APPENDIX TO SECTION III.

CHAPTER VI. Sub-Section iv.

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SAMSKĀRAS.

From the explanation given in the text it is clear that the samskaras are intended to be performed at certain definite periods or stages in the formation and course of development of the human body, with the view of bringing about certain results that are beneficial to the growing organism. The first three samskāras described by the author have reference to events in ante-natal life, and when studied in the light of modern medical knowledge the results sought to be attained by the samskaras are recognised as eminently desirable ones; indeed medical science to-day seeks to reach the same results but uses for this purpose the physical methods of modern western science, whereas in the samskāras the superphysical (psychic or occult or metaphysical and subjective) methods of ancient eastern science are employed.

Each of these two methods has its own particular value, the western physical method, belonging to an age of materiality, being perhaps the more universally applicable at the present day, though the eastern superphysical method, belonging to an age of spirituality, is the more farreaching and complete, and its results might be usefully combined with and guide the western. With the aid of theosophy and of modern science this is seen to be possible. The samskāras are based ultimately upon certain fundamental truths in Nature which underlie human development or evolution, both spiritual and physical, and a knowledge of the scientific facts of development leads to a clearer understanding of the nature, value and use of the samskāras and points to a common ground and connecting link between the ancient science and the modern.

THE THREE ANTE-NATAL SAMSKĀRAS.

The following are the scientific facts gathered from the text:

The ovum (rajas) having been fertilised by the spermatozoon (vīrya), a process of growth and development in the fertilised ovum at once begins. The process is a three-fold one and therefore comprises three main stages whether viewed from the objective (physical) standpoint or from the subjective (superphysical) standpoint. These physical stages are successive as regards the time in ante-natal life when they are initiated, each stage being definitely marked

off from the others by certain anatomical and physiological characteristics.

The first period includes, on the physical side, all the structural and physiological changes which occur in the fertilised ovum from the moment of fertilisation until the time when the "trunk and limbs and organs" have become clearly defined and the tiny "embryonic body"—a miniature of the human form—is fit and ready for the entrance into it of the jīva (the individualised life, or spiritual entity) for whose use the body has been formed, and is to be further developed.

This miniature human form has been "formed by the multiplication" (the cleavage or segmentation) "of the compound atoms" (conjoined pro-nuclei) "of germ and sperm." "Each such atom" (pro-nucleus) "is a trinity" (a complete morphological unit or set of characters) "and possesses the power of multiplication etc.," (the power of evolving through a cycle of life) that "manifests everywhere in the World-process" (the drama of cyclic life). "It is the beginning of reflexion about Brahman."

During this first period of growth and development the "jīvāṭmā" (the spiritual entity or individuality) "is connected with the atoms of the body in the womb" (with the pro-nuclei, or centre of formative activity and formative differentiation). When the pro-nuclear activity and differentiation are completed, the jīvāṭmā (individualised life) whose connexion with the pro-nuclei initiated the pro-nuclear or formative activity, "comes and enters into the embryonic body" or miniature human form and the second stage of growth and development begins.

The second stage is "the fixing of the connexion between the jīva and the body," or the rendering of the body viable. The "trunk and limbs and organs" of the tiny "embryonic body" or miniature human form which is as yet incapable of living apart from the maternal forces that pulse through it, receives a fresh stream of life or downpour of vital force or energy, and by the new impluse to development which is thereby given, the "embryonic body" is further developed and differentiated and becomes a fœtus, or finished embryonic body, capable of carrying on the vital functions of the human organism and of living an independent life of its own. "It is the completion of the consciousness of the I, and the I is the Atmā."

This period includes therefore on the physical side all the anatomical and physiological modifications by which the "embryonic body" becomes a viable feetus or human organism whose lifeforces are centred in the feetal heart, their primal seat, and thence pulse through the fætal body. About this, Madame Blavatsky writes;

"The heart is the king, the most important organ in the body of man....The spot in the heart which is the last of all to die, is the seat of life, the centre of all, Brahmā, the first spot that lives in the feetus and the last that dies." (S. D., iii, p. 582.)

