



Original Article

Human Embryonic Moral Status in the Embryo Research Debate from the Indian Religious School of Thoughts

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Abstract: Human embryonic moral status in the embryo debate in the Indian religious school of thoughts is a challenging issue. The paper tries to figure out whether ontological status implies moral status of embryo. Consciousness is an important determinant of animation of human embryo. In this paper an attempt had been made to understand the concept of man and soul in the Hindu philosophical thought. In the process we would also make a critical review of embryology in the Hindu philosophical thought. The study would adopt a conceptual elucidation of morality. The paper made an elaborative study of *Puruṣa* as found in the *Saṃkhya* Philosophy and the study of consciousness and animation would try to resolve the related question, when does life begin to have that value? Embryo-protectionist regards embryos as a potential person. The Gita says the human person is individual self-called *ātmanā*, whose nature is of pure consciousness, *Brahman/Puruṣa*. Consciousness constitutes the essentiality of individual Self. Human embryo developments are elaborately studied in the *Yajñavalkya Smṛti*, *Garbha Upaniṣad*, and *Suśruta Saṃhitā*. The self that remain latent in the embryo gets impetus with the association of consciousness until then it cannot be a human personality. In Hinduism sanctity of life gets combined with autonomy and self-determination. The sanctity of life applies both to the fetus as well as to the overall welfare of the society. The embryo being in an interim stage and the soul not being destroyed upon body annihilation, it may be claimed that since destruction or annihilation of the physical form does not destroy the soul, beneficial embryo research should thus not be abhorrent. The Hindu ethics as examined here precludes the consideration of the situation at hand, and causing the least harm and work according to one's dharma.

Keywords: Embryo research, consciousness, embryology, non-maleficence

Introduction: The Hindu idea on medical ethics grounded on the promotion of preservation and sustention of life as righteous living is balanced by the thought that the flaws

in the natural process are to be rectified and repaired to prevent from becoming life-threatening. Medicine which had a humble beginning took a major leap from magico-

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religious therapeutics to rational therapeutics that is from *daiva-vyapāśraya bheṣaja* to *yukti-vyapāśraya bheṣaja*¹. Ethicists value embryo as potential person and merits protection. Consequentialists espoused that for greater

humanities sake, embryo whose potentiality has not being actualised could be risked. This is an age-old moral dilemma in embryo ethics.

With a conviction that this approach would be able to address the pressing problems of the day, the article address the socio-medical issues arising out of embryo research through analysis of ancient Hindu texts. The ancient physician made an uninhibited understanding of the world and man derived from the same fundamental matter called *bhūta* which are understood as existing in five-root-forms—*pañcabhūta*.

Concept of man and consciousness in Hinduism: Hinduism as “*Sanātana Dharma*” is a Universal Religion not founded by any prophet and is based on the eternal sustaining values of life. Hinduism believes that the first man to tread each of the designated ages or *Manvantaras* is a progenitor similar to the Western Biblical Adam known by the name *Manu*. The Primeval Being called *Puruṣa* is the whole universe, lord of immortality, the creator and is the prototype of the microcosmic man who is the individual being as depicted in *Puruṣa-Sūkta* 10.90.8-14². The “*Taittiriya Brāhmaṇa*” speaks of *Parama Puruṣa*—the Supreme Being, the sole king of the entire universe-- the world architect, the creator of the sky, earth, not affected by the fruits of actions³.

The *Sātapatha Brāhmaṇa* relates that *Puruṣa*, the soul of the universe was alone. He did not enjoy happiness and desired a second and thus cause the same self to go asunder and divide to two parts that from whom arose male and female. Thus beings were created. The *Gītā* says the human person is composed of individual self-called *ātman*, whose nature is of pure consciousness, *Brahman* or *Puruṣa* has a complement of materiality called *Prakṛti*. *Prakṛti* or matter is lifeless, but possesses a creative force and properties of goodness, passion and apathy. It is to be noted that one side of this composite is irreducible to the other, yet the self and the matter co-exist in an intimate relationship that comprises the human with its unique sense of ‘I’ and ‘mine’. Matter

when comes into union with self becomes active and procreant⁴.

