

EMERGENT EVOLUTION AND ĀRAMBHAVĀDA - A COMPARISON

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According to Lloyd Morgan, evolution “is the name we give to the comprehensive plan of sequence in all natural events” and emergent evolution is the hypothesis that this plan displays at certain points something which is genuinely new, not a mere re-grouping of pre-existent events¹. This hypothesis is based on the conviction that there is in reality a natural, consistent, and coherent plan of relations. Its aim is to set forth a constructive philosophy which will explain all the occurrences in the world of experience.

Referring to Emergent Evolution Lloyd Morgan says, “in the old sense, evolution meant the unfolding of what is already being but enfolded. Emergence is the coming into view of that which has hitherto been submerged-virtually there but hidden, latent and not as yet patent. Now-a-days the word ‘evolution’ has supplanted the older word ‘epigenesis’ (formation of organic germ as a new product) and means the coming into existence of something in some sense ‘new’, and this something new, is what Lewes labelled ‘emergent’ as contrasted with ‘resultant’”². By ‘emergent’, he claimed, that which is unpredictable before its de-facto epigenesis, the resultant is calculable before the event. In this way emergent evolution is naturalistic. It protests against mechanism. The mechanistic interpretation is in terms of re-grouping of pre-existing events with no real novelty. It also differs from various forms of vitalism. These theories introduce at a particular point in the series a “supplementary concept of entelechy, vital-force or elan, from some disparate order of being”, thus breaking the continuity of evolution³.

Lloyd Morgan's characterisation of emergent evolution by contrasting it with the conception of evolution "in the old sense", as of re-grouping of pre-existing events, reminds us the controversy between *asatkāryavāda* and *satkāryavāda* in Indian Philosophy. It is appropriate to compare and contrast the effects of *satkāryavāda* and *asatkāryavāda* with the emergents and resultants of emergent evolution⁴. According to the Nyāya-Vaiśeṣika theory of causation, an effect which is altogether non-existent comes into existence after the operation of its causes. The system advances a theory called *asatkāryavāda*⁵. According to it, an effect, like cloth brought into existence after causal operation, cannot be held to be already existent. The Nyāya-Vaiśeṣika effect is a new creation *ārambha*⁶. Hence, its theory of causation is specially termed as *ārambhavāda*. Nyāya-Vaiśeṣika effect resembles for all practical purposes with an 'emergent' in the language of Lloyd Morgan. The Sāṃkhya-Yoga theory is technically called *satkāryavāda*⁷, the 'theory of origination of the already existent effect'. It differs from the theory which holds an effect, like cloth, to be an emergent or a new entity, i.e., a reality which did not exist before. On the contrary it declares that the effect already exists in the form of its cause and its production means merely its manifestation from its unmanifested condition. Accordingly the Sāṃkhya-Yoga effect approximates itself to the 'resultant', as it is predictable or calculable even before its de-facto epigenesis.

A point of central importance regarding the 'effects' of Nyāya-Vaiśeṣika and Sāṃkhya-Yoga in terms of the emergent and the resultant respectively is an enquiry into the nature and source of novelty present as the characteristic of the one and is conspicuously absent in the other. But before we come to pass a judgment on the appropriateness of treating the effects of Nyāya-Vaiśeṣika Sāṃkhya-Yoga in terms of the emergent and resultant, it behoves on us to examine the definition of the emergent as Morgan offers it. We must see whether his conception of emergent evolution really offers any real protest against the mechanistic interpretation of the world, and succeeds itself in delivering a criterion of evolution as something other than or different from a mere re-arrangement or re-grouping of pre-existent events.