With the attainment of viability, "the stay of the jīva has been assured" (physical life is possible for the child) and the third stage in ante-natal life is entered. It consists in making "known all the conditions and stages that the jīva passes through," and is an impressing of the distinctly human characteristics upon the feetal organs and brain of this human feetus or organism which is being fashioned for the use of the incoming entity or spiritual man. On the objective side, the anatomical and physiological changes initiated during this stage of growth, are therefore those which result in the formation of cerebral fissures peculiar to the human brain, and the expansion and growth of the brain cells and allied structures, which fit the human organism for the functioning therein of the human mind, changes which result in the formation of other fissures in the brain besides the primary ones. Keith in his Human Embryology and Morphology, page 253 writes: "In the seventh month the fissures on the human brain have a remarkable correspondence to

those on the cerebrum of an ape," and "The neuroblasts in the cortex have reached nearly their full number by the seventh month; after then it is their dendrites and collateral fibres that continue to develop". It is "the conjunction of the I with the this." On the subjective side, this period is characterised by the giving to the child of a thinking principle, "that portion of the Divine which goes to animate the personality, consciously separating itself, like a dense but pure shadow, from the Divine Ego, wedges itself into the brain and senses of the fœtus, at the completion of its seventh month" and "becomes, as the child grows, a distinct thinking principle in man, its chief agent being the physical brain." (S. D., iii. 511-512).

To one who has studied western science and knows the facts and basic principles of Comparative Embryology, the correctness of this outline is self-evident; it contains no statement which in any way contradicts the observations and researches made in Embryology. The facts observed and recorded by scientists readily find their place in this outline, and there is left upon one's mind the conviction that the author of the *Pranava Vāda* was familiar with all the essential facts of Comparative Embryology and their bearing upon human life in general, with all the main facts of heredity and of other

mysteries of life and death. The key to the understanding of the ancient teaching is given when the ideas expressed in the eastern books are put into the technical language of modern science. This has become possible to-day through the work of Dr. J. Beard, whose researches in Comparative Embryology, commenced in 1888 and published in 1904, confirm these ancient teachings—and the teachings of theosophy—in two very important respects, viz.

(I) Dr. Beard's researches prove that there is "a morphological continuity of germ-cells from generation to generation;" that "the germ-cells" are not "somatic in origin;" that "they exist prior to the appearance of any trace of a soma;" that the formation of the primary germ-cells takes place "before any trace of an embryo" has been laid down; that one of these primary germ-cells goes "to the unfolding of an embryo to contain the rest" which on its formation "migrate into it along the connexion between embryo and yolk-sac, the yolk-stalk." In these researches "was afforded" says Dr. Beard, "the possibility of following in a distinct and tangible form, and without the assumption of the continuity of an hypothetical, intangible germ-plasm (Weismann), the track of germinal continuity from one generation to the next, and "the formation of an embryo sinks into the

position of being a mere incident in the life-cycle."

About this subject, Madame Blavatsky has written: "These germinal cells do not have their genesis at all in the body of the individual, but proceed directly from the ancestral germinal cell passed from father to son through long generations." (S. D., i. 244). And again, "Weismann in his hereditary germ-theory is very near truth." (S. D., iii. 592). She gained her knowledge of these facts from the researches of eastern science.

(II) "From the worms to man himself," writes Dr. Beard, "the products of the early cleavage are concerned, not in the formation of an embryo, but of an asexual foundation or larva—a series of temporary and transient organs that precede an embryo or sexual generation." "By looking at the phenomena in this light it becomes possible to compare together, so as to show their essential identity, the phenomena in the life-cycle of a hydrozoon, a worm, a mollusc, an insect, a fish, a mammal, and a man. And to these must be added the higher plants, or metaphyta. In other words, it reveals the unity of organic nature!" Thus do the most

recent researches of modern science illustrate and serve to confirm the ancient teachings of the unity of all life. Madame Blavatsky writes: "The human feetus follows in its transformations all the forms that the physical frame of man assumed, throughout the three Kalpas (Rounds)..... In the present age, the physical embryo is a plant, a reptile, an animal, before it finally becomes man, evolving within himself his own ethereal counterpart, in his turn." (S. D., i. p. 206). The form becomes even more highly differentiated and complex, and the powers of the life within show themselves and shine forth through it ever more and more fully and perfectly.

