descartes' dualism was to say

That the substances never do interact. All the changes that take place is in accordance with the pre-established plan.

Neither Spinoza nor Leibniz work on the assumption that empirical observation could prove the correctness or otherwise of their metaphysical schemes. Certainly they reflected carefully upon the physical world. But it was an underlying structure for its existence that they sought in their metaphysics. It is as if such a metaphysician says: 'Look, the ultimate nature of the world is like this: the world fits into this scheme that I put forward to you' And the scheme might include the claim that the causal principles govern events in the world. But the plausibility of the claim would rest rather more in its coherence with established ways of thinking about the world, than on supporting empirical evidence. Yet the empirical evidence would not be entirely discounted as support.

Here there is a connection between a metaphysical claim and empirical states of affairs in that the former is often intended as a fuller account or explanation of the latter but the connection is not easily elucidated. That difficulty cannot be tackled now. At this stage we should simply note that the metaphysician's main task is to argue

powerfully for his analysis or scheme, in order to show that however fantastic its structure may appear as when Leibniz conceives of us all as windowless monads that do not interact it nevertheless must be just as he says and any apparent contradiction of it by physical facts is not a genuine contradiction but the result of our inadequate knowledge of the underlying reality. The metaphysician does not ignore states of affairs that obtain in the physical universe, but his concern is not with a scientific investigation of them.

Empirical Claims:

Now let us see what is the status of the deterministic claim that 'every event has a cause' ? When it is a scientific or empirical claim it depends on observation and so put forward as an empirical hypothesis. It has been argued by Prof. Popper that all empirical statements must be falsifiable. This demand arises from a problem of justifying the conclusions of inductive arguments. For instance if we have the premiss

Every mule that has been observed has a heart

And conclude from it that:

Every mule has a heart.

Here we have jumped to a conclusion from the many times examination of mules and their having hearts. But most of the dead

mules of the past and most of the unborn mules of the future are inaccessible to examination.

Thus Poppers argument is that laws such as 'Every mule has a heart' and 'Every event has a cause' etc. can never be conclusively verified hence they are to be admitted to the class of empirical statements which must be able to be tested by observation. One single contrary instance would be enough to falsify a universal statement. So one case of a mule without a heart would entitle us to say that 'Every mule has a heart is false.'

Then what count as an uncaused event ? How would we discover if a given event had occurred without a cause ? Most of the time in daily life we unhesitatingly assign to events and their causes. And if we come across something mysterious that seems to have happened out of the blue, then our common-sense tendency is not to assert the absence of causes but to assume causes and assert our ignorance of what they are. We do not seem to have any criteria for recognizing an uncaused event. There is no way of establishing either its truth or its falsity and if this is so then it is not acceptable as an empirical hypothesis. This kind of criticism of causality and determinism has sometimes evoked a sense of relief in would-be liberatarians. But ofcourse,

this is a debate we are examining and so the determinist has replies to make to his critics.

A simpler though less far-reaching criticism of scientific determinism arises from considering exactly what we mean by saying that events of a certain type are predictable. The standard examples of such events are those which fall within a well eveloped science like physics or astronomy. It is common knowledge that the range of events that can in practice be predicted is very limited. Nevertheless, it has sometimes been suggested that these limitations can be progressively removed by increasing our knowledge of the laws of nature or by improving the techniques of observation by which we collect our data or by improving our methods of calculation. In other words, that these limits are mere de facto practical restrictions on our present knowledge and are not restrictions 'in principle'.

Then what conditions must be satisfied before we would accept a claim that a given event had been predicted ? It is easy enough to list the essential conditions. To justify a claim that I had predicted a certain event E that had occurred at time T_2, I should have to show:

1. that a time T1 prior to T2 I had described E and stated that it would occur at T2

2. That at time T1 I possessed evidence that justified the prediction and

3. that I actually deduced from this evidence by a valid process of inference, the statement embodying the prediction.

In the above if only (1) alone was satisfied then we should not be willing to say that E had been predicted in any scientific sense. It is only a forecast or prophecy. But if both (1) and (2) were satisfied, then the statement embodying the prediction had been drawn from the evidence by a legitimate process of reasoning. Thus predictions may vary in a number of ways. They may be more or less accurate in their description of the event and in the time to which it is assigned, and the description may be more or less complete. Moreover predictions may be the outcome of varying sorts of inference. A critic might be prepared to deny to any ostensible prediction the status claimed for it on the ground that the description of E or the time to which it was assigned was too vague or too inaccurate or because the argument by which the prediction was drawn from its evidence was logically unsatisfactory.

These criteria are reasonable enough but they are quite imprecise. Moreover, their impression is such that we have no way of removing it. As a consequence, we cannot maintain the close connection that is commonly supposed to exist between the concepts of determinism and predictability although we settle on pragmatic grounds the criteria that are acceptable in practice in any branch of science. Any ostensible prediction may satisfy to a greater or lesser degree the standards mentioned above. There are no well-established rules of logic or common use that enable us to say in any disputed case whether a given candidate to the title is a genuine prediction or not. It is a matter of more or less rather than yes or no. We would like to have definite rules that would give us a definite answer to the question - What is a genuine prediction ? Predictions are not natural features of the world we recognize and classify. They are human performances and it is we who decide what should count as such a performance.

Predictable in Principle:-

Let us now look at the more elusive notion of "Predictable in principle" and its supposed relevance to determinism. To call certain types of events "predictable in principle", instead of simply calling them " predictable" tends to minimize the important difference between events

that we can in fact predict and those we could predict if our knowledge were greater or our techniques of calculation more efficient. There are many kinds of events like tides, eclipses etc. than can be exactly foretold by the present-day scientists but that were not accurately predictable or even predictable at all by scientists of earlier times. And there are many types of happenings or events like earthquakes, volcanic eruptions etc. that are not predictable by contemporary scientists but may become so in the future given better techniques of observation and calculation. Are we to say that these are "predictable in principle" ?

To say that a certain event that we cannot now predict is nevertheless predictable in principle may be merely to make the hypothetical statement like if we had the necessary evidence and could make suitable deductions from it, we should be able to describe the event in advance and say when it would occur. We could have done if we knew enough. But such statements are true only because they are empty of content.

Is there any sense of "predictable in principle" that is not vacuous ? Suppose we use the phrase to describe those events that are not at present predictable but are reasonably

similar to events we can now predict. For example given that meterologists can predict the weather in their vicinity for, say twentyfour hours ahead, we might say that the local weather is predictable in principle over the next six months. We would mean by this that the events we cannot now predict are closely similar to those we can, that the laws of nature operate and that similar methods of observation and computation are required. But in such cases, there is no important difference between those events predictable in principle and those predictable in practice. The first class is larger than the second only to the extend that reasonably forceable improvements in our predictive techniques will bring events that cannot now be predicted within our range. And that such improvements can be forseen is a hypothesis that like any other can be confirmed or refuted by events. So the claim that all events are predictable is either false or empty of content. What lies within the range of human knowledge depends among other things on our senses and our powers of reasoning. No doubt there are many things that are true about the universe and that lie forever beyond the boundaries of human sense and reason. Perhaps our qualified principle of determinism is one of these.

