

JAIN KARMIC THEORY AND GENETIC SCIENCE

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The Universe is mainly made up of two elements animate and inanimate. The existence of both of them is eternal. However, the modes of both of them keep on changing and this is the cause of transformation taking place in the universe every moment. According to Jain karmic theory, the oneness of these two elements has been established since time immemorial and this oneness will remain there until the soul attains liberation, destroying all the bonds of karma.

According to Jain karmic theory, conscious activity is the characteristic of the living being (*Upyoga Lakṣaṇo Jīvah*) and cognition is known as conscious activity, Deluding karma is the main element that covers this cognition and this delusion is caused by vices like attachment and malice etc. These two evils cause karma, karma causes life and death and these two (life and death), in their turn, cause sorrow. This cycle goes on and on. The scripture '*Tattvārtha Sūtra*' says, "*badhyate partantrī kriyate ātmāneneti bandhanam*" (The bond by which soul is rendered dependent is karma.) According to Jain karmic theory, only a soul bonded by karma, accumulates new karmas; a liberated soul can never accumulate karmas as its evils like attachment, malice and jealousy, the seeds causing karmas, are totally destroyed. Soul is the ingredient of karma. It is the doer and enjoyer of karmas. An ingredient comes to be known only when it gets a instrumental or external cause. Yoga (the combination of body, mind and speech), environment and circumstances form the external causes for the enjoyment of the karmas. The karmas that do not have any instrumental cause are enjoyed in the regions of soul. Passions like attachment and malice etc. only enhance the instability of the yogas. When the yogas are unstable, they stimulate passions and thus a bond of karmas that cause substances of

karmas takes place. Thus there is a full cycle of passions, instability and karmas.¹

Body only forms the medium of the expression of consciousness and of enjoying the karmas that have been earned. 'Gene' is the ingredient of the gross body and the ingredient of the subtle body is karma. This gene is responsible for making a man what he is. It is the main cause of all the habits and of all the differences. According to genetic science, there are as many as sixty lac commands inherent in each gene. In karmic language, it can be said that there are as many as infinite commands inherent in each karmic aggregate. The genetic science has so far been able to come up to 'gene', which is the ingredient of gross body where as karma is the ingredient of subtle body. There is a *Tejas* body, an electric body within this gross body. This is the subtle body. The karmic body is subtler. Infinite scripts are written on each of its aggregate. All the account of our principal exertions, virtues and evils, drawbacks and strengths and all their reactions are present. There in the subtle body man behaves in accordance with the vibrations he receives from the subtle body.²

By '*prāṇa*' (vitality) is meant the life force. That, by the combination of which a being gets life and in the absence of which he gets death, is known as (*prāṇa*), the life force. The capacity of all the five senses of gaining knowledge is known as five-senses vitality'. The capacities of thinking, speaking and performing physical activities are known as morale, the force of speech and the force of body respectively. Vitality and life force are one and the same thing. The capacity of receiving and giving out substances in the form of respiration is known as the respiratory force. In the same way the force of remaining alive in a certain birth up to a certain period is known as longevity-force.

Vitality is related to development (completion). Vitality is the force of the being and development is the force of the substances received by the being. **Development is the cause and vitality is the effect.** There is no activity of the being related to mind, body and speech that can take place

without the assistance of material substances. The cause of the five-senses vitality is the development of senses. The causes of morale, force of speech and force of body respectively are mind completion, language completion and body completion. The cause of respiratory vitality is respiratory completion, and of longevity vitality is food completion as longevity vitality can be possible only when there is food completion. According to Jain karmic theory, the main and the most important of all the ten vitalities is the longevity vitality. All the activities of body and the functioning of its organs are possible so long as longevity vitality is there and active. The moment it ceases, all the activities come to an end completely and this stage is termed as death.³

