

## ON THE MEDICAL DOCTRINES IN THE TANDULAVEYĀLIYA

### 1. TEACHINGS OF EMBRYOLOGY

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#### Translator's note

This text was written by Collete Caillat and published in 1974 as, "Sur les doctrines médicales dans le *Tandulaveyāliya*: 1. Enseignements d'embryologie," *Indologica Taurinensia* 2 (1974): 45-55. Caillat draws her analysis from Walther Schubring's (1969) Prākṛit transliteration and German analysis and explanation of the *Tandulaveyāliya* (Skt: *Taṇḍulavaicārika*). Her citations use various styles to account for Schubring's division of the text and the fluctuation between verse and prose. At times, in-text citations refer to a numbered verse in *āryā* or *śloka* meter (e.g. 1 a-b, or stanzas 1-139); at other times the page and line (e.g. p. 8,26 = p. 8, line 26) (See Caillat's fn. 1 below).

Rather than follow Caillat's convention of using abbreviations for texts, I created a standard bibliography. I have tried to offer clarifications in the text and footnotes where needed, using brackets [] to signify (a) missing words, (b) definitions, or (c) alternate language spellings. There are a few footnotes where I could not deduce the clear meaning of an abbreviation and left it as it was.

Since the *Tandulaveyāliya* has not yet been translated, this article on embryology teachings has been especially helpful for my research on Jain foundations for biomedical ethics. I hope readers will also find Caillat to be a lively guide into this unique Jain medical text. I thank S. C. Kaplan at Rice University for her expert review of my translation though any errors are mine.

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[45] The *Tandulaveyāliya*,<sup>1</sup> whose title evokes the quantity of “grains of rice” and equivalent [foods] that a male individual consumes [46] during a lifetime of one hundred years, is in many respects a reflection on impermanence and impurity, that is to say, on two of the twelve themes that have often been proposed for contemplative meditation (*aṇupekkhā*; *anupreṣā*) among the Jaina followers.<sup>2</sup> The work concludes naturally with the need to practice *dharma*, the only good that never fades away. Thus, the faithful will avoid all rebirth [and] be delivered from all evils.

The arguments supporting these claims are partly borrowed from the teaching of medicine. The *Tandulaveyāliya* thus proceeds in the manner of the Brahmanic *smṛtis* [such as the] *Viṣṇusmṛti* [and] *Yājñavalkyasmṛti*<sup>3</sup> that eventually base moral and religious exhortations on medical data. It has also been noted that the enumeration of the principle organs recognized by Indian anatomy tends to become commonplace.<sup>4</sup>

The *Tandulaveyāliya* does not limit itself to inserting elements of anatomy into its presentation. It also bears upon other branches of medicine, as the very title of the work<sup>5</sup> proves; here follows a brief summary of the work’s contents.

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<sup>1</sup> The *Tandulaveyāliya* is a short treatise found in the collection of *Paiṇṇayas* (*Prakīrṇaka*) [meaning a collection of dynamic and fluid texts, often written in Prākṛit, that exist on the margin of the Śvetāmbara canon]. These “mixtures” are incorporated into their canon by most Śvetāmbara sects (with the exception of the Sthānakvāsin). See Schubring 1935, section 50; Alsdorf 1965, p. 31-32. The *Tandulaveyāliya* was recently reissued by Schubring, from three Indian editions, in *Tandulaveyāliya, Ein Paiṇṇaya der Jaina-Siddhānta: Testausgabe, Analyse und Erklärung*, edited by Walther Schubring. *Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse 6* (Mainz, Germany: Akademie der Wissenschaften und der Literatur 1969), 145-74. The citations in this paper refer to [Schubring’s] edition, either to the stanzas, from (1) to (139), or to the pages and lines [p. 4 = p. (146) of the journal]. This edition is reviewed in Deleu 1972 and Caillat 1972; these reviews do not examine the relations between the doctrines presented by the Jaina and the classical doctrines of Indian medicine.]

<sup>2</sup> On *aṇupekkhās*, see A. N. Upadhye, *Svāmi-Kumāra’s Kārttikeyāṇupreṣā...* Namely the Introduction and in particular p. 6-42; Upadhye recalls the considerable place given to the *aṇupekkhās* in the *Maraṇasamāhi*, which is one of the *Paiṇṇayas* (Upadhye, 26). Compare, in another *Paiṇṇaya*, the *Candāvejḥhaya* [Skt: *Candravedhyaka*, “Hitting the Mark”], the reflections proposed for the religious person who dies in holy exertions (stanzas 160-169, and p. 148-150).

<sup>3</sup> Cf. *Viṣṇusmṛti* 96 (Jolly 1880, 55-98); *Yājñavalkyasmṛti* 3 (Mandlik 1880, 69-109).

<sup>4</sup> Jolly 1880, p. 42, section 35.