THE SENSE OF MUST.

Coming back to the idea of a cause as a sufficient condition it follows that 'If a cause is a sufficient condition, then its effect must follow. That is to say that if it is raining then the ground must be wet. Then the question here is that 'What is the sense of 'must' here ?

There are several senses of the word 'must' but we need not examine all of them here. Consider the following reasoning:

If he is a bachelor, then he must be unmarried. That 'must' is a logical 'must' because it follows from the meaning of the word 'bachelor' that the person to whom the title correctly applies must be unmarried. It is logically true.

Let us examine the statement 'If it is raining the path must be wet ! It is not a logical 'must' because it does not follow from the meaning of the word 'raining' that the garden path must be wet. There may be difficulty in this that someone might say that 'wetness' is part of the meaning of the word 'raining'. This is correct, but it is not thereby logically true that because it is raining then the garden path is wet. The test of our statement is made by

asking whether we would know that it was always true without having to go and look. And we do not know solely by examination of the meanings of the words that the statement is true. We have to check it by observation and so it is an empirical and not logical 'must'. The truth of this kind of statement is known in a different way from the truth of statements such as 'circles never contain straight lines,' or bachelors are unmarried or 'all swans are birds' etc. In the case of the latter statements we do not have to inspect circles, bachelors and birds to test for truth. Thus an empirical 'must' is not like a logical 'must' and if an event is causally determined it is not that it follows logically from its causes. Logical connections hold between statements, not between events. If we now ask how we come to lay that a given event must follow upon a particular cause, the reply is found in the universality of natural laws. Because the sun always has risen, organisms do always die, rain makes things wet and so on and we come to say that they 'must' do so. But it is always logically possible that they may do otherwise. These are matters of natural necessity, in contrast to those of logical necessity.

Here we should be aware of a possible confusion of arguing logically using empirically grounded statements. When we do this then logical relations hold between those

statements of empirical fact, but the statements themselves are not logical truths. We may for instance argue that all elephants are grey. Jumbo is an elephant and therefore Jumbo is grey. The three statements employed here are empirical but the relation between the statements is a logical one.

Physical and Logical necessity:

What has this to do with causal determination ? It is in this respect that if I say that the rain is the cause of the garden path's being wet or that because it is raining then the garden path must be wet I am not saying that it is logically necessary that the garden path is wet. The statement 'it is raining' does not entail the statement' the garden path is wet'. And to say we care causally determined in all we do is not to say that it is logically necessary that we do all we do. Again, it is a physical or natural necessity of which we speak and not a logical one.

Part of the pre-Hume sophistry about natural necessity consisted in the belief that the causal maxim, 'Every event has a cause' was a logical truth of the same kind as 'Every bachelor is an unmarried male'. This is clearly not correct. The idea of an event is the idea of something happening and

this idea does not include the idea that there must have been a cause of that happening. Here we should not be confused with 'event' and 'effect'. 'Every effect has a cause' is certainly a logical truth since if something is an effect then it is something which is caused. Eventhough it is a logical truth that every effect has a cause, this does not mean that a particular cause is logically related to its particular effect. When Descrates applied heat to the melting of the wax, there is nothing in the sentence 'He applied heat to the wax that tells us 'the wax melted'. Yet we do speak of the connection here as in some sense a necessary one in that we say 'if he heated the wax it must have melted'. Part of Hume's concern was with analysing what we mean when we speak of that necessity. Since the connection is not a logical one it must arise in some non-logical way. Hume argues that it arises from our observation of regular conjunctions. It is by constantly observing processes like the melting of wax by heat and the wetting of paths by rain that we come to say that heat or rain necessarily bring about these respective states. For Hume says " ....when many uniform instances appear, and the same object is always followed by the same event; we then begin to entertain the notion of cause and connection". (David Hume, Enquiries.Ed. Sely-Bigge, Clarendon Press, Oxford, 1966. p. 78).

Hume concludes that when we speak of natural necessity the connection between events which we say 'must' hold is simply the connection our minds tend to make once we have observed regularly connected events. All our ideas are derived from sense impressions but there is no sense impression of the necessary conjoining of events. The only sense impressions we can discover are of objects themselves. But we become so accustomed to the regular conjunction of certain pairs of events that the idea or impression of one member of the pair is associated with the idea of the other member and it is scarcely possible, as Hume puts it, to prevent the mind from passing from one to the other. Therefore we come to say that the one must be connected with the other. This analysis of natural necessity forms the foundation of Hume's own views on free will and determinism or as he names them as Liberty and Necessity.

In the Enquiries Concerning Human Understanding Hume state his views on Liberty and necessity. It is base on the observation the way in which we all behave to each other. Hume says that we expect regularities in the behaviour of our fellow men just as we expect them in nature and all physical events. We make the same sorts of inferences about

people as about the rest of the physical universe and even those of us who assert in words that we are exempt from these regularities in our actions reveal in our practice that we agree to 'the doctrine of necessity' as he outlines it.

By the 'doctrine of necessity' he means the belief that certain events will always be followed by certain other events, a belief acquired through observation of the regular conjunction of those events. His point is that our behaviour to others shows that just as we come to expect the production of a flame from the striking of a match so we expect in our fellow men certain actions to follow from certain motives. We infer from motive to action and from action to motive in the same way as we infer from the striking of a match to its burning and from its burning to its being struck.

His explanation of why we will not acknowledge this in words, eventhough we acknowledge it in practice, is that we tend to think when we observe things outside ourselves that we see between conjoined events a connection that is more powerful and binding than mere constant conjunction. Yet when we relect on our own conduct we have no sense or awareness of a similar binding connection between our motives

and our actions. And so we say that our actions are exempt from those connections because we do not feel a link between them. But in fact, Hume is of the view that, it is the same for everything and everyone and the regularity we observe in matters exterior to ourselves applies to ourselves as well. But in all things this regularitiy is nothing more than constant conjunction between certain events, and the tendency of our minds to infer from one to another of the conjoined events. This is what necessity or necessary connection amounts to on Hume's analysis.

If human action is and all changes in matter are entirely subject to natural necessity a question arises as to what we mean when we say we have liberty. Hume defined liberty not as conduct that is exempt from natural necessity, but as conduct in which we are free to do what we want to do. Ofcourse what we want to do is necessitated in the sense of necessitation he has outlined already. But we say we are free when we are not restrained from doing what we want to do and when we are not compelled to do something we do not want.