When, after leaving one body, soul adopts another body, it simultaneously creates, according to Jain karmic theory, the necessary substantial material with the help of body naming karma to start its new journey. This material, or the force produced by it is known as completion (development). The order of these completions is like this food, body, senses, respiration, speech and mind. In all, there are six completions. All of them start at the same time but they develop gradually and in an order, hence this order has been made. It takes one time for the completion of food completion where as each of the rest of the five take an under *antara muhurta* (48 minutes time). Through the completions of food, body, senses, respiration, speech and mind, living beings, receive substances fit for food, body, senses, respiration, speech and mind, transform them accordingly and leave away non-substantial material.⁴

In accordance with Jain Karmic theory, 'genes' under genetic science, may be regarded as body completions. Development (completion) means the completion of formation of the force of substances necessary for life. The least developed beings at least have four vitalities in all—vitality of the sense of feeling, vitality of body, vitality of respiration and the vitality of longevity. They also have food completion, body completion, senses completion and respiratory completion. Thus, according to Jain karmic

theory, the life cycle of a being goes on with the combination of vitalities and completions. The specialization and differentiation of increase and division etc. that takes place in the cells is a part of all these completions. These completions are controlled by karmas. Cells die and the living being made up of several cells also dies. This death occurs in according with the, longevity-determining karma. The longer one's longevity, the longer one will live.

The behaviour, conduct, thinking and every action of a living being gets constantly marked within him. Several branches of science have come to admit this fact. This marking affects a man in course of time. Indian philosophies have expatiated in detail this marking system in the form of the theory of karma. Modern science makes the different methods and institutions of this marking the basis of their discussion. Our mind too records all out actions. Out antagonistic cells also mark them and ultimately 'genes' that are responsible for the formation of impressions come to be the basis of all this marking. The independent study of the two will help not only in their understanding but also help in solving the problems in the modern perspective.

The doctrine of karma is extremely subtle. It is a doctrine that goes beyond the sphere of intellect. Genetic science has helped a lot in the understanding of this theory. Gene is the carrier of one's hereditary characteristics. There is a particular gene for every particular characteristic. These rules of heredity are the corresponding rules of the doctrine of karma. The gross body is made up of very minute biological cells. There are almost 60-70 trillions cells in human body. These cells contain chromosomes. Each chromosome is made up of ten thousand genes. These genes are responsible for all the behavioural patterns of man. In every cell of the human body there are 46 chromosomes. They have also been termed as the carriers of the family traits.

According to Biology, in every cell or germ plasma, 23 chromosomes of father and 23 chromosomes of mother meet together. Scientists believe

that their combination may have 16, 777, 216 possibilities.⁵ Atmosphere, circumstances, environment, geographical situations, heredity, gene and the chemical changes caused by the secretion of the glands of the body—all these are the corresponding aphorisms of the karmic theory.

Gene is an organ of our gross body where as karma is an organ of our subtlest body. Both of them are connected with body, the one with the gross body and the other with the subtlest body. Both of them are connected with body, the one with the gross body and the second with subtlest body. Death is related only to the gross body. The subtle body remains even after death. The body that has been termed as astral, karmic body in Jain philosophy, has been termed as sign body in *sāṃkhya* philosophy. In the worldly state, they always live together. Scientifically, all these things can be explained like this—according to scientists, there are four states of matter—solid, liquid, gas and plasma. One more state has been found out—proto-plasma. Spiritually speaking, protoplasm is our life force and it is a solid proof of our existence. Scientists believe that protoplasm is an immortal element. This chemical, that exists in our cells, gets separated from the body after death and gets scattered in the atmosphere. This protoplasm enters the genes of a child at the time of conception.⁶

According to genetic science, very minute living beings, known as virus, are found on the earth. The moment they come in contact with a living media, their number increases infinitely. The creatures whose bodies are made up of one cell, known as bacterias. This bacteria has a nucleus that contains DNA. This DNA has got the characteristic of multiplying and that is why even this one-celled being too performs metabolism. The element responsible for multiplication is DNA and it is found in one-celled living beings also.⁷

Cloning

To produce the genetical counterpart i.e. to produce the exact copy of the donor parent (male or female, either of the two), is known as cloning.