In *Sāmkhya* philosophy *Puruṣa* and *Prakṛti* combine to form the embryo from where the world emerged. *R̥gveda*⁵ verse 10.121 mentions of *Hiranyagarbha* (literally which is golden embryo or womb) that existed before the creation. While some states *Brahma* emerged from the *Hiranyagarbha* and created the world other considers *Brahma* himself is *Hiranyagarbha*. The Lord projects creatures into being, from time immemorial with the aid of matter (*Prakṛti*) through the instrumentality of his magical power (*māyā*). The individual self is encased by the five sheaths (*koṣa*) caused by the power of ignorance (*māyā*). The *Advaita Vedānta* describes it as hidden from sight like the water of a pond covered with weeds. When the weeds are removed the water is revealed and can be used by man to quench his thirst and cool him from the heat⁶. The Self is distinguishable from the material body and all forms as is a stalk of grass encased in its sheaths of leaf. The human being is an image of the Primeval Man (*Puruṣa*), either totally identical with the Absolute Being (*Brahman*) or a part or modes exists in the supreme personal Being.

The Hindu metaphysics conceives of the basic characteristics of the human being to be rational that is *cit* or better still have *caitanya*, self-illuminating (*svayamjyotiṣṭva*). In waking state an individual soul’s consciousness is directed outward to external objects. It experiences gross objects through the five external motor sense-organs, five vital forces and four internal organs – mind, intellect,

ego-sense and *citta*. There is a consensus among the Biologists that despite the presence of anatomical parts, the absence of consciousness leads to the collapse of the body. A living being not only comprises of molecules, bones, tissues, cells and so forth, but most importantly it is founded upon consciousness⁷. This is corroborated in the *Bhagavad Gītā* 13.34 as ‘*yathā prakāśayaty ekah kṛtsnaṁ lokam imāṁ ravih kṣetraṁkṣterī tathā kṛtsnaṁ prakāśayati bhārata*’⁸. This means – O son of Bharata, as the sun alone illuminates all this universe, so does the living entity, one within the body, illuminate the entire body by consciousness. Consciousness is

absolutely necessary for the living body to function as it does⁹.

Atman is the seat of consciousness. Pippalada in *Praśna Upaniṣad* 3.3, 3.4,¹⁰ asserts that just as an emperor function and rules over the people so does the *Prāṇa* engage the other organ of human body. The self (*ātman*) resides within the very heart. There are many veins in the body which branches out to many more. Along these veins travels the link-breath (*samāna*). Now the up-breath which is considered the fire rises up and transmits a man to a world of good or bad depending on his deeds.

The question now arises whether embryo the core of creation is entitled to the same status as a human being in the Hindu context.

Embryology and consciousness in Hinduism: In the Vedic Cosmo genesis, the reproduction of *Parama Puruṣa Prajāpati* is the prototype of all procreation and in case of man the cosmic emanation of *Prajāpati* finds replication in the effusion of semen (*rasa*) which constitutes the essentiality of man. The ejected semen enters the ovary and it comprises of equal parts of air, fire, water and earth, the ether being all-pervading gets mixed with it in the ovary. The semen originated from six fluids (*rasa*). It is said that embryo or foetus formation does not happen only due to the communion of the father's seminal fluid with mother's blood (*śonita*) but requires the combination of *atman* along with the subtle body consisting of *pañcamahābhūtas* connected with by means of its karma.

The *Yājñavalkya Smṛti* (YS) Verse 72-74,¹¹ holds the beginning-less perpetual soul desiring for a beginning wishes to take a body (*ādimichhataḥ*) and the *indriyānt* (organs) and the vital elements results as continuing from its previous birth. In the first month the foetus remains in a fluid condition submerged in the six elements (*dhātuvimūrchhitāḥ*) of earth, fire, etc. In short, it is in the liquid state. In the second month being stirred by cold winds it becomes slightly hardened shaped into a tumour (*arbudam*). In the third month, the sense organs are generated. Movement of the foetus develops in the fourth month. YS (Verse-79)¹¹ state that from the third month of conception the desire of the pregnant mother is to be fulfilled. In this period granting of the mother's wish would be fulfilling the foetus

