

Entailment theory of causation.

Ans. (Rationalists like Descarte, Spinoza and many others believe that there is a necessary connection between cause and effect. When it is said that poison causes death, it means that there is a necessary connection between 'taking of poison' and 'death caused by the event'. It cannot be said that there is simply a sequence of two events in time and nothing else.)

(By the term, necessity the advocates of the rationalism or the supporters of entailment theory want to mean logical necessity. As A.C. Ewing says, "The theory according to which the connection between cause and effect is the same as or very like that of logical necessity may be called the rationalist or the entailment theory of causation.") The names of Broad, Blanshard and Ewing are associated with this theory. Though it is a theory advocated by some philosophers, 'it certainly is more closely akin to the common-sense view.'

(By logical necessity, the adherents of the entailment theory mean necessity underlying valid inference. When in a valid inference we conclude 'All kings are mortal' from two connected premises 'All men are mortal' and 'All kings are men' the conclusion is necessarily true as both the premises are true. So, in a valid inference, there is a relation of entailment between the premises and the conclusion.) To explain the term 'entailment' Ewing said that 'entailment is the relation between the premises and the conclusion in an argument where the latter follows necessarily from the former or between the objective facts expressed by the premises and by the conclusion.' (The upholders of the theory of entailment point out that the regularity of theory is not mistaken when it asserts that causality involves regular sequences of events, but it is mistaken when it denies that there is necessary connection between the cause and the effect.)

(According to the Rationalist as there may be a relation of entailment between two propositions, similarly, there may be a relation of entailment between two objective facts. They however agree that the relation need not be exactly the same as the entailment which occurs in formal logical reasoning, but that it must be at least be analogous to it in the important respect that it justifies the conclusion.)

(The supporters of the entailment theory have forwarded two strong arguments in support of their theory. *Firstly*, it is possible to make legitimate inferences from cause to effect only because the cause in a very important sense entails the effect. In a valid inference to draw valid conclusion from premises which is in no way entailed in the conclusion is an impossibility. *Secondly*, the repeated regularity that we find in the case of causation can be explained only if the cause is a reason for the effect. But the cause cannot be a reason for the effect if its nature does not somehow involve the effect. "In that case", as Ewing remarks, "the latter will logically follow from, i.e.,

be entailed by the former, or at least the relation will be very closely analogous to that the logical entailment.")

Empiricists have criticised the above theory from different aspects

(a) No causal laws appear to us as logically necessary. All these laws about the physical world appear to be empirical generalisations. The supporters of entailment theory replied that failure to perceive any necessary a priori connection between cause and effect is no proof that there is not any. It would have been better if the empiricists could declare that they are able to see positively that there is no such connection.

(b) It is objected that in cases of a priori reasoning, the conclusion is certain but in cases of causal reasoning the conclusion reached is only probable. The supporters of the entailment theory point out that we never know whole cause but only 'the most striking part of vast complex of conditions.' The empiricists point out that if it is not possible for us to know the relation of entailment that holds between the whole cause and the whole effect, then what is the use of saying that such relation holds between the cause and the effect.

(c) The supporters of entailment theory points out that we may not have insight into causal entailments in the physical world but they are perceptible in the world of psychology. We can see a priori that the cause will tend to produce the effect. The empiricists do not agree to the above view advocated by the supporters of the entailment theory. Hume points out that there is no necessary connection between my volition and the effect it is supposed to produce in the external world. Had there been any necessary relation between the two, an analysis of our volition would have given us the knowledge of the effect, but we do not get any such knowledge.

Q. 3. Explain critically the empiricist theory of causation.
Regularity theory of causation.

Ans. According to the Regularity theory, causality is nothing but regular sequence of event. Causal relation implies uniformity of succession among events and the cause is nothing but invariable antecedent of an event. Regularity theory denies causal relation as a necessary connection. According to this theory, fire causes burning means that fire is the invariable antecedent of burning.