According to Jain karmic theory, it can be said to be the result of the maturity of the physique-making completion karma of the being. The traits of a being are determined by the chromosomes present in its ingredient cells. Most of the developed beings give birth to their issues by sexual reproduction. Half each of the chromosomes present in the reproductive cells of male and female produce a new being that has the characteristics of both father and mother.

But in the case of cloning, the issue is produced by the general body cells of either the male or the female and this issue is the exact copy of its donor. In undeveloped beings, trees and plants, this process takes place in a natural way in the form of asexual reproduction, but modern scientists have begun to reproduce developed beings like rats, sheep and even human beings also by this method.

The Technique of cloning adopted in mammals

Innumerable cells are found in every flora and fauna. The number of such cells in human body is about 60-70 trillions. Every cell is a complete living unit in itself. There is a nucleus in the centre of the cell. This nucleus contains the chromosomes of that being. The number of chromosomes in human beings is 46. These chromosomes contain all the traits of heredity. They are made up of chemicals like DNA and RNA. These chromosomes contain genes. Round the nucleus is a fluid known as protoplasm.

The sperm cells of the male and the egg cells of the female too are ripe cells. They do not procreate by duplication. In mammals, there is sexual reproduction. In this process, the sperm by way of fusion with the egg cell forms a new cell. This new cell has the trait of copying by which it turns into a foetus. The number of chromosomes in the nucleus of this cell is 46, but half of them are of the male and the rest are of the female. Contrary to this in the case of cloning, all the chromosomes in the new cell are only of one of them.

The process of cloning in mammals may be explained like this—a healthy egg cell of the female is used. By a special technique, the nucleus of this cell is taken out and the protoplasm (the cell without nucleus) is absorbed in a culture medium and placed at a safe place. Now, the cell of the donor parent (the clone of which is to be produced) is taken out of its skin. The nucleus of this cell is separated very carefully. This nucleus is then transplanted into the protoplasm that had been preserved previously. Thus a new cell is formed, the nucleus of which is the nucleus of the donor parent. It is clear, thus, that this new cell contains the chromosomes of the donor parent only. It is then, by way of copying, is transformed into a foetus. This foetus is placed in the ovary of any female where it begins to develop in a normal way. The issue that is born in this way contains the chromosomes of the donor parent only. It totally resembles its donor parent and is the carbon copy of the donor parent. We will have to install the nucleus of the being, the clone of which we want to prepare, in the protoplasm (cell without nucleus) of the egg cell of the female. If we want to prepare the clone of a male, we will have to install the nucleus of its cell in the egg cell (having no nucleus) and if we want to prepare the clone of a female, we will have to install the nucleus of the female in the egg cell (that does not have a nucleus.)⁸

Jain Karmic Theory and Human Cloning

According to Jain philosophy, all the actions and events of life are controlled by karmas. The body, longevity, status of birth, joys and sorrows that a being gets, are determined by its karmas. But it does not mean that karmas are the sole determiners of all the activities of life. In fact, karmas only create conditions and circumstances; it is up to the being to act or not to act according to those karmas. The soul, no doubt, is bound by karmas but it can change the course of life and events by its self-exertion and devotion. Jain religion is actually to win over karmas by the independent force of consciousness.

Now the question arises—when these are the scientists who have come to determine the different characteristics of human and other beings, what role does the Jain karmic theory play? Is not bringing about any change in body a challenge to the karmic theory? It will be Justifiable here to say that if a culprit breaks some part of a man's body or some one gets the organs of body by surgery, or someone gets one's criminal thinking changed by undergoing some psychological treatment or meets untimely death by an accident or taking poison, all these things cannot be said to be challenges to the karmic theory. The same thing is now being done by scientists in a more systematic way; but there can be no gainsaying the fact that this act of cloning is absolutely unnatural and immoral. Producing the same kind of creatures is not at all proper. Having the same features and body does not mean that the personality and the behaviour of the beings too will be the same. It does not necessarily mean that the clone of a criminal will be a criminal and that of a scientist will be a scientist. People seem to think that scientists can assuredly produce any being by way of cloning. The first clone of sheep came after the failure of 277 experiments. The percentage of success in case of human cloning has been only 1 or 2 percent.⁹