On the form-side, if the language of Comparative Embryology is used, the first samskāra denotes the impulse to development from the "fertilisation of the ovum" to the "critical period"; the second samskāra denotes the impulse to development from the "critical period" to the "viability stage of the fœtus"; the third samskāra denotes the development from "viability" to "full term."

The author mentions also the subjective side of ante-natal life and he gives its broad outlines: the jīva connected with the fertilised ovum and exercising an influence upon the growing physical body throughout the whole of

[&]quot;" A Morphological Continuity of Germ-cells as the Basis of Heredity and Variation," by J. Beard, D. Sc., p.133.

ante-natal life; the entrance of the jīva into the physical body making viability possible and laying the foundation for the exercise later of the psychic (mental) faculties which are regarded as distinctly "human," and which distinguish the psychic life of the human mind from the

psychic life of the animal mind.

Of the life-side—of that which gives the impulse to the development of the form out of the fertilised ovum, western science tells nothing. "The two chief difficulties of the science of Embryology-namely, what are the forces at work in the formation of the fœtus, and the cause of 'hereditary transmission' of likeness, physical, moral and mental-have never been properly answered; nor will they ever be solved, till the day when scientists condescend to accept the occult theories." (S. D., i. 243.) "These germinal cells proceed directly from the ancestral germinal cell passed from father to son through long generations How will biologists explain the first appearance of this everlasting cell?" asks Madame Blavatsky. (S. D., i. 244.)

The subjective side of ante-natal life and the influence exercised by the jīva on the development of the fertilised ovum are still unknown to western science,—hence the impassible gulf to-day between western science and religion; and also the inability to understand and to cope successfully with those social and moral

problems that are stirring profoundly the hearts and minds of men and women in the west; hence too, the many, as yet unanswered questions about heredity, about ways of improving the human race, about man's spiritual nature and immortality, about future life, and about other mysteries of life and death,—all of which are known to eastern science and, when understood, make the institution and use of samskāras intelligible.

"The problem of heredity is almost the greatest one in embryological science" says Dr. Beard. His patient and long continued researches, by western physical methods, have led him to the discovery of a morphological continuity of germ-cells,-a discovery long before made by eastern scientists or occultists who had recourse to the superphysical (clairvoyant) methods of occult subjective science. "No earnest investigator can ignore the immense, the overwhelming importance of this continuity for the science of embryology. It and the various facts associated with it, are bound sooner or later to revolutionise completely the ideas and conceptions of zoologists, anatomists and embryologists." In these words does Dr. Beard unwittingly testify to the truth and value of the occult science of eastern sages.

THE FOURTH SAMSKARA--JATA-KARMA.

The completion of the third stage of embryological development is followed by the birth of the child, and for this the fourth samskara is performed. Ante-natal life has provided the is va with a physical body sufficiently developed to permit of its being used as an independent organism wherewith to carry on physiological, psychic and mental activities. But until birth has actually taken place, this independent functioning is still only a possibility, not yet an actuality; the feetal lungs, although perfectly formed, are in the condition known as atelectasis (the air-cells not yet expanded and filled with air), and the circulation still includes the passage of the blood through the placenta, and there is a communication between the right and left auricle of the heart.

At birth, with the first breath that the child draws, air enters and expands the atelectic lungs. The relative change in blood-pressure thereby produced, causes the Eustachian valve of the heart to close, blood can no longer pass from the right auricle into the left auricle and the placental circulation soon ceases. Other secondary structural changes in the vascular system complete the adaptation of the child's organism to the new conditions and environment; among these, may be mentioned the obliteration of the Ductus Arteriosus (? secondary sushumnā)

some ten or twelve days after birth,-a fœtal vessel between the left pulmonary artery and aorta, immediately below the point at which the left carotid artery is given off from the arch of the aorta. Unless the changes in the fœtal lungs and heart take place, the physiological activities necessary to independent existence cannot be carried on, and the new-born child cannot live; it will be "still-born". Therefore the jāṭa-karma is "the accompaniment of the success of the wish 'May I be many,' i.e., of the wish for progeny". It is "performed for the maintenance of that success" i.e., for the continued life of the new-born child. "All action being threefold, viz., birth, stay, and death, the endeavour to secure stay naturally follows after birth," and to secure stay it is necessary that some of the general life force, the energy of the jīva, shall be specifically set apart (individualised or differentiated) to carry on independently the vital (physiological) functions of the new-born body, as the "prāṇa" of that body. "Jīva becomes prāṇa only when the child is born and begins to breathe." (S. D., iii, 545.)