Objections to Hume's Natural necessity and Liberty:-

We could think of two possible objections that be made against Hume's account. The first objection is that

say someone might say that liberty consists not in merely being able to do what one wants to do but in actions which are exempt from necessity and fall into occasions of chance. But Hume sets about demolishing the notion of chance saying that there is no such thing because 'it is universally allowed that nothing exists without a cause of its existence'.

Again Hume asserted that 'Nothing exists without a cause of its existence' i.e., 'Every event has a cause' which is a logical truth. Yet he offers no argument for the assertion other than that it is 'universally allowed'. This is far from satisfactory. However, Hume's point is that if nothing exists without a cause than there is no such thing as chance. For chance consists of uncaused happenings.

The second objection that might be made to Hume's account of liberty is that although everything may be caused, there are some causes that do not necessitate and it is these that have to do with free actions. Here Hume turns to the definition of a cause to counter the possible objections. We cannot say what a cause is without saying it is that which produces something, a necessary effect and so to speak of causes as not necessitating is a contradiction. The ground of this arguments is firm. For it is to the logical truth of 'Every effect has a cause' which Hume is appealing.

All the time we hage to remember that Hume analyzes necessity as the regular conjunction of certain events and the customary inferences we make concerning them. Necessity is no more than that.

TO SUM UP:

We started with a distinction between 'actions and events', which if put under critical scrutiny we end up in the free-will-determinism debate, which led us to the discussion on the meaning and criteria of determinism. We stated the two divergent views on determinism and came to the view that determinism meant for us that 'we are causally determined in every respect' i.e., we do not choose freely and so we are not responsible.

Then we just skipped through the four varieties of determinism namely the logical determinism, Psychological determinism, Theological determinism and Ethical determinism. And we focused our attention on the Physical Determinism at length.

We also examined some arguments for and against determinism and the grounds of the claim 'Every event has a cause'. Although there was no conclusive outcome to our examination the case for determinism appeared to be less difficult to challenge than it seemed to be. However, it is clear that, we cannot afford to dismiss the thesis of physical determinism. It has to be taken seriously and may very well be true.

Our discussion also tried to look at the notions of 'sufficient condition', Predictable in principle'. We also considered the 'metaphysical claims and the 'empirical claims'. Next we considered the difference between the 'must' of natural necessity and the 'must' of logical necessity. We looked at Hume's analysis of that 'necessary connection' which we speak of as holding between certain events, and also at his views on liberty and necessity.

Humes' analysis of natural necessity provided us with a point that will acquire increasing importance as we go on with this enquiry: that logical connections do not hold between events. But what really enables us to take the next step is something that is a consequence of Hume's account of liberty and necessity. Hume, as we have seen, believed that men are in no way exempt from necessity. He held that "the conjunction between motives and voluntary action is as regular and uniform as that between the cause and effect in any part of nature". (Enquiries, concerning human understanding p.88).

Thus he was a determinist in so far as he thought that men are not in any way exempt from natural law. At the same time he held that this does not mean that men are without

liberty because by liberty we mean ' a power of acting or not acting, according to the determination of the will". For he said that"if we choose to remain at rest, we may; if we choose to move, we also may." That is what it is to be free, at any rate for Hume.

So for Hume, liberty is not opposed to necessity but to constraint. This puts in question the assumption that if we are wholly determined then we are not free. This leads us to the compatibility thesis or 'soft determinism' as it is often called. So a lot depends upon what we understand by the freedom of the will.

CHAPTER - IV

MEANING AND CRITERIA OF FREE WILL

A day rarely passes in which we do not make statements blaming or ~~or~~ excusing some aspect of either our own or someone else's behaviour. We can remember numerous instances where we have either held a person responsible for what he has done in a certain situation or have excused him from responsibility depending upon certain conditions in existence before and during the commission of the act. For example if we were to learn that Tom, whom we know to be a Kleptomanic, has stolen a watch, we would most likely excuse his action and even we might take steps to see that he receives proper psychiatric treatment. On the other hand, suppose a room-mate named Ravi, whom we know quite well has no record of a similar mental disorder, very methodically schemes and steals my prize camera then he tries to shift the blame to someone else. In this case we would most likely to get annoyed and would take steps to bring him to justice and punished some way for his act.

If we were to justify the different treatments we accorded to Tom and Ravi we might resort to an explanation along the following lines. Tom is a poor chap. He could not help what he does when he steals. He is not free to

refrain from stealing. He acts involuntarily when it comes to such things. In effect, he is forced to do what he did just as much as if someone had made him steal at the point of a gun. Surely if a person does something not of his own free will.

Ravi on the other hand acted on his own free will. He knew that he was doing because he planned for days in order to perpetrate his crime and to get away with it. He was not forced at all. He was free to take or not to take it.

The Libertarians maintains that it is desirable to retain our notions of moral praise and blame in order to preserve meaningful distinctions between what is morally right and morally wrong. Part of what is meant by saying that a given act is morally wrong in that the agent deserves moral blame and that the act ought not to have been done. But how can moral obligations and moral praise or blame make any sense if all of a person's actions are caused by factors outside his control ? It would be senseless and grossly unfair to hold a person accountable for actions he cannot help committing. If we say that Hari ought not to have done X, we imply that he could have chosen to do other than X but freely chose to do X anyway. Therefore inorder to

preserve man's status as a moral agent we must preserve the notion that a free act in one which orginates within some part of the agent's personality which is not merely the product of heredity and environment. factors over which he has no control.

So a freeact is defined "as one which originates solely in that area of human personality which is not the result of heredity and environmental factors" (The Activity of Philosophy - Fred A. Westphal p.132). Any act which happens because of the determining influences within or without the agent cannot be considered to be free. The ordinary man at least believes that there is something for which he is responsible even after allowances are made for his inherited traits and possibly an unwholesome environment. We can held Ravi responsible for staling the camera only if he could have done otherwise.

I think the litertarian claim runs something like this:

I am free in those situations in which I could have done otherwise. I do not mean by this that one or some of the circumstances would have had to be different in order for me to have done otherwise, but that in precisely the circumstances that obtained I could have done otherwise.

Having free-will means not just that there is an absence of restraint or compulsion in the situation but also that there is more than one course actually open to me.

Let us place alongside this claim the statement of determinism that:

Every event has a cause
Every human action is an event

$\therefore$ Every human action is caused
Any event that is caused could not have happened otherwise than it did.

$\therefore$ No human action could have happened otherwise than it did.

When we compare the libertarian claim with that statement of determinism it is clear that the more required by libertarianism is contained in the phrase 'there is more than one course actually open to me.