The beings that are produced after a number of failures are not really produced by scientists. Scientists simply create situations favourable to a certain body structure, Putting life/soul into that body is beyond their control. Cloning is related only to the level of body and the issues of soul and rebirth are beyond the limits of scientists and laboratories. The inkling of soul and rebirth occurs only to non-violent and truthful human beings. This is a fact that even scientists cannot deny. The reason is obvious. Innumerable events occur every time in the whole of world that prove their existence.¹⁰

Jain Religion and Technology

In bio-technology, a newly developed branch of biology, we study issues like human genom project, genetic engineering, genetic surgery and

human cloning etc. It's latest researches show the various characteristics of the genes that are contained in chromosomes. All the different stages in the life of man—old age, crime, diseases etc. are controlled by these genes and the scientists claim of bringing into existence a desired life by bringing about changes in genes. Keeping in view this characteristic of genes and genetic codes, the concept of relations between genetic codes, and karmic atoms has been provided to scientists and some of them are also doing research in this field.

First of all we should be clear that genes and genetic codes are not the ultimate; physical, environmental, internal and external conditions also control them. Activities of life are conducted in accordance with the activities of the being itself and the external circumstances. Genes and the factors affecting them ultimately indicate the possibilities of karmic atoms about which the scientists are presently silent. If the scientists, make researches, understanding the Jain karmic theory thoroughly, on the various activities of man like truth, falsehood, non-violence, crimes, compassion, and cruelty, they will find this principle absolutely true.¹¹

According to Jain karmic theory, the body of a living being is formed because of its physique—making karma. The features a being gets are determined by this very karma. But in the case of cloning, the body is formed by man himself. We can prepare features that we like. The concept of physique—making karma thus seems to have no meaning but it is not true. To understand reality we will have to go to the depth of the Jain karmic theory.

We should, first of all be clear in mind that each and every thing does not take place only on account of karmas. *Ācārya Mahāprajñā*, in his book '*Karmavāda*' (The karmic Theory), Says, "Each and everything does not depend on karma. If we come to think that everything is subject to karmas, we will come closer to fatalists who believe that what is destined, will be, or to the theists who believe that everything will happen as God wills. We cannot do anything. If karmas come to be all and all, there will be no value

of principal exertions that is put to destroy them; neither will there be the possibility of liberation because we shall reap what we sow and continue to have the bondage of new karmas. By thinking this ways, the concept of self-exertion and liberation will be proved to be false. "It is clear, thus, that karma is not all and all."¹²

Making his view clearer, Ācārya Mahāprajña farther says, "Karma is not an absolute power. There is control on it also. Karmas can also be changed. Lord Mahāvīra said," You will have to face the consequences of your doings. "This is a general rule but there are certain exceptions. Premature fruition, delayed fruition, hastening and transition in karmas are possible by which karmas can be changed. We can say that karmas can be dissociated prematurely by putting forth principal exertion. The time—period and intensity of karmas can be increased and decreased and karmas of the same nature can be transformed also. The force of the fruition of karmas can be suppressed and even rendered incapable of giving fruit for the time being. This process is known as subsidence."¹³

Ācārya Mahāprajña believes that the principle of transition is the principle of mutation of genes.¹⁴ One thing to be remembered is that the fruition of karmas takes place in accordance with the substance, region, time and feeling. Karma is not the only thing responsible for the formation of personality. Heredity, circumstances, atmosphere, geographical conditions and environment—all of these factors have a deep effect on the nature and behaviour of a man. Longevity is a karma but it can be diminished with the help of external causes like poison etc. Similarly one's facial features can be changed by bringing about changes in the genes present in the chromosomes of the cells. This is possible through transition, according to Jain karmic theory. We, therefore, come to the conclusion that according to the Jain karmic theory, it is possible to produce beings of the same shape and size, to change the nucleus of the cell and to produce beings having the same features through human genome project, genetic engineering, genetic surgery and human cloning. Hence genetic science is not a challenge to the

karmic theory. On the contrary, it may be understood very easily if we comprehend the Jain karmic theory systematically.

