

Pulsation of *Prāṇa* in Human Embryo: A Scientific Inquiry

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- 1.0. The first and purest spark of Vedic sacrificial fire was derived out of the ritualistically symbolic intercourse between a pair of wooden blocks called *araṇi*, which represent the manifestation of a new *life* or *prāṇa* consequent upon the corporal union of a couple. Therefore, *prāṇa* often is identified with *agni* or fire. Thus since the very dawn of Indian wisdom *life* or *prāṇa* became the focal point of intellectual and spiritual thought. As the main stream of Indian tradition believes in the eternity of consciousness, *prāṇa*, according to the same, is regarded merely as a link between matter and consciousness.
- 1.1. In the modern scientific perspective also, life is a continuous process and the living cell is the basic unit of life. Fertilization is only a landmark which marks the formation of a genetically distinct organism exhibiting the signs of life. However, the beating of the heart in the embryo, detected through non-invasive medical instrumentation, is simply a confirmation of the healthy development of the embryo exhibiting the signs of life.
- 2.0. Long before the invention of medical instruments the Vedas along with the Upaniṣads and Āyurveda have contemplated on and offered exhaustive deliberations on the animation of *prāṇa* in human embryo. In fact, Indian wisdom since its origination concentrated upon the wellbeing of every individual. For the same as they started their research for finding out the mystery of the emergence of the sense universe, similarly they became inquisitive about human origination. They struggled a lot to discover the unknown *self* from within the known *self*. Thus started their journey of *spirituality*. To initiate the same they had to begin with the study of manifestation of *prāṇa* in human embryo.
- 2.1. *Chāndogyopaniṣad*, one of the most exhaustive Upaniṣads acknowledges both the man and woman as *fire*. The respective five fires are *dyuloka* or yonder world, *parjanya* or or cloud, *pr̥thivī* or earth, *puruṣa* or man and *yoṣā* or woman. Among these while man is regarded as fire, *anna* or food is considered as the oblation, offered by the deities. Semen of a man is asserted to originate from that very oblation, which affirms a real healthy body as a prerequisite for the production of healthy sperm. Further, when woman is identified with fire semen is considered as the oblation to the fire, from which the foetus comes into being and simultaneously to be called a person—

puruṣo vāva gautamāgnis...tasminn etasminn agnau devā annaṁ juhvati, tasyā āhute
retaḥ saṁ bhavati/ yoṣā vāva gautamāgnis...tasminn etasminn agnau devā reto juhvati,
tasyā āhuter garbhaḥ saṁ bhavati/ (*Chāndogyopaniṣad* 5.7-8)

- 2.2. Being a person, either man or woman he/she should again be regarded as fire. Conceivably, life or *prāṇa* here is allegorically represented as fire. Oblation then to the said fire is possibly the simile of conscious and continuous effort for keeping the *prāṇa*, animate, nourishing the same and carrying forward its journey.
- 2.3. But how is the semen? Is it inanimate? According to Upaniṣads unanimously the answer is “No”. *Aitareyopaniṣad* clearly indicates *retaḥ* or semen as *ātman*. It states that in man indeed the soul is first conceived. The semen which is extracted from all the limbs of body as vigour is actually the conceived soul within the father. When he sheds it into his wife, then he procreates the self, i.e. the semen being dropped into female uterus, if can reach and penetrate a competent ovum the inseminated ovum becomes an animated foetus. And this event of fertilisation is considered as the first manifestation of a new life—

puruṣe ha vā ayam ādito garbho bhavati yad etad retaḥ/ tad etad sarvebhyo 'ṅgebhyo
tejaḥ sambhūtam ātmany evātmānaṁ vibharti/ tad yadā striyām siñcaty athainaj
janayati/ tad asya prathamaj janma/ (*Aitareyopaniṣad* 2.1)

- 2.4. It is clear from this deliberation that Upaniṣads were well aware of the fact that only a living sperm can fertilise a competent egg, which could have been a powerful reply to the later superstitious belief of the ignorant people, who used to blame women only for infertility.
- 2.5. Ācārya Śaṅkara who had been less emphatic about the relative aspects of the Reality, however expounded the biological process of reproduction of one living system from the other in his renowned *Prapañcasāra* in order to explicate the interplay of matter and life in this grand design of phenomenal existence, which indirectly substantiates the basic proposition of the existence of Consciousness at the fundamental level. Śaṅkara's treatment on mammalian embryogenesis as revealed in the *Prapañcasāra* has taken into consideration both the gross and subtle aspects of the manifest existence. Arguably, his wonderful exposition has striking similarities with the conclusions of modern biology. Though Śaṅkara's treatment has been lacking somewhere in furnishing the minute details of the gross evolution of the embryo, yet his contribution is unique in the sense

that it provides a comprehensive theory which accounts for the life principle that partakes in physiological growth.¹