According to Morgan an emergent stands for a new form of

relatedness⁸. "New" means, for him, unpredictable from pre-existent events⁹. A term is the function of a relation. It is the part which it plays in any given relationship since a term is the part played by any entity or element in a specific relation. It is obvious that one term can be in only one relation. A new relation makes of the given entity a new term. Therefore, a new form of relatedness would mean new terms as well as new forms of relation. So, an emergent consists in new terms in new relations such that they could not have been predicted from earlier forms of relatedness. Relations are of two kinds : intrinsic and extrinsic¹⁰. Intrinsic relations are called qualities, those which are of the nature of the thing itself. These depend solely on inner reality. On the other hand, extrinsic relations are relations to other things. According to Morgan intrinsic relations are those of space, time, physio-chemical structures and processes, and the physiological and psychical processes in living and conscious beings. Extrinsic relations are those of weight, since it depends on gravitation, colour and other secondary qualities. These depend on the distance-receptors of the organism. The relation of atom to atom in the molecule is an extrinsic relation. The inner relation of the molecule to the atoms which constitute it is an intrinsic relation. But the sum-total of the intrinsic relations of the molecule is not the same thing as the sum-total of the extrinsic relations of the atoms which constitute it, since these are different forms of relations and their terms are different. With the result the emergent, as a new form of relatedness would hardly involve a necessary difference from the mechanistic interpretation of higher forms of integration as a re-arrangement or re-grouping of the pre-existent events. The new form of relatedness certainly means new terms in relation as well as new relations between the terms. But on the above interpretation of relation, the term of a new relation becomes by the very fact of being the new relation a new term. It need not necessarily be a new entity, since any entity entering a new relation becomes by the very fact of the new relation a new term. The pure event with its "intrinsic spacio-temporal relatedness"¹¹, on entering into more complex physio-chemical relations would become a physio-chemical event as such. This is certainly more complicated, more highly organised relation which becomes a living event, a term, i.e., in some form of conscious relation. If this is so, even the most uncompromising mechanist

would not object to and we are at no loss to make out the "protest against mechanical interpretation" that the doctrine of emergence boasts of.

The criterion of the 'new' can be illustrated by molecules and liquidity¹². Molecules being in a state of vapour, one could not predict that by cooling the vapour turns into liquid. Liquidity is claimed as an emergent, because no amount of knowledge of gases would enable one who had never experienced liquid to predict moisture as the quality. Similarly, solidity is an emergent, life is an emergent, mind is an emergent. The emergent does not cease to be an emergent since it can be predicted. It is an emergent since it could not be predicted by one who had no experience. On this basis the peculiar taste resulting from inadvertently putting both cream and lemon in one's tea would be an emergent as truly as life or mind is an emergent. The same would be true of fire from rubbing sticks, of the growth of plants from the sunshine, flowering roses in June. All these are emergents only because they could not be predicted unless something of the same sort had been experienced before.

The definition of an emergent as something which could not be predicted before its coming into existence seems to suggest that "resultants" could be predicted before their occurrence. The example offered in this connection is that of weight¹³. An examination of this example would show that unless someone has had experience of the fact that two weights added together will result in a simple sum of their individual weights, it is impossible to predict the result beyond all shadow of doubt. For instance, one could imagine that larger weight might absorb the smaller. The new weight resulting from the addition of the two previously existing weights will become in all probability a new property of the new system. It may turn out to be a new form of relatedness with a whole series of new qualities and properties, which an emergent is. But the difference in predictability between the results in this case and the usual case of added weight lies in the degree of knowledge of the observer. In the one case, the observer has less knowledge of the general plan of emergence than he has in the other. The whole principle behind modern bridge-building consists in learning the plan of emergence, as it relates to the addition of weights to the closest possible degree. The fact that the addition of two weights results in the simple sum of their separate weights is certainly no less dependent on experience than

the later learned facts of the varying strength of materials. The aim of our discussion on the meaning of emergence is to show that every new particular is a new emergent and the apparent deference between emergent and resultants only points out in regard to certain classes of particulars we can predict certain classes of results. But even in this restricted sense, we do not predict the whole of the resulting qualities and properties but only those which have been experienced.