The aim of the deep study of Jain theory of karma and Genetic Science is to make the people aware of the fact that every creature, by doing principal exertion, can transform its inauspicious deeds into auspicious ones and by renunciation, restraint, stoppage and dissociation the form of the genes of the gross body can also be changed. The aim of the research of the Genetic science is to bring out the fact that the gross body of any being can be developed by transplanting healthy genes in place of wounded genes.

Social Utility

This research will provide humanity the knowledge of auspicious and inauspicious karmas being attached by the auspicious and inauspicious tendencies of the worldly soul and consequently man will not indulge in immorality and violence. A lay man will come to know how genes contribute in the composition of the gross body. He will come to know the significant role that the genes play with the result that he will be very conscious about the purification of genes. Our soul is free so far as thinking and principal exertions are concerned but it is dependent because of the bondage of karmas. Man can have permanent joy by purifying his soul by observing renunciation, restraint, stoppage, and dissociation with the help of principal exertions. Karmas can be dissociated and genes can be transformed with the help of volitional cycle. When one comes to know the formula of the purification of the gross and subtle body with the help of this research, one will be able to form a good society, a good nation and a good world, by purifying one's feelings. This research article has so much social qualification and utility that it can provide a permanent solution to all the present emotional problems like possession, terrorism, violence, increase in population, pillage, prejudices, poverty and disease. This research work will reveal the fact that with the help of the technique of cloning, which is a branch of genetic science, it will be possible to develop the different parts of

human body in laboratory that will help in curing the diseases that are so far regarded as incurable. Besides all these benefits, with the help of this technique, it will be possible to change the genes that have been rendered useless and to control old age. Taking into consideration the medical utility of this research, the British government has allowed to perform human cloning in the year 2001.¹⁵

According to Jain karmic theory, only a bonded soul accumulates new karmas. Attachment and malice are the causes of karma. A liberated soul does not accumulate karmas as its feelings of attachment and malice are totally destroyed. For the destruction of karmas, Jain religion firmly believes in principal exertions and efforts. Jain system of meditation aims at attaining liberation by destroying karmas with the help of stoppage and dissociation. The position of the karmas earned previously can be improved by adopting the method of transition, premature fruition, delayed fruition and hastening. To attain this goal, it is necessary to adopt equanimity, and to make dissociation, the supreme form of penance, an indispensable part of life should be a doped.

Gene is a part of our gross body and karma is a part of our subtle body. Genes are the carriers of man's hereditary traits. For every particular trait, a particular gene is responsible. This gene corresponds to the theory of karma. With the knowledge of the science of genetics, different parts of human body can be developed in laboratory by the technique of cloning. This will help a lot in curing many diseases that are upto now considered as incurable. Besides all these benefits, with this new technique, it will be possible to change the genes that have been rendered useless. This technique will also help in controlling old age. The principle of transition is the principle of mutation of genes. Karmas can be dissociated and genes can be transformed by "emotional purification".

Conclusion

There is a big challenge before the scientists. The question is—If gene is the controller of every activity of body, who controls the gene itself? The scientists have no answer to this question. But it can be answered by the karmic theory of Jain philosophy. These genes are guided, directed and motivated by karmas. These are the karmas that instruct the genes as to what next they have to do and the genes then act accordingly. In the formation of gross body, genes are the corresponding elements of karma.

References :

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 - ³ Jīva-ajīva—Acārya Mahaprajña, p. 22.
 - ⁴ Ibid, p. 18.
 - ⁵ Psychology and Education, p. 161.
 - ⁶ Acārāṅga, first chapter, p. 10.
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 - ¹¹ Arhata Vācana (Indore)—Ajit Jain 'Jalaj', Biological concept of the karmic theory, July, 1999, pp. 17-22.
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 - ¹³ Ibid, p. 102.
 - ¹⁴ Ibid, p. 132.
 - ¹⁵ Vigyan Pragati, Human Cloning—Sanjay Verma, New Delhi, 2003, p. 20.