- 2.6. As an exponent of vedāntic philosophical tradition Śaṅkara believed in the omnipresent existence of consciousness. Therefore, he never spoke of the commencement of life, rather he has stated that as the embryo goes on increasing, the same as a part (*kalā*) of Supreme Light (*param-jyoti*) manifests the life-force and thus attains the state of a conscious living being (*kṣetrajñatā*). Consequently, the germ comes to be regarded as a living being (*jantu*).

kramavṛddhau paramjyotiṣkalā kṣetrajñatām iyāt/
sakṣetrajñam malam tat tu sabhūtam saguṇam punaḥ//
sadoṣam duṣyasampannam jantur ity abhi dhīyate/ (*Prapañcasāra* 1.87-88ab)

- 2.7. The present discussion would remain incomplete if Āyurveda, the ancient Indian life science is not taken into consideration. The texts of Āyurveda consistently have followed the concepts of Upaniṣads. According to *Carakasamhitā* when a man with unimpaired sperm and a woman with unafflicted genital track, ovum and uterine bed cohabit during the period of fertilisation, the *jīva* (living soul) along with the mind descends into zygote and lodged inside the uterus. This results in the formation of the embryo—

puruṣasyānupahataretasaḥ striyāś cāpraduṣṭayoniṣoṇitagarbhāśayāyā yadā bhavati
saṁsarga ṛtukāle, yadā cānayos tathāyukte saṁsarge śukraṣoṇitasamṣargam
antargarbhāśayagataṁ jīvo 'va krāmati sattvasamprayogāt tadā garbho 'bhi nir vartate...
(*Carakasamhitā/Śārīrasthāna* 3.1)

- 2.8. Prior to *Carakasamhitā* *Suśrutasamhitā* prescribed the coordination of four factors, namely, menstrual period, healthy womb, nutrient liquid, healthy semen and proper observance of rules as necessary for conception and development of a healthy child—

dhruvam caturṇām sānnidhyād dharmāḥ syād vidhipūrvakam/
ṛtukṣetrāmbujabījānām sāmagryād amkuro yathā// (*Suśrutasamhitā/Śārīrasthāna* 2.33)

- 2.9. The precondition of not only a competent ovum but also that of an ideal genital track and uterine bed for ideal conception is nowadays a matter of great concern. It is well known that *in vitro fertilisation* today often is used for gestational surrogacy, which in many cases is needed because of incompatibility of the uterus of the biological mother.

2.10. Following the principle of transmigration of soul in *Bṛhadāraṇyakopaniṣad*,² *Carakasamhitā* has stated the transmigration of an individual soul, which is conditioned by mind, from one body to another. It further states that by entering into the uterus, the transmigrated soul gets combined with the sperm and ovum and thereby reproduces himself in the form of a foetus. Thus the foetus takes the designation of soul—

ātmajaś cāyaṃ garbhaḥ/ garbhātmā hy antarātmā yaḥ, taṃ jīva ity ā cakṣate śāśvatam
arujam amaram akṣayam abhedyam acchedyam aloḍyaṃ viśvarūpaṃ viśvakarmāṇam
avyaktam anādim anidhanam akṣaram api/ sa garbhāśayam anupraviśya
śukraśoṇitābhyāṃ saṃyogam etya garbhatvena janayaty ātmanātmānam, ātmasamjñā hi
garbhe... (*Carakasamhitā/Śārīrasthāna* 3.8)

2.11. *Carakasamhitā* has repeatedly focused on the normalcy of genital track and seeds of the couple. Along with that it never forgets to mention about the indispensability of the entrance of the *jīva* or individual self and the fusion of the same with the sperm and egg during fertilisation—

evaṃ yoniṣu śuddhāsu garbhaṃ vindati yoṣitaḥ//
aduṣṭe prākṛte bīje jīvopakramaṇe sati/ (*Carakasamhitā/Cikitsāsthāna* 30.125cd-126ab)

2.12. Perhaps the view of transmigration of soul would be regarded as mere a scriptural hypothesis from the modern scientific perspective. But sometimes in spite of fulfilment of all essential prerequisites fertilisation and even *in vitro fertilisation* fail when most rational person even finding no reason for the failure, blames the *destiny*.

3.0. The present paper unravels the science of embryo formation in the light of the premier texts of Upaniṣad and Āyurveda with special emphasis on the dynamics of Prāṇa. The inadequate theory of embryogenesis of modern science is thus supplemented by the insights derived from the invaluable Sanskrit texts of antiquity.



Reference:

¹ Cf. “Human Embryogenesis: Modern Science vis-à-vis Śaṅkara’s view as reflected in *Prapañcasāra*”. *Anvikṣā*, Research Journal of the Department of Sanskrit, Vol. XXXVII, March 2016. Pp. 93-105.

² Cf. *Bṛhadāraṇyakopaniṣad* 4.4.3-5.



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