desire. The mind, the seat of consciousness is recognised in the fifth month. Cognition (*buddhi*) along with vitality develops in the seventh month. In the seventh month the baby is endowed with *chetasā* (vitality) covered with pulses, that is the wind circulators, the arteries, the ligaments gets connected with the navel. In the eighth month there is development of skin (*tvachā*), flesh (*māṁsena*) and memory (*smṛti*). In the eighth month the *garbha* or foetus loses its vital power (*oja*) to the mother and again regains it. So an embryo born on eighth month would be deprived of vital breaths (*ato aṣṭlame māsi jāto garbhaḥ prāṇairvijayate*). The *ojas* has been described as that subsiding in the heart of the pure nature, slightly hot and having yellow tinge and in the "body upon its destruction, it goes to destruction" (Verse-82)¹¹. With fully developed limbs and organs, the embryo/baby in the *navame daśame vāpi* (*navame*- ninth, *api*- even, or even before, *daśame*-tenth) with extremelabour pain will be thrown out like an arrow (born) through its cavity by the forceful wind causing delivery. With the birth and in contact with air the baby loses memories of past birth and death (Verse-83)¹¹.

The *Garbhopaniṣad*¹² holds in the seventh month quickening happens, when embryo becomes unified with *jīva* (*ātmā*). In the eighth month the organ gets fully developed. In the ninth month, embryo enhances in size. *Śukla* or the seminal fluid is of men and *śonita* or the vital energy is of women. By itself each of the constituents is powerless or neutral but the confluence results in conception. Out of the preponderance of the father's seed, son is born. The preponderance of the mother's seed results in the birth of daughter.

With the confluence of *śukla* and *sonita*, a child is born reflecting the qualities and form of a father just as a true image of the original is reflected in the mirror. If afflicted with *vāyu* (*apana*), there would be vital air trouble at the time of copulation of *śukla* and *sonita*. If the *śukla* bursts forth into the womb in two parts it would lead to conception of twins. It is common for a womb to conceive one embryo. But sometimes there may be two; the conception of three embryos in a womb is as rare as one in a thousand.

In the ninth month, the body composed of the five elements is able to cognize odour, taste etc., through spiritual fire or *tejas*. It mediates

on the imperishable Omkara. It develops cognition. The body develops and identifies oneness of its existence with the eight prakṛtis or nature¹² and the sixteen vikāras or changes. The baby obtains prāṇa when food and drink is transmitted to the mother through her nādis. This embodied jīva still within the womb fully possessed of its characteristics, then remembers the series of its earlier incarnation and also discriminates the nature of its past actions. Lamenting and remembering its past deeds and fainting in its heart at the thought of its avidyā, with its head down and its feet moved upward akin to a sinner, wishing to obtain release, comes to the mouth of the womb and is born with the greater suffering. After having born, being touched by an all-pervading Māyā he forgets his imponderable past and his past actions.

While concentrating on human life what is important at the Indian metaphysical level is the presence of consciousness which provides impetus to human life. Maharshi Punarvasu in volume-II and page-viii, has enumerated consciousness as the most distinctive characteristics of life and āyus¹³. 'Āyus' as depicted by Sharma of volume-I, verse -- 42 of page-6, means the conjunction of body, sense organs, mind and self¹⁴. The self is the permanent subject of all acts of consciousness (cetanā-pratisandhāta) the self is knower (kshetrajña), the seer (drasta), the witness (sākṣi) and the immutable. The composite whole of cit and acit (consciousness and unconsciousness) knower and known compromises the total personality called jīva or jīvātman. To be conscious means to react in a certain way to our environment and to introspect about our inner thoughts and feelings. Conscious being not only reacts to external objects, but they know that they are reacting. The stone, for example, we know is not aware of its moment of reaction, but if it does, it would have consciousness. The matter at stake here is whether embryo has this consciousness.

Garbha or conception occurs when the semen and the ovum in the uterus and the Self takes hold of the mahābhūtas contributed by the united impregnating matter, assumes a subtle shape and remains confined in the uterus to be subsequently evolved out as human. The embryo is in a state of sleep. The 'waking' state comes about after the state of sleep and depends upon the embryo being developed to

the point where it is endowed with consciousness. There are various opinions about when embryo is endowed with consciousness. The Garbhopaniṣad states that it is in the seventh month onwards from conception embryo get endowed with consciousness. Suśruta points out that when the heart develops, consciousness as distinct category gets manifested.