David Hume is the main exponent of this theory. Many other recent thinkers Mach, Karl Pearson and Russell have lent their support to this Regularity view of causation. The contemporary logical empiricists

subscribe to Hume's view. According to them the statement 'A is the cause of B' is logically equivalent to the statement 'A is regularly followed by B'.

Hume criticises the popular conception of cause as 'power or activity' which has also been supported by Locke. Hume says that we have no experience of power in sense perception and cause cannot exert any power to produce the effect. According to Hume, perception is the only source of our knowledge and it does not provide us with any idea of power or force. We never observe that the power or force as an attribute of cause is producing the effect. When we see the power in the first billiard ball causes the second to move, we have practically no experience of power. We simply perceive a sequence of two events in time and nothing else. Richard Taylor has pointed out that almost all philosophers since Hume have accepted Hume's view of the elimination of the idea of power from the concept of causation.

Hume also points out that neither a priori reasoning nor experience provides us with any idea of necessary connection between cause and effect. A priori reasoning can help us to discover a necessary connection between two things if they are identical. But the effect is so very different from the cause that the former cannot be discovered in the latter by a priori reasoning. In fact, had there been any necessary connection between cause and effect, then a mere analysis of the idea of cause would have given us the idea of the effect. But in reality we cannot have such experience. However, we may analyse the idea of cause, the effect cannot be discovered in the cause. We know that bread causes nourishment but it does not help us to discover the effect, nourishment in the cause, taking bread. It means that the effect cannot be logically deduced from the cause, the way the properties of a triangle can be deduced from the definition of a triangle. The causal proposition, like fire is the cause of burning, is not analytic, but synthetic, because such propositions are derived from experience. Besides, the causal propositions are not necessary but contingent, because their opposites are not inconceivable.

According to Hume, in our experience we find relation of contiguity and succession among our impressions of sensations, but no relations of necessary connection is observed among them. What we observe in experience is merely a succession of phenomena—one event following another, death following starvation; we do not observe any necessary connection between them.

So a question arises that why do we believe causality to be a necessary connection at all? Hume answers that it is the mental habit of expectation that creates such belief in our mind. To explain this he said that we repeatedly observe in experience an event, say taking bread, invariably followed by another event, causing nourishment. A subjective bond of association between these two ideas is established in our mind. As a result, the ideas of taking bread leads the mind to the idea of causing nourishment. The repetition of the two events begets in us the habit of expectation due to which we think that since one event follows another in time, it must always do so in future. It is a subjective connection which we erroneously objectify. So, according to Hume causal relation means nothing else but 'invariable sequence of mental phenomena'.

Hume's theory has been subjected to following criticisms by different philosophers :

(a) Regular sequence between two events does not imply that the two events are causally connected. For example, there is regular sequence between flash of lightning and sound of thunder. But we cannot call these two events causally connected.

(b) Regularity theory fails to explain the cause of an event which has occurred only once as there is no repetition of two events to give us the idea of regular sequence.

(c) In case of voluntary actions we are always conscious of willing freely or determining the course of our actions from within ourselves. I wish to raise my hand and I do it. This fact cannot be resolved into mere regularity of succession. It cannot be said that the event of raising my hand regularly follows the event of my wishing it. That I can regulate or control my bodily movements is a fact so obvious that it can hardly be denied. I am directly conscious of myself as an agent contributing to the actual occurrence of my thought, wish and desire.

If we accept Hume's theory of causality as satisfactory, scientific induction, future prediction and calculation will have no rational justification. The scientific generalisations will lose their necessary character and will be regarded as probable. But scientific truths are considered certain and universally valid.

On the basis of the above discussion we can conclude that causal relation is not merely a relation of succession but a necessary relation. Mill while criticising Hume's theory has clearly recognised it. So we are

led to think that if experience fails to explain the necessary character of causal relation, we shall have to depend on some other source of knowledge, i.e. reason to explain it.