Now, let us consider the tenability of any suggestion to read the "effect" of the Nyāya-Vaiśeṣika theory of *asatkāryavāda* in terms of the "emergent" of Lloyd Morgan's emergent evolution. According to *asatkāryavāda*, an effect which was altogether non-existent comes into existence after the operation of its causes. Therefore, an effect, according to Nyāya-Vaiśeṣika, is a new event. As the effect was altogether non-existent before, the question does arise as to where from the effect derives its existence. According to *Nyāya-Vaiśeṣika* an effect has come into existence through the operation of its causes. It is not produced out of its cause, but in its cause. A piece of cloth is not produced out of the yarn which continues to exist separately and simultaneously with the piece of cloth. Although a piece of cloth subsists in the yarn which is claimed to be its inherent cause (*samavāyī-kāraṇa*), the essence of cloth does not come out of the yarn, since even after the production of the cloth, the yarn continues to exist intact as it did before. Then, where from does an effect derive its essence?

Therefore, the question of the source of the essence of the effect poses a problem for the Nyāya-Vaiśeṣika. According to this system, it seems as though the essence of an effect comes into being out of the void, despite the systems denial of such a position and its defense that causes have actually worked to bring about an effect. The position of the system as formulated by Vācaspati Mīśra¹⁴ is - *sataḥ asat jāyate*, i.e. from the existent cause comes into being an effect which was non-existent before. But the existent cause does not impart essence to its effect. The principal cause is not conceived by the system, as material cause (*upādāna-kāraṇa*) but inherent cause (*samavāyī-kāraṇa*) because the implication of the material cause is that it should impart its essence to its effect. Again, to the

Nyāya-Vaiśeṣika system, the samavāyī-kāraṇa is always in the form of parts (*avayavas*), while an effect is in the form of a whole (*avayavin*). This position of Nyāya-Vaiśeṣika lends itself to 'the concept of a whole' as something more than an aggregate of its parts, and entirely new entity different from them. This is equivalent to saying that an effect is different in essence from its cause in which it resides by inherent relation as separate entity.

When it comes to the question of a comparative study of the position of Nyāya-Vaiśeṣika with emergent evolution, it must be pointed out that there are basic differences between the two in respect of the relation between the cause and the effect. For emergent evolution, as opposed to Nyāya-Vaiśeṣika, the 'emergent' owes its essence to its cause. The universe is made of some physical fore-runner of matter which is homogeneous and independent and indefinite, but is distributed in systems of simplest organisations. Now these systems become more and more complex. Protons and electrons appear in varied systems. These systems may be supposed to appear as chemical elements, oxygen, hydrogen, iron, sulphur etc. From these emerge their properties and from these properties again new events appear. For instance, water emerges from the properties of oxygen and hydrogen combined. Now, water with its peculiar properties is an emergent, a novelty. But the novelty of water as compared with hydrogen and oxygen is only an actualisation of what was potentially existing in hydrogen and oxygen. Therefore, it is the combination or what the emergentists call 'relatedness' that makes the molecules of water, a novelty as compared with the pure state of hydrogen and oxygen. "The new kind of relatedness" is 'intrinsic' to the system. The emergence of the new qualities and properties does not depend upon 'new eternal' relations of any kind¹⁵.

The above discussion on emergent evolution reveals that the effect or the emergent owes its essence to its material cause, a position, the Nyāya-Vaiśeṣika rejects. In fact, what renders novelty to its effect, to the Nyāya-Vaiśeṣika, is its distinctness from its cause both in its existence as well as in essence. But for the emergentists it is the combination or relatedness of the causal factors that renders novelty to the emergent. This means that an emergent shares its essence from its cause to which it

is intrinsically related. This position of emergent evolution is closer to the Sāṃkhya-Yoga theory of *satkāryavāda*. For instance, a piece of cloth, according to the Sāṃkhya-Yoga is only a different arrangement of yarn. The yarn imparts essence to the cloth. The essence of both is the same. But the *samavāyī-kāraṇa*, of Nyāya-Vaiśeṣika continues to exist simultaneously and along with its effect. As such it retains all its essence to itself and cannot in any form, pass its essence to its effect.