It is believed that the self never gets dissociated from the subtle and sense-transcending bhūtas and past deeds and transmigrate into the embryo from another body. But the self is unable to produce himself. In such a scenario question would arise whether the self produces itself while born or unborn as in both ways it is untenable. For, a born self cannot be produced from an already born self and an unborn self cannot do so as he is non-existing.

Even it may be presumed self produces himself in that case why not he be get reproduced in desired species endowed with supreme power, manifesting pleasure, brilliance strength and is bereft of disease, old age, death and deformities. To this the Sāṃkhya-Kārika speaks of subtle body (sūkṣma deha) which continues to exist till salvation. At each birth it receives a new body and at each death it leaves it. The Vaiśeṣika on the other hand refutes to accept the existence of a subtle body and assigns it no place in the embryonic development. Śrīdhara¹⁵ stated that after the communion of the seminal fluid of father along with the mother's blood there is set up in the atoms constituting them a change through the heat of the womb, so that the old form gets destroyed and new similar qualities gets produced. Through the formation of dyads and triads the foetus body forms and then there enters the mind (antaḥkaraṇa) which cannot enter at the level of the combination of semen and blood for mind needs body to support it. Then with the combination of unseen power (adr̥ṣṭa), the embryo gets disintegrated by the heat of the womb into atoms and together with nourishment, the atoms conglomerate to form a new body. This shows that subtle body and mind have nothing to do with the development of the foetus. Heat of the womb is responsible for all disintegration and re-combination and formation of foetus.

It is held that though consciousness is produced by a conjunction of several constituents like 'Manas', 'Indriyas' and the external objects or 'Viśayas' yet inheres in the soul only of which it is a quality. But even the soul is not an eternal possessor of consciousness as Saxena thinks in page 44 of the *Nature of Consciousness*¹⁶. A man at the time of death loses his consciousness (intelligence mind) through exorable pain and dies leaving behind his lamenting relatives as observed in the page 399 containing verse-18 Skanda-III¹⁷. In fact, in the state of deliverance the soul is bereft of all its qualities including consciousness which gets manifested when enjoined with the 'Manas', 'Indriyas' and the external objects¹⁶.

Hindu texts dealing with the vivid description of embryonic development does not believe in the constant association of soul with consciousness in embryo. The soul either loses consciousness because of incessant pain or gets accrued with consciousness at the stage of development of embryo. Besides this the embryo as held in Muṇḍaka Upaniṣad-1.1.8 that which takes shelter in the mother's womb will get developed when it would get nourished by the food and water intake of the mother, a fully grown human personality¹⁸.

Empirically life in the embryo would in a sense be dependent on the anna or food intake of the mother. Metaphysically life is nothing else but food or the five mahābhūtas which gets embedded in the seminal fluid of the father to combine with the mother's ova to achieve conception. The embryo itself cannot develop into a child without being implanted in a woman's womb. To enable embryonic development it requires external aid and thus it does not have an active potentiality to develop into a human being without help. Embryos are a part of human body and for its sustention at its initial stage it has to depend on another people's bodies until they reach a certain autonomous stage of development. Suśruta attested this fact when he stated that the umbilical cord (nādi) of the embryo is found to be attached to the mother's artery through which the essence of lymph-chyle (rasa) produced from the assimilated food intake of the mother, gets transmitted in the blood veins. Immediately after the process of fecundation the dhammani of the mother carrying the lymph – chyle (rasa) gets transmitted in the foetus and tend to foster its growth through its

continuance in the womb as evidence found in the Susruta Samhita by Bhishagratna in page-140 of Volume-II, Chapter-III, and 17th Verse¹³. The Vedic embryologist opines that the developing embryo united to the mother, comes into individual self-becoming (ātmabhūya) with the mother as part of her own.

The self that remain latent in the embryo gets impetus with the association of consciousness until then it cannot be a human personality. This is reinforced by the neuro-physiological indication of the embryo. Consciousness demands a sophisticated network of highly interconnected components, nerve cells. Its physical substrate, the thalamo-cortical complex that substantiates consciousness with its highly elaborate content, happens to occur between the 24th and 28th week of conception. Roughly two months after, synchrony of the electroencephalographic (EEG) rhythm across both cortical hemispheres signals the beginning of global neuronal integration. Thus, many of the circuit elements required for conscious development began to grow by the third trimester that is beyond the period of 26th week. The slow wave movement that is, from sleep to dreaming stages (rapid-eye-movement-REM) gets to be located in the brain region at late gestation of the foetus¹⁹.