<sup>5</sup> By drawing attention to the total amount of “grains of rice” consumed, the title evokes the phenomena of nutrition and physiology. Compare [this to, on the one hand,] the teachings of dietetics in the medical *saṃhitās* of classical India, and, on the other hand, ancient speculations about food (A. Minard, *Trois énigmes sur les cent chemins* 2, Paris 1956, section 403 e, ubi alia; G. Dumézil, *Idées romaines*, Paris 1969, p. 262 and fn. 2; both referring to Mauss, *Anna virāj*, in “Mélanges Sylvain Lévi”). On the various senses of amg. *veyāliya*, see Schubring, in *The Dasaveyāliya Sutta*, ed. by Ernst Leumann and Walther Schubring, Ahmedabad 1932, Introduction, p. v., fn. 1; in this case, “*vaicārika*.”

After a traditional *maṅgala*, consisting of a very brief homage to the noble Jina Mahāvīra, “who destroyed old age and death” (1 a-b), the initial stanzas announce that the subject of the treatise is the ten-times-ten periods which are supposed to constitute the hundred years of a normal human life (2 a-b). They then present ([in section] A) some points of embryology (3-8, and 11-16) and gynecology (9-10). To the [next] *gāthās* [that is, stanzas] (11-16), the author connects a rather long development in prose and verse which makes use of (by [47] increasing and correcting) the embryology teachings recorded in the *Viyāhapannatti*,<sup>6</sup> and sketched in the *Sūyagaḍaṅga* [Skt: *Sūtrakṛtāṅga*].<sup>7</sup> Next, ([section] B) offers an examination of the ten-times-ten years that a man lives, followed by the reminder of the obstacles and diseases of which the living are currently victims (31-49 and p. 8,26-27). The text then notes the superiority of humans of the past by incorporating a *vaṅṅaya*, a formulaic discourse in rhythmic prose that describes the alleged constitution of these mythical ancestors (p. 8,28-11,14). Their longevity and perfection contrast with the weakness of the contemporaries to which the reader is thus brought back. The *Tandulaveyāliya* analyzes ([in section] C) what is nowadays the normal duration of life and then estimates ([in section] D) the amount of what is consumed during the course of existence (p. 12). After these calculations and some reflections on the different units of time, etc., the text, which is built in chiasm [reversing the order],<sup>8</sup> returns to the study of the human body. At this point, the text introduces a memory-aide for anatomy (p. 14,25-15,24). This serves to show the filth of the body, [and] thus the disgust which it should inspire; after which, ([there is section] E), to warn against [the body’s] deceptive delights, then against the perverse appeal of women [p. 16].

We see that the medical, paramedical, and related teachings occupy the entire beginning, as well as the central, culminating point of the text, on which, in the end, they base the conclusions. It is therefore likely that the Jainas considered them very important.<sup>9</sup> Yet, it seems that the theories professed in the text have received little attention except from small circles

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<sup>6</sup> The fifth *aṅga* of the Śvetāmbara canon: a venerated text, often called *Bhagavaī*, [Skt: *Bhagavatī-sūtra*] “the Blessed.” The correspondences between the *Viyāhapannatti* and the *Tandulaveyāliya* are elaborated by Schubring 1935, section 64, *Tandulaveyāliya*, p. 27; Deleu, *Viyāhapannatti*, p. 82-83. The *Tandulaveyāliya* seems to me, in fact, to be a reworking of the doctrine taught in the *Viyāhapannatti*.

<sup>7</sup> The second *aṅga* of the Śvetāmbara canon, Schubring 1935, section 45.2; one of the “seniors” of the canon, Alsdorf 1965, p. 28.

<sup>8</sup> *Tandulaveyāliya* [analysis] (Schubring 1969, 21); also *Viyāhapannatti* 14 (Deleu 1970, 129).

<sup>9</sup> [The text serves] practical reasons, as well: in order to successfully defend the true religion, it is important to be learned in all fields. It is therefore necessary that the masters know all the doctrines, even profane ones [such as medicine], as well as the various arguments that can be made by rival sects or by the worldly [non-religious]. See, for example, *Candāvejjhaya* 26 (Caillat 1971, 106).

specialized in the study of Jainism. Without a doubt, the theories merit a more thorough examination, especially to determine any affinities between the doctrines of classical Indian medicine and those that we find in the *Tandulaveyāliya*.<sup>10</sup>

To contribute to this investigation, I propose to take up the analysis of the first section of this *Tandulaveyāliya* pamphlet (ed. Schubring 1969, section A, p. 4,2-7,16).<sup>11</sup>

[48] The first section treats embryology and gynecology. The teaching is dispensed successively in verse followed by prose, the latter punctuated by formulas, summaries, or conclusions put into verse.<sup>12</sup> It inevitably gives way to various common beliefs, although they cannot be subjected to the test of observation or scientific experiment. For example, the *Tandulaveyāliya* attempts to establish a relationship between the existence of wicked monsters and the duration of their gestation, which would last for twelve years (15, cf. 24). It describes the case of the mythical continent Mahāvīdeha (14). It reproduces, in the prose development inspired by the *Viyāhapannatti*, the explications on the causes of rebirth in hell or divine dwellings (p. 5,35-6,8 and 6,9-18). Nonetheless, on the whole the *Tandulaveyāliya* strives to combine critical thinking and fidelity to tradition. We will see that, in more than one respect, the teaching it dispenses recalls, without being identical to, elements of classical Indian medicine. In the end, it seems that from verse to prose, the text itself registers fluctuations of variable importance. It is true that in this area, some arbitrariness was common.<sup>13</sup>