That requirement stands in opposition to the determinist conclusion that 'no human action can happen otherwise". The libertarian says that doing what one wants to do without interference is part of the meaning of acting freely. But genuine freedom of choice and action also means that there are genuine alternatives before one, in that once choice

itself is not pre-determined. It is a refusal to count as a free action something which is the inevitable outcome of previous circumstances.

Into the smooth sequence of the determinist argument the libertarian must somewhere derive a wedge so that we are not bound to accept the determinist conclusion. We know that the determinist has a valid form, and so it is open now to the liberatarian to question the truth of its premises, and thus to make some ground on which his own claim may stand.

The following questions viz.:

(1) Are actions events ? and

(2) Could I have done Otherwise ?

cast doubts on the truth of any of the premises then the business of wedge- driving has begun.

If a challenge to the assertion that actions are events can be upheld then a further question can be raised about whether human actions can be classed with the events as falling under the causal pattern. And so doubt can then be cast on the determinist conclusion.

There is another reason for choosing to look in some detail at the ways in which philosophers have challenged the

assertion that actions are events. The reason is that the issue is of a type that is central in many discussions in the philosophy of mind. The kind of distinctions that are drawn between actions and events are involved in debates about mind-body problems, behaviourism, rationality, moral responsibility, the nature of artistic creativity and other philosophical problems.

Are Actions Events ?

It is not at all difficult uncritically to accept the assertion that 'Every human action is an event'! Picture some commonplace actions such as catching a train, greeting a friend, paying a bill etc. All these certainly involve physical movement and if we search our minds to think of an action that does not involve physical movement we are in difficulty. Someone might suggest that coming to a decision about something could be an action that involved no physical movement - for one could be sitting in an armchair motionless and decide to take the first bus to Gauhati instead of the second bus in the morning. But against this it might be argued that in making the decision one is not in fact motionless since the making of a decision involves changes in the state of one's brain and so involves physical movement.

Here we must be careful. The decision may involve movement in the brain, but that is not to say that the brain movement is the decision. A neurologist misght be able to give a completely exhaustive description of the brain movement, recounting in detail the sequences of electrical impulses and changes in nerves and cells that took place. But this account does not describe the decision itself i.e., the decision to catch the first bus to Gauhati. in the morning. In fact the description of the events in the brain tells us what happens in the brain. It does not tell us what a person does, i.e. what his action is ?

In drawing the distinction between actions and events, it is often pointed out that the same bodily movements can be used in performing quite different actions and the same action can be performed by means of quite different bodily movements. So the movement of waving an arm in the air may be a greeting, a warning, a gesture to dispel insects, a plea for a help or a number of other things. Obversely, the action of, say, casting one's vote, may be carried out by making a mark on a paper, raising one's hand, shouting, moving to a particular place and so on.

But suppose we wanted to judge whether two physical events, say the boiling of quantities of water in copper

kettles were similar. We would probably employ criteria of measurement, we will measure the amounts of water, the cubic capacities of the kettles, the thickness of the copper, the degrees of the heat applied etc. But if we want to judge whether two similar actions have been performed say whether X and Y have both paid their debts, we do not start measuring physical similarities and changes pertaining to X and Y and their environments. X might have paid his debt by remiting a cheque and Y by handing over coin and we shall not show that they have performed similar actions by comparing the physical events involved in the actions. Thus we see that the criteria for judging whether two events are similar are different sorts of criteria from those employed to see whether two actions are similar.

In a paper called 'The Antecedents of Action' (A.C. Mac Intyre, The Antecedents of Action, British Analytical Philosophy, ed.Williams and Montefiore, Routledge & Kegan Paul 1966). Professor Alasdair MacIntyre has used examples of this sort to enforce the claim that talk about human actions is talk at what he calls 'a different logical level' from talk about bodily movements. He says "To call something an action is to invite the application of a quite different set of predictions from that which we invite if we call something a bodily movement".

Mac Intyre, in the paper mentioned above offers five illustrations of the difference between talk about actions and talk about obdily movement.

Firstly, he compares the kind of answer normally given to the question 'Why did your arm move ? with the kind of answer normally given to 'Why did you move your arm ? In the first case the answer is about something that happened to cause the arm movement, some physical event. In the second case the answer is about some purpose one has in mind, one's intention in raising the arm.

Secondly, he observes that if some says ' I moved my arm', then it is always appropriate to ask a reason for this. And when the agent gives reasons he has special authority in giving them for he has a unique knowledge of his own reasons. But in this case of accounting for 'My arm moved' there is not this special unique authority.

Thirdly, he pointed out that if someone says ' I moved arm', such a statement generally speaking rules out the question 'How do you know ? We do not normally require evidence that someone knows what he is doing. Yet it is not out of place to ask for evidence when the statement is of the sort 'My arm moved' i.e., when it is a bodily movement

rather than an action that is described. Mac Intyre asks us to imagine a partially anaesthetized man, lying so that he cannot see his arm directly saying 'My arm moved'. We might then ask 'How do you know ? and then the answer ' I saw it in the mirror' would make sense.

The fifth may of bringing out the difference between action concepts and event concepts in to consider borderline cases where we are uncertain as to which mode of discourse to employ. There are occasions when the body seems to control what is going on and we are unsure of how to describe what takes place. Mac Intyre's contention is that it is precisely that the fact that we do cast around for an appropriate description that indicates that we take careful account of the distinction between action and bodily movement. Think for instance the world of difference and the significance involved when the two month old infant makes the transition from simkling with the mind to similing.

The distinctions and arguments we have discussed ~~from~~ form only a small part of everything that has been said to cast doubt on the claim that human actions are events. It is the dualistic conception of human beings that is being spelt out in the arguments and in such a way that we are left with the impression that the sphere of action is one that is quite distinct from and independent of the sphere of physical

movement or events. However, the view does not satisfy our common sense conviction of the integral wholeness or unity, of a human being. Nor does it, in the end, give the libertarian the kind of justification he wants for the claim that we can sometimes do otherwise, and this is clearly brought out by Geoffrey Warnock in the following passage taken from Freedom and the Will:

"The point that specific statements about how matter moves are not, and, further more, are not translatable into, specific statements about what people do, is a correct point, and a substantial point. We have here, as one might put it, fundamentally different systems of concepts, between which no tight logical relations obtain. But still, even if for this reason we concede that the thesis of physical determinism neither states not entails that human behaviour is determined, one may still feel that there are some beliefs about human behaviour which that thesis, if ture, would require us to abondon.