During intra-uterine life, the child's body is bathed by the Liquor Amnii of the ovum, and the effect of the rhythmical contractions of the uterus upon this bag of fluid will, in accordance with the laws of hydrostatics, be such as to produce general rhythmical wave-like forms of stimuli on the nerve ends of the fætal body which call forth the seemingly "spontaneous" rhythmical activities, termed microkinesis and micropsychosis. In this way the child's nervous system is developed during the intra-uterine life up to the point of ability to respond to general stimuli and at birth readily shows forth these "spontaneous" forms of general activity. But, after birth, there is a change of environment, and external stimuli can reach the nerve-ends in the ordinary way and give rise to definite, localised, "respondent" forms of activity-local (or specific) sensory motor responses or reactions, -- "sensations" and "actions" as they are technically called. By these definite responses or reactions to definite external stimuli, specialised (individualised) sensory and motor paths are developed in the brain and spinal cord, "sensory and motor tracts," and thus the physical foundations are laid which later make intellectual activity possible. Among the early sensations and actions may be noted those which are referred to the skin and to the respiratory and digestive tracts, viz., tactile sensations and the infant's "cry" or "vocal act" when there is bodily discomfort, and the infant's "sucking" or "buccal act" when any object is put into its mouth. "In the corresponding true consecra-

tion the idea is 'What is this, of which I have become aware? What accrues to me by that which this is?"" i.e., by that awareness of something ("sensation") which I have experienced? It would seem, therefore, that on the subjective side, the jata-karma refers to the experiencing or becoming aware of external stimuli that affect the nerve-ends of the organism, or to the development of the "Sensation-subjective" state, upon which the evolution of the concrete mind and intellectual faculties of the child depend; for as Madame Blavatsky writes: "Mind as we know it, is resolvable into states of consciousness, of varying duration, intensity, complexity, etc., all, in the ultimate, resting on sensation." (S. D., i. 31.)

THE FIFTH SAMSKARA-NAMA-KARANA.

"Brahman is one" asserts the Unity of all Life or Consciousness; all comes from and is God; "still separateness appears therein" because of the many separate organisms or forms, in which that Life or Consciousness is focussed or individualised for the gaining of individual experience,—"the reason for all evolution" being "the gaining of experience." (S. D., iii. 559.)

"And those that appear separate have separate names also fitly," because each functions and works, in his own separate form or organism,

as an individualised Life, or Spirit, or Name, evolving his own separative mind, both abstract and concrete—and his own individual consciousness. "In truth however all names belong to all," because all individuals or individualised lives originate in the same way from the One Life which has been focussed in a multitude of forms or germinal cells evolving in the same way, though at different stages and in varied order of detail. An individualised life consists, therefore, always of a form or body (the This) in which a ray of the One Life is focussed, and of the Life (the I) which is individualised as a ray in that particular form, between which and itself a particular definite inter-relation is thereby established. The "true naming" or "the thinking of the This by the I and of the I by the This," expresses this inter-relation established between the Form and the Consciousness, and is a "mutual cognition between them, so to say," or a state of consciousness which is common to both.