To harm an embryo at its earliest stage means it is defeating the interest of the embryo. A being having interest means the being have beliefs, desires, expectation, purposes. But an embryo at its earliest stage of conception is bereft of awareness about these interests. As the embryo is not the subject of such interest the moral right of the foetus would always stand less in comparison to an adult human being.

This is reinstated by the fact that though killing of embryo is considered as mortal sin yet in a pregnancy where the mother's life is in a balance, Hindu ethics emphasizes upon mother's right to foetal right. There is ancient Indian view that states; when the life of the mother is at risk due to pregnancies the foetus may be aborted²⁰. The life and death of mother stands high above the esoteric demands of faith. However the unborn life is no less intrinsically insignificant, only that it being incomplete will be born again.

Suśruta who is associated with India's surgical inheritance recommends abortion when there is negligible chance of normal delivery or when the foetus is damaged. When the mal-presentations of the foetus (mūḍhagarbha) cannot be corrected, Suśruta advised termination of pregnancy. Time should not be lost to avert danger to mother's life. Suśruta advised performing craniotomy operations to remove the foetus as found in Cikitsasthana²¹ 15.6-7. In Hinduism sanctity of life gets combined with autonomy and self-determination. We human live in a society and are interdependent and human action affects one another. Crawford²² pointed out that the Hindu ethics is not absolutist and unbending rather it takes on a reflective and contextual standpoint in its dealing with moral problems. The Hindu Dharmaśāstras not only emphasize upon the sādharma dharma and sāmānya duties but uphold bhūtaḥittatva, which is, seeking the good of creatures. It allows room for emergency conditions where convention must be superseded in favour of prudence.

Conclusion: The crux of the paper is to enquire whether embryo has the same moral standing as any human soul in the Hindu ethics and whether we are defying Hindu moral orders when using embryonic cells for research. The clinical world of conception in India is rooted deeply in its cultural topography and religious thinking. The Hindu texts contend embryo as an interim stage of soul's apparition as a physical form. The Bhāgavad Gītā of Chapter-II in verse 20 views that the soul is unborn, eternal, changeless and ever-existing and is not killed when the body is annihilated⁸. The self being immutable cannot be slain. The embryo being in an interim stage and the soul not being destroyed upon body annihilation, it may be claimed that 'since destruction or annihilation of the physical form does not destroy the soul, experiments on embryos should therefore not be abhorrent to Hindus'²³. Jiva not being mere flesh and bone, but a conscious entity is important in our discussion about using embryo for research.

While evaluating the status of embryo along with a grown human being we have tried to delve into the function of the consciousness. In Hinduism, inquiry or jignasa, is the fundamental duty of human life. Humanity begins when questions about the different phases of life experience get aroused in one's

mind. So, inquiry forms the basic foundation of acquiring knowledge. An early human embryo's brain could be deciphered after four weeks of conception when the cerebral hemispheres are differentiated around fifth week. By the end of the sixth week the rudimentary development of the five brain vesicles gets complicated. In the seventh week, the pineal gland gets formed. The pineal gland was believed to be the seat of consciousness in the pseudo-science and by philosophers²⁴. So the embryo at its very initial stage cannot enquire about the deeper purpose and meaning of life.

But a human person is endowed with the unique ability to enquire about life and beyond bodily needs. Medical research aims to help a person's longevity in a healthy way. Human life in Hinduism aims to be in union with the Supreme Being and that makes it more valuable than the embryonic cells at a primordial stage, where it has no sensation. The difference is at the level of degree of consciousness²⁵. Hinduism has an appreciative understanding of human nature and human history. And this sort of approach provides to Hindu bioethics a way to rationality eschewing away the paths of authoritarianism, credulous, and emotionalism. The autonomous individual gives due weight to scriptural injunctions but in the final analysis he turns towards his own inner conscience, guided by what collective religious experience has defined as being of ultimate value. Hindu bioethics after advocating the principle of non-maleficence is also committed to the principle of beneficence. At the same time Hinduism upholds sanctity of life. After appropriately satisfying the concerns of non-maleficence and ensuring safety Hindu bioethics considers embryo research may be morally permissible considering that its purpose is saving the lives of people.

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