Consider an example. Suppose that, in my role as a physical determinist, I describe a certain process of matter in motion, which is in fact (though I don't use these coarse, every day expressions) that of Smith's foot coming in to contact with Jones's Shin; and I claim that, given the anteeedent

physical set up, matter had to move thus, nothing else could have occured. Now in saying this I do not tell you what Smith did, and a fortiori I don't tell you what he could not but have done. There is indeed a sense in which I don't talk about Smith at all. He might have been kicking Jones on the Shin, certainly; but, for all I have said, he might equally have been embarking on a dance in the course of which his foot knocked Jone's Shin accidently; or Clumsrly showing to Jones his new shoe laces; he might even have been doing nothing, being the helpless subject of stimuli he was powerless to resist or control And so on. But, even if the account of how matter moved thus does not entail any spefific designation of what Smith did, there still are, surely, some descriptions of what he did with which it is incompatible. For instance, if matter moved in the way described, then, though it is not necessarily true that Smith kicked Jones on the Shin, at least it can't be true that he kept both his feet on the floor. It appears - indeed, surely it is obvious that the narratives of the physical determinist will be compatible only with those accounts of what people do which are themselves comparable with matters moving in the way narrated: and though there may well be several alternative such accounts, there will certainly be some that won't do" (Geoffrey Warnock, Freedom and the Will, MacMillan 1963.pp.76)

The position now seems to be as follows: There is certainly a distinction to be drawn between the system of concepts employed in respect of actions and that employed in respect of actions and that employed in respect of events. Yet, as the passage from Warnock indicates, there systems do not seem to be wholly disjunct. If we accept physical determinism, then we accept that in a given situation there is only one way in which matter can move. In that case, the range of actions open to the person in the situation is restricted to cover only those actions that are compatible with the movements of matter that take place within the context of the situation. This restriction is not in itself alarming, purely because, as we have laready seen, there are many ways of performing any one action, many descriptions may be applied to one set of events and moreover we are forever devising fresh ways of instantiating actions or ascribing action titles to events (as where an incident once describable as 'riding a bicycle over wet point on a canvas' is suddenly given the discription 'producing a work of art). However, Warnock's illuminating observation is that the question which actions are compatible with a given set of movements is a different question from the everyday question what someone could have done in a given situation. With the ordinary, everyday question about what someone could have done in a particular situation, we do

not cast around to discover what other action descriptions would have fitted the events that took place rather we suppose that the agent involved could, to some extend, have shaped the course of events. Because of this, Warnock said that our denial that actions are determined 'seems to have undergone a rather subtle, and a shift of sense. And what we have to note is that, in the picture we now have of choosing from a range of actions compatiable with a particular determined course of events, we have something that is not consistent with our ordinary,everyday beliefs about what the person in that situation could have done.

I Could Have Done Otherwise.

The attempt to argue that human actions are exempt from the inevitability of causal sequences has not met with unqualified success. Human action seems to be trapped somehow in the causal nexus and because of this the libertarians is in difficulty when he tries to justify the claim that we sometimes could have done otherwise.

There is a sense in which we always could have done otherwise and always can do otherwise. This is the sense in which it is always logically possible to do other than in fact does. Thus, although I in fact went to the university yesterday, it was logically possible for me to have gone to some other place. Moreover, it is logically possible that I

might now take off from my chair and fly unassisted to Mars for there is no contradiction involved in saying that I might do that.

It was this kind of freedom, i.e., freedom from logical compulsion for which Leibniz argued in the correspondence between himself and the theologian, Arnauld. When Leibniz expounds the view that freedom consists in exemption from logical compulsion, Arnauld is shocked by such a narrow conception of human liberty, because of its implications for Christian theology. He exclaimed that there is more to freedom than logical possibility.

This is the characteristic libertarian cry and the one for which we have not yet found an adequate justification. Most modern libertarians are not concerned, as Arnauld was, with theological implications as much as with the inadequacy of logical possibility as a description of human freedom. For there is not much to a freedom that consist merely in the fact that the contrary of a statement describing what one does is not logical nonsense. Surely ' I could have done otherwise' means something more than that it is logically possible that I could have done otherwise. Free action requires the actual possibility of doing otherwise.

The hard determinist maintains that no one could ever have done other than what he actually did, because no one could

have chosen to do anything else. The indeterminists on the other hand contends that a person could be acting freely only if he had been able to make a choice different from the one he actually made on a given occasion. Such an ability to choose otherwise is necessary for moral freedom and responsibility and we all have a feeling when we are deliberating that we could choose between a number of possible alternatives.

What does the statement "He could have done otherwise" really mean and what is this "feeling of freedom" the determinists talk about ? To answer this, let us get back to our case of Ravi's staling the camera. If it is said that 'Ravi' could have done otherwise than steal the camara" means that "If Ravi had possessed a different character or had been placed in circumstances different from those in which he has, then he would not have stolen the camera or could it mean that Ravi would have done something besides stealing the camera if he had desired or chosen to do so. If we take the original statement to mean this, then all of us on certain occasions could have done something other than what we actually did.

But then to the determinists could Ravi have desired anything other than what he did given the constitution of his character ? The question does not make sense since the

words 'could' and "could have" make sense when applied to the area of actions but not when they are applied to speech about the springs or sources of action. In other words 'could' and 'could have' have meaning when employed in statements like "I could have done a lot better on the examination had I studied more" 'could' is a powerful word which is learned from and has its ordinary, intended use in contexts where something is said about a person's observable behaviour. To take 'could' out of this context and ask 'could Ravi has desired differently ? in to violate the standard meaning of the term.

If, Can and Could:

The words 'can' and 'could' are very ambiguous. Not all of the distinguishable senses are possibly relevant to the problem of freedom, but some may be. First of all 'can' is an auxiliary verb. 'I can' is not a complete sentence. But in the sentence ' I can do X' , "do X" stands for another verb, and give the verb different shades of meaning. But the relevant use of 'can' to our purpose here is clearly conditional or hypothetical. In these uses 'can' means "can if conditions C,.....Cn one satisfied". But to the libertarians philosophers there is another unconditional or categorical sense of can and that this is the sense required by free choice. " I can" in such contexts

means "I can, no matter what" (J.L.Austin "If, and Cans" Philosophical Papers Oxford and New York 1961).

Austin opens the discussion on 'Ifs and Cans' in a characteristic way by asking 'Is there an if in the offing ? Another way of putting Austin's questions is to ask 'Are cans sometimes categorical or are they always hypothetical ?

If the claim that 'I could have done otherwise' is understood as always requiring and 'if' clause which cites antecedent causal conditions then, in using it on that meaning we are not evincing a belief in free will of the sort affirmed by the libertarians.But if, on the other hand, the claim is understood and used as a categorical assertion of abilities other than those we actualized then we do seem to be evincing a belief in the libertarians kind of free will. In Ifs and can's Austin's enquiry is into whether all 'can' sentences require completion with an if clause, he says that they do not.

Moore analyses 'could have' as 'could have if I had chosen', This meaning is compatible with determinism since the choosing constitutes the change in antecedent causal conditions required by determinism for a change in outcome. The 'If' clause states the causal conditions. Moore also says that we can substitute 'should have if I had chosen' for 'could have if I had chosen'.