Western experimental (Practical) Psychology is still in its infancy, so it is difficult to convey eastern psychological knowledge, because of the lack of scientific terms in which to express the eastern ideas. On the objective side, this samskāra may perhaps best be described as concerned with the development of those parts

of the nervous system by which the various organs and other parts of the body become especially connected with, or related to, the developing consciousness of the child; and, on the subjective side would include therefore all so-called "organic or internal sensations," i.e., the internal sensations of strain, pressure, the muscular sense, articular sense, and so on. Every internal body-change or body-activity, produces a corresponding change in the consciousness, an "internal or organic sensation". Every internal conciousness-change or conciousness-activity, produces a corresponding internal bodily-change and therefore "internal or organic sensation." The "internal or organic sensation" is common to both body-activity and consciousness-activity, is essential to each of them, and may call forth both of them, so that, a body-activity (Etat utterance) and consciousness-activity (Aham utterance) being both called forth, Etat may be said to be included in Aham and Aham in Etat, the inter-relation or inter-connexion being "organic sensation" belonging to both and to either. "The name given to an object depends upon the nature of the cognition connected therewith" i.e., depends upon the "internal or organic sensation" connected therewith, depends upon the child's biological organism. This is, possibly, the explanation, of Grimm's Law; slight differences in the human

biological organism becoming exaggerated by isolation from other similar human biological organisms, with the result that the "organic sensations" and vocal sounds elicited by any group of "organic sensations" differ slightly in these cases -and these vocal-sound differences having been observed and tabulated the corresponding names in different languages were found to have a common element (factor) and a variable element (factor) now spoken of as Grimm's Law. "To frame sounds on the basis of that knowledge is to give names whereby things are recognised", not artificial or partial names that express certain attributes or qualities possessed by the biological organism and which consist of variable elements, but real, true names which express the summation of the series of all its inherent "organic sensationpossibilities," in the same way in which an algebraical formula may be said to express the summation of the series of all its algebraical termpossibilities, as e.g., does the Binomial Theorem in Mathematics.

THE SIXTH SAMSKĀRA—THE CHŪDĀ-KARAŅA.

"The real consecration implies the union of I and This, 'I am this'—the egoism of the I permeates the This fully, and the entrance into the world and the worldly life is complete." For as Madame Blavatsky says: "Manas, the Mind Ego, does not accomplish its full union with the child before

he is six or seven years of age, before which period, even according to the canon of the Church and Law, no child is deemed responsible. Manas becomes a prisoner, one with the body, only at that age." (S. D., iii. 506.)

The changes peculiar to this development appear on the objective side to consist in the formation of links or paths between the vasomotor nervous systems and the cerebrum; and on the subjective side, to refer to the evolution of the psychic life called by western psychologists 'Affection,' or 'Feeling' and defined by Titchener as 'the conscious process' arising from the way in which an organism receives a particular impression made upon it.1 The sense of "mineness" increases when the psychic 'affective' element is added to the psychic 'sensory' element; and the "entire freedom" from conventions, from sense of shame etc., in infancy, begins to be lost. The infant did not know himself as distinguished from another, because the "I" had not as yet gone "forward into the This." "The full cognition of the I and the This, and the going forward of the I into the This" is the essence of the chudakarana. The result is "the loss of its original character by the I,"-i.e., of the 'pure sensory' or 'sensation-subjective' state, and "its complete

¹Titchener's Outlines of Psychology, Edit. 1902, p. 102.

entrance into the This, the enveloping of the former by the latter"; the psychic sensory element is enveloped by the psychic affective element. The jīva has been born to "accomplish the work of the World-process" and the rite indicates the fact that henceforth this jīva engages in work,—the first work being the identification of itself (himself) with the functioning of the new physical body that he is to use. This identification of himself with the body-changes or sensations, is dependent upon 'affection' or 'feeling,' and therefore "the real consecration implies the union of I and This, 'I am This.'"

THE SEVENTH SAMSKĀRA—KARNA-VEDHA.

"Knowledge of all activity is implied" by the karna-vedha or 'ear-boring.' The jīva is in possession of a biological organism with which it has learnt to consciously identify itself, and through which it can experience states of consciousness, made up of "sensations," "internal or organic sensations," and "affections or feeling." It realises that "all this is mine, all else, i.e., that which is not mine is useless"; that this samsāra, or experience, or succession of states of consciousness, is the "chief fact, and neither the Āṭmā nor the Paramāṭmā." Having realised and affirmed this, the jīva enters upon activity, dissociating and re-associating the elements into more and more complex conscious-

ness-states, the dissociation of the 'affectionelement' from the other elements being interpreted as 'pain,' the association of the 'affectionelement' with new combinations of the other elements being interpreted as 'pleasure'; thus, "the sense of mineness increases further."