An examination of the meaning and the general treatment of the concept of emergent evolution on the one hand and the implications of *asatkāryavāda* in respect of the cause-effect-essence on the other, is undertaken to show that any tendency to regard emergent theory of evolution as a modern version of the theory of *satkāryavāda* is only ill-conceived and not warranted by facts. A new form or relatedness, according to the emergentist's own interpretation of relationship, the emergent is not necessarily other than a new grouping of preexistent events. Therefore, there appears to be no emergent in any assignable sense of the term. As related to experience and defined as unpredictable without experience in the final analysis, the description of emergent covers all particular events, so that everything is an emergent. We are left with the contradiction that everything is an emergent and that nothing is an emergent. The conclusion is also forced on us that evolution is a mere re-grouping of preexisting events. That there can be no evolution in the sense of an unbroken and continuous development but merely a succession of unrelated changes. Finally, the universe is an absolute one and is also an absolute many.

The problem of the separate essence of cause and of its effect has been a puzzling one to Nyāya-Vaiśeṣika. A defensible answer is that an inherent cause, without transferring its own essence and retaining it intact, imparts in some way essence to its effect which resides in it by an inherent relation. The essence of an effect is constituted by the fact of its residing in its cause by *samavāya* relation. We may say that the same essence-stuff simultaneously serves the purpose of being the essence of the cause as well as its effects. To commonsense, it is difficult to believe that the yarn and the cloth are two separate substances with their separate size, colour and measure and separate weights. There appears to be an inconsistency in holding the continuity of the existence of cause after the

origination of effect.

NOTES

1. C. Lloyd Morgan, *Gifford Lectures*, 1992, pp. 1, 113, 194.
2.' *A Philosophy of Evolution in Contemporary British Philosophy*, 1st series, p. 297.
3.' *Gifford Lectures*, 1992, pp. 5, 8, 12.
4. Sri Venkatarama Iyer, "Darwin, Alexander, Aurobindo and Śaṅkara on Evolution", *Prabuddha Bharata*, Vol. LXIX, March, 1964, pp. 103, 104.
5. *Nyāya Sūtra*, IV, i. 48-50.
Nyāya Kusamāñjalī, p. 58.
6. Bhimal Krishna Matilal, "Causality in the Nyāya-Vaiśeṣika school", *Philosophy East and West*, Vol. XXV, No. 1, Jan. 1975, pp. 41-48.
7. *Sāṃkhya Pravacana Sūtra*, I, 115-118, 121.
Sāṃkhya Kārikā, IX Aniam Sen Gupta, "In Defence of the Sāṃkhya Kārikā, Definition of the Cause", *Proc. of the Aristotelian Society*, Vol. IX, July-Oct. 1974, Nos. 3, 4 pp. 120 ff.
8. C. Lloyd Morgan, *Gifford Lectures*, 1992, p. 16.
9. *Ibid.*, pp. 3, 65.
Flora I. Mackinnon, "The Meaning of 'Emergent' in Lloyd C Morgan's Emergent Evolution", *Mind*, Vol. XXXIII, New Series, 1924, pp. 311-315.
10. C. Lloyd Morgan, *Gifford Lectures*, 1992, pp. 52, 59, 218, 227.
11. *Ibid.*, p. 71.
12. *Ibid.*, p. 66
Arthur, O. Lovejoy, "The Meaning of 'Emergence' and its Modes", *Journal of Philosophical Studies (Philosophy)*, Vol. II, 1927, pp. 167-181.
13. C. Lloyd Morgan, *Gifford Lectures*, 1992, p3.
14. *Sāṃkhya Tattva Kaumudī*, IX.
15. W. Mc Dougal, *Modern Materialism and Emergent Evolution*, p. 115.