Austins' Challenge.

Austin now queries Moore's three main contentions by asking:

(1) Does 'could have' mean could have if I had chosen ?

(2) Is it correct to substitute 'should have if I had chosen' for 'could have if I had chosen ?

(3) Do these if clauses state causal conditions ?

Then he answers all the three questions with a No, and gives reasons thus. He argues that 'I can if I choose' is not the 'if' in 'I shall if I choose' provides a different meaning. Then he bits various meaning for ' I can if I choose' and points out that in all of them the assertion ' I can' is linked to the raising of the question whether I choose to. The 'if' is an 'if' of doubt or hesitation rather than of condition. In ' I shall if I choose' the 'Shall' expresses intention, So, the 'if' again is not conditional but stipulatory.

Austin argues that 'could have' may express either the past subjunctive in which case it requires a conditional or 'if' clause or the past definite indicative of the verb 'can'. Similarly 'could' sometimes has a conditional meaning and sometimes a past indicative meaning. He says that it is

not that 'could' and'could have' are ambiguous,but rather that two parts of the verb can take the same shape. His conclusion is that when 'could have' is a past indicative the general temptation to supply 'if' clauses with it vanishes.

Austin then considers whether it makes sense to suppose that always requires completion by an 'if' clause. He decides it could not and that Moore saw that it could not and so switched from considering whether 'can' must always be completed by an 'f' clause to considering whether it always has to be analysed with an 'if'.

Austin notes that Moore does not consider 'if' clauses other than 'If I had chosen. But one of Moore's examples is that the ship could have gone faster' analysed this that ''The ship could have gone faster if her officers had chosen.

This is interesting because the 'if ' clause has a different subject from the main clause and because the verb in the'If' clause is different from the verb in the main clause. Austin points out that the example has those two features because the ship is inanimate. Since it is a question of free will that is at issue, it has to be made clear that free will is not to be ascribed to the ship, but her officers. So far our discussion was on Free rather than will and so what is the will.

The Will:

The will is not a thing like a bodily organ or a power, although we sometimes talk of it as if it were a thing of that sort. Hobbes in Leviathan spoks of the will as " the last Appetite or Aversion immediately adhering to the action or the omission there of". (Hobbes, Leviathan, Fontana Library 1962 Ch.VI). For Hume it was an internal impression, for he said "nothing but the internal impression, for he said and are conscious of when we knowingly give rise to any new motion of our body or new perception of our mind". (Treatese Book II Part III,Section.I).

In the above descriptions both Hobbes and Hume present the operation of the will as something that takes place before one performs some action and so we have come to speak of "acts of will' or volitions.

An act of will, one might say,is something which preceds or accompanies an action or a mental act that qualifies what it precedes as an act rather than merely a set of physical movements. The 'internal impression' which for Hume constitutes willing, is described by him as a distinct mental occurrence that is separable from any other occurrence with which it may be contingently connected. It is distinguished from animal responses by reason of involving consciousness.

Voluntary Action:

In a book called, Action, Emotion and Will'(Anthony Kenny, Action, Emotion and Will Routledge and Kegan Paul 1963 Ch. XI) Anthony Kenny provides us with a detailed examination of voluntary action. He construes voluntary action on the pattern of a command and its fulfillment for full - blooded voluntary action involves both Willing something and bringing it about. Kenny holds that an action is not voluntary unless it is in the agents. Power not to bring it about. He poses the case of a father standing on the bank of a river, intending shortly to dive in. While he stands there he is pushed in by a friend. Although he intends to enter the water, his entry is not voluntary because it was not in his power to prevent it.

Thre is more than this to the matter Kenny new points out that voluntary action is not even adequately described by the account that requires it to be in the agent's power not to bring about what he volits.

Kenny says "consider the following case a man, having written a suicide note, electrocutes himself in a faulty switch ~~while~~ while entering the kitchen to put his head in the oven. Such a man does not commit suicide, i.e., does not kill himself voluntaerly, but dies by accident. Yet he had the volition to be dead, by touching the switch he brought it about that he was dead, and it was in his power not to

kill himself, for he did not have to touch the switch. In this case, the man did not know that by touching the switch he would bring about his own death. So we must add knowledge to our conditions for voluntary action and say that for A voluntary to bring it about that P, he must knew that he is bringing it about that P. (Action, Emotion, and Will, Anthony Kenny pp. 237,238).

Kenny is still not satisfied with his account. There is something further that must be considered about cases of voluntary action which is not covered by stating that a man who acts voluntarily must know what he is doing. We might consider the case of a man who wants the death of his enemy, who knowingly causes his enemy's death under circumstances in which it was in his power not to cause it, and yet is not his enemy's murderer. If, for example, he is a soldier who is ordered in war time to blow-up a bridge on which his personal enemy is standing guard. The point here is that in such a case, although the man wants his enemy to die, he does not cause him to die because he wants him to die.

It is 'because' here that brings us to the core of the matter. 'Because' signifies, Kenny says, a special relationship in which a man's action stands on to his volition. This special relationship which is the further requirement of full-blooded voluntary action, is expressed by saying that in such action we intend to bring about what we know we are doing.

Here we should pause to reflect. The man who blows up the bridge in the situation described by Kenny is acting voluntarrly, even if he does not blow up the bridge because he wants his enemy to die ? Although the death of the man's personal enemy was not the point of his action and what he did was not directed towards bringing about his enemy's death so that the intention in the action was not that, yet the action is in all other respects voluntary. The man knows his enemy will die, even though that is not his intention in blowing the bridge. But we should note that in this situation if the man says prior to the execution of his intention to blow up the bridge, ' I am going to bring about the death of my enemy', then this statement is to be construed as a prediction, for it is not an expression of the intention he has in blowing up the bridge.

Intentional Action:

We can distinguish between voluntary and intentional action. Intentional action are undertaken voluntarily but can produce some consequences which we do not intend yet can forsee, sometimes regretfully. These concomitant but unintended consequences are voluntarily brought about and could have been prevented if we had refrained from the intentional action; but whether we reject our approve them, it cannot be said that we intend those concomitant results.

A man who, in dire circumstances, introduces deadly organisms into a water supply with the intention of destroying a diabolical enemy of mankind, may know that the result of his action will be the decimation of his allies as well as his enemy, but he does not intend the death of his allies and we cannot say that because he foresaw all the consequences of his action, he intended all of them.

We need to know a person's intention if we are to give a correct description of the action it directs. Moreover, knowledge of intention affects our judgement of the agent himself. In the case of man who introduces organisms into the water supply, whether we describe him as a tragically disoriented patriot or a mass murderer.

What we should recognize about this whole account of voluntary and intentional action are what I shall call the inward and personal features of the conditions assigned to it. My action is only fully voluntary and intentional if I will it, have the ability to refrain from it, know what it is I am doing and intend to do it. Those conditions describe in the main, inner status to which in the end, only I can testify.

A further point is shown by the case of the mass who

introduces organisms into the water supply. In considering that case we saw that knowledge of intention influences our description of the agent as well as of his action and so to reveal one's intention is to reveal something about oneself. Wittgenstein says. "Why do I want to tell him about an intention too, as well as telling him what I did ? Not because the intention was also something which was giving on at that time. But because I want to tell him something about myself, which goes beyond what happened at that time.

I reveal to him something of myself when I tell him what I was going to do. Not, however, on grounds of self-observation, but by way of a response (it might also be called an intention") Wittgenstein, Philosophical investigation book I, p. 247).

Free Will.

Free action is seen as the essential condition and activity of personhood and personhood as the expression and consequence of free action. This relationship has been worked out in considerable detail by several twentieth-century Philosophers and perhaps the most adequately by Jean Paul Sartre. I like to outline Sartre's views on human freedom before concluding the chapter.

The title of Sartre's most famous book is Being and Nothingness. That title serves well as a key phrase to introduce his views on freedom. He holds that man first has being or existence in the world and then through consciousness, becomes aware of nothingness, which is his human freedom. This nothingness is the permanent possibility for consciousness of effecting a rupture with its own past of wrenching itself away from its past so as to be able to consider it in the light of a non-being.

Consciousness, for Sartre, enables a person to detach himself from the ever accumulating part which is history and his being and that wrench of separation enables him to experience not-being what he is not is a man's freedom, and he can make himself as a free being by choosing the manner in which he will inhabit the nothingness of which he is aware. The dichotomy of being and nothingness provides the essentially human made of existence. Thus Freedom for Sartre "is not a being; it is the being of a man - i.e., his nothingness of being" (Jean Paul Sartre, Being and Nothingness, trans. Hazel E. Barnes, Methuen, 1966. p.441).

He regards the traditional dualist picture of man as a being who is somehow simultaneously free and determined as unaceptable. To this picture he says:

"There is one objection which is obvious and which we shall not waste time in developing. This is that such a trenchant duality is inconceivable at the heart of the psychic unity. How in fact could we conceive of a being which could be one and which nevertheless on the one hand would be constituted as a series of facts determined by me another - hence existence in exteriority and which on the other hand would be constituted as spontaneity determining itself to be and revealing only itself ? A priori ? this spontaneity would be capable of no action on a determinism already constituted on what could it act ? (Ibdi p.441).

The will, for Sartre, is not the privileged manifestation of freedom. It does not create ends but is what Sartre calls 'a mode of being in relation to them. It is merely one way, a deliberative or calculative way of announcing the choice made or expressing the value ascribed to the historical past by the conscious subject. This conception of the will as providing one way of announcing choices pre-supposes a choice that is prior to willing.

Another way of announcing one's choice is by what Sartre call passional means. In a situation of danger I might affirm a value, 'I value life' and thus is my choice. But I may announce or express that evaluation either by passional means - Perhaps

by fleeing to safety in my passion of fear or by volitional means, by calculating a resistance and a countervailing of the danger. Both means, the passional and volitional affirm the same end which is the supreme value I place on my life.

If we ask what it is that makes the original choice by bestowing a value, then Sartre's answer is that it is the human-reality which realizes its being in the nothingness which constitutes its freedom. In that very act of realization it defines its being by the ends it affirms.

It is therefore the conscious subject that chooses. The affirming of ends is identical with freedom and all modes of being, whether volitional or passional can manifest freedom equally for they are all ways of being one's own nothingness. This does not mean that any and every incident in any human life is a manifestation of freedom. Most of us, most of the time, refuse the possibility of experiencing our freedom and so choosing how we shall be, and Sartre's term for this evasion is 'bad faith'. In 'bad faith' one attempts to conceal one's own nothingness from oneself so that instead of choosing what one makes of oneself in that nothingness, one allows one's psycho-physiological make-up or one's environment to determine what takes place.

Inspite of his contempt for and arguments against the free and determined conception of human beings, Sartre expounds a dualism of his own. He speaks of th 'en-soi' (the-in-itself)

and the 'pour-soi' (the for-itself). These are two fundamental modes of being and a man partakes of both of them. The en-soi is constituted by one's temporal and historical being. It is that from which consciousness continually seeks to separate itself in order to find its own being in nothingness. The en-soi, the phenomenal world is given being by the nothingness which constitutes the pour-soi and the same act of encountering nothingness which constitutes the pour-soi and the same act of encountering nothingness provides the freedom which separates a human being from the bondage of the past. In the situation of nothingness modifications of what is can be conceived. The pour-soi exists only beyond what is and never can exist within what is. There are no limits, according to Sartre, to this freedom except to the extend that the pour-soi wishes to hide its own nothingness from itself and to incorporate itself. But the being which is what it is cannot be free. Freedom consists in being exterior to what is.

To Sum Up:

We started the discussion with some common occurances and found that praise or blame we attach to every-day events either in our own life or in other life we too attach moral responsibility to our every-day actions. Then we tried to explain the same from the angles of determinists and libertariants. Then we focused our attention on the two questions namely (a) Are actions events ? and (b) Could I have done otherwise. On the discussion of the first question considerable light has been shown by Macntyre. While discussing the second question we have seen it from the points of view of libertarians and determinists and focused our attention of ifs,can and could and tried to see the analysis of 'could have' from the point of view of Moore and Austin's criticism of the same. Then we focused our attention on the will and tried to see in the light of the definitions given to it by Hobbes and Hume; which led us to the detailed discussion on the voluntary action and intentional action. And lastly while discussing 'Free will' we followed the foot-steps of Sartre and found that Freedom is not a being, it is the being of a man-i.e. his nothingness of being.

CHAPTER - V

CONCLUSION

LIMITS OF PHYSICAL DETERMINISM AND HUMAN FREEDOM :-

In the determinist/libertarian debate the libertarian's difficulties come in trying to give a substantial, positive account of free will, one that can stand sturdily alongside the claims of determinism. It has been argued that this failure on the part of libertariansim is a failure to point to what is before our eyes, to something that is manifest in the human situation. If this failure is redressed, the arguments runs, then although the libertarian has neither refuted determinism, nor established indeterminism, he has shown that the concept of free will is and must be a crucial feature of our conceptual scheme.

Determinism to a scientist conveys the general proposition that every event has a cause. Whether this general proposition is true is a very difficult question to decide, but it is contrary assumed to be true by most scientists. For example when iron heated we can make the prediction that iron will expand. Here we have a typical causal relation. And these conditions are regarded as being sufficient to explain the effect.

Have we such relations in human affairs ? The initial difficulty about saying that we have in that it is difficult to maintain that there are any psychological or sociological laws which would enable us to make such definite predictions.

The only areas of human behaviour in which there are known laws starting sufficient conditions are areas in which man is passive we can often list the conditions sufficient for something happening to you, such as your leg getting broken, but we cannot list any conditions sufficient for a single human action such as writing a letter or thinking about philosophy. At best we can list necessary conditions. You could'nt write a letter without fingers, you could'nt think without a brain. But exactly what you will do, having fingers and a brain, we cannot predict. If I predict that you will do one thing, you may do just the opposite in order to refute my prediction.

Freud's brilliant discoveries, for instance, were not of the causes of actions like singing, contracts or shooting peasants rather they were of things that happen to a man like dreems, hysteria and slips of the tongue. These might be called 'passions' more appropriately than 'actions'. One class of laws in psychology, then gives causal explanations which seem sufficient to account for what happens to man, but not for what he does.

When we consider the nature of human action we find that the concept of action cannot be reduced to behavioural concepts in so far as it can be done, it should be observed that behaviour itself is on the known physical side of the

mental-physical divide, Since behaviour needs interpretation. Action pre-supposes intention, which cannot be given a mere physical relization.

Action in general proceds from a psychological background of intentions, emotions, perception and motivation etc. So unless the psychological background can be explained away in terms of material (neuro-psychological) process, physical determinism even if true could not apply to human action completely.

In particular the notion of intentions is necessary to the understanding the notion of action. It seems that action proper cannot be caught in the net of physical determinism. However since actions involve bodily movement which are parts of the physical world and proced from inner physiological stimuli which are again part of the physical body, physical determinism will certainly control the modes of action, performance and the scope of action realization.

In Freedom and Resentment, Professor Strawson asks us to consider how much we actually mind and how much it matters to us whether 'the actions of other people reflect attitudes towards us of good will, affection or esteem on the one hand or contempt, indifference or malevolence on the other. He remainds us of the many different kinds of relationships we

can have with other people as shares of a common interest, as members of the same family, as colleagues, as friends, as lovers, as chance parties to an enormous range of transactions and encounters. And he points out that if someone treads on my hand accidently while trying to help me then although this may be painful, it does not outright the resement on me, but if he treads on my hand in contemptuous disregard of my existence or with a malevolent wish to inuure me then I will surely show him my resentment.

This brings out how much an agent's intentions matters in inter-personal relationships and how my own attitude to another person is formed by reference to his attitude to me. We recognize that these kinds of relationships are important throughout society. Moreover, the whole range of inter-personal attitudes and feelings can manifest itself only on the pre-supposition of a freedom that allows us to regard one another as agents who are responsible for what we do, although we are sometimes subject to circumstances which lead to modifications of inter-personal attitudes and feelings Whether we are judged as wholly, bring about is of the utmost importance for any such modification.

The justification of a claim to free-will is embaded in the facts that a person's expression of his intention is a manifestation of the ultimate nature of the person, that the

feelings and attitudes that play such important parts in inter-personal relationships are not merely conventions that we adopt but direct expressions of a natural way of going on.

To Quote Hegel:

> "Freedom must be understood as a social phenomenon, a property of the social systems which arises through the model development of the community. It is less an individual through legal and ethical institutions that the community supports. In consequence, it cannot be equalled with the self will or the following of private inclinations. Freedom consists rather in the adjustment of inclination and individual capacity to the performance of socially significant work, or as F.H. Bradly puts it, finding my station and its duties" (Hegel,ed. George H.Sabine, Freedom and Authority, pp.593-8,Oxford 1973.

To Summarise:

Complete predictability of events seems out of the question even in the inanimate world. Prediction of human action is perhaps the most complex problem facing the scientist. In this field we can expect only the very slowest progress and we must expect that many types of decisions will forever remain outside the scientists ability to predict.

Most important of all, we must remember that we are human beings. The very fact that a scientist observes us may alter our actions. This is the simplest way to demonstrate the relation between predictions and free-will. When we predict where a stone will fall, we may tell it just what it will do, and it will still do it. But tell a human beings that he will use his right hand to scratch his nose and you are likely to find that he uses it instead to punch your nose. In any case the truth of the matter is that we have to take physical determinism for granted in order to enable us to persue experimental science with confidence.

And I would like to conclude by taking a position of Eugels with regard to freedom and causal necessity that both are not contradictory stand points, and they are only in the realm of thought and not in reality. For Eugels wrote:

Freedom does not consist in the dream of independence of natural laws" wrote Engels, "but in the knowledge of the laws, and in the possibility this gives of systematically making them work towards definite ends This holds good in relation both to the laws of external nature, and to those which govern the bodily and mental life of men themselves....two classes of laws we can separate from each other at most only in thought and not in reality. Freedom of the will therefore, means, nothing but the capacity to make decisions with real knowledge of the suchject ....Freedom therefore consists of the control over ourselves and our external nature which is founded on the knowlege of natural necessity". (Engels, Frederick. Anti Duhring, Part.Ch.2. Pelican Marx Library 1962).

BIBLIOGRAPHY

Ayer, A.J. Philosophical Essays(London and Newyour, 1954.)

Engels, Federick, Anti Duhring, Part.I, Pelican Marx Lib. 1962.

Franklin, R.L. Free Will and Determinism, London,1968.

Geoffrey Warnock, Freedom and the Will, MacMillan,pp.76 1963.

George H. Sabine, Freedom and Authority, Hegel (ed) Oxford 1973, pp.593-98.

Hospers John, An Introduction to Philosophical Analysis, Pub.by Routledge & Kegan Paul Ltd., 1956

Kenny A. Action, Emotion and Will, London & New York,1963.

Kemeny G. John, A Philosopher Looks at Science, Pub.by D.Van Nostrand Company,1959.

Kneale, W. Natural Laws and Contrary to Fact Conditionals, Analysis Vol.10,1950, Oxford.

Moore, G.E., Ethics, Oxford and New York 1947.

O' Connor, D.J., Free Will, Open University Set Book, Pub.by the MacMillan Press Ltd.London,1971.

Ryle, G. The Concept of Mind, London and New York, 1949.

Sartre J.P. Being and Nothingness, trans. Hazel E.Barnes, Methuen, 1966, p.441.

Theobald, D.W. An Introduction to the Philosophy of Science, Methun and Co. Ltd., London, 1968.

Westphal, Fred. A, The Activity of Philosophy, Prentice Hall, Inc. Englewood Cliffs, New Jersey, 1969.

Wittgenstein Ludwig, Philosophical Investigation, trns. G.E.M. Anscombe, Basil Blaek Well, 1968.