After these general remarks, let us turn to the summary of the teachings of gynecology and embryology, point by point, in the order followed by the *Tandulaveyāliya*.<sup>14</sup>

At first, there are sixteen *āryās* [a meter consisting of two lines], the first eight of which, as Schubring notes, serve as a general introduction (1969, 21). They insistently describe, among other things, the length of time that the embryos stay in the maternal womb: normally 277 ½ days, or thereabouts.

Following (9-16) are indications on the location, configuration, and functions of female genital organs. From the base of the umbilical region of the woman leaves a pair of vessels

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<sup>10</sup> The *Tandulaveyāliya* is not mentioned in the explanations devoted to Indian medicine in textbooks (see Jolly 1901; Filliozat [and Renou] 1947, section 1676).

<sup>11</sup> The following analysis is, of course, based on that of Schubring (1969, 22-24); but the latter only takes into account Jaina teachings.

<sup>12</sup> Verse and prose alternate in the text; is this mixture, so common in the treatises of the [Jaina] canon, fortuitous or desired? Compare the writing of classical medical *saṃhitās* [such as the] *Suśruta* and *Caraka*.

<sup>13</sup> Filliozat [and Renou] 1947, section 1656.

<sup>14</sup> The text, accompanied by the *vṛtti*, is reproduced in the Jain encyclopedia *Abhidhan Rajendra*, vol. 3, 830-38, s.v. *gabbha* [Skt: *garbha*].

(*sirā-dugaṃ*) like hollow flower stems; underneath is the uterus (*joṇī*), consisting of a bud-shaped receptacle facing downwards (9).<sup>15</sup> At the base [49] of this organ<sup>16</sup> [are] clusters of flesh, like mango; during menstruation, they burst, and release drops of blood (*soṇiya-lavayā vimoyanti*, 10). All the drops that reach the uterus, mixed with sperm, are able to be born in the form of “lives” (11):<sup>17</sup> up to 900,000; but they are sterile after twelve *muhuttas*. Man’s sperm remains active for the same period of twelve *muhuttas*; and a child can have up to ninety fathers (15). On our continent, a woman is no longer fertile after fifty-five years, a man after seventy-five years (13).<sup>18</sup> Lastly, the text (16) teaches that the right side of the uterus is for boys, the left for girls, the middle for asexuals [or intersex]: an opinion one finds echoed elsewhere in India.<sup>19</sup>

The prose presentation that follows the initial *āryās* examines the development of the embryo, starting with its initial manifestation: “this *jīva* (the one who survives, from among all those who are likely to have had an ephemeral existence, according to *āryās* 12-15?) is transmuted into an embryo after having, for the first time, taken food (*āhāraṃ āhāritā*), (to wit), at the union of mother and father, the maternal *oyā*<sup>20</sup> (*māuoyaṃ*), the paternal sperm, the foul, impure mix of the two” (p. 5,1-3).<sup>21</sup>

<sup>15</sup> *joṇī ahomuhā saṃthiyā koṣā* (*koṣā khaḍga-pidhānakā*), cf. (11) *kos’āyāraṃ joṇiṃ*. According to the *vṛtti*, the *joṇī* would therefore have the configuration of a “sword sheath.” I indicate that this “receptacle” (*koṣa-*) evokes a “bud”; this considering the Skt: *koṣī-*, fem. “bud” (see PW 2, 452); and from the comparison proposed in (9b), which could be continued in (9d), and which, moreover, recalls the one introduced by *Suśruta* 3.3.9\*:

After menstruation, the *yoṇi* closes like a lotus that folds in on itself, the day [having] finished: ...*divase ’tīte saṃkucaty aṃbujam yathā*; cf. also, *Suśruta* 3.5.43\*-44\*.

<sup>16</sup> *tassa ca*, masc.-nt.; so *joṇī* is feminine in this passage (cf. 9) and if the grammar is respected, [is it not likely that this line refers to] “at the base of the *sirā-duga*”? The *vṛtti*, however, translates *tasyās ca yoner adho-bhāge*, cf. *Tandulaveyāliya* (Schubring 1969, 27).

<sup>17</sup> *kos’āyāraṃ* (-iṃ, v. 1. Abhidh.) *joṇiṃ saṃpattā sukka-mīsiyā jaiyā taiyā jīv’uvavāe joggā bhaṇiyā jīnindehiṃ*.

<sup>18</sup> *joṇī pamilāyae mahiliyāṇam*, “the *yoṇi* of women fades, dries up.” From the age of fifty, according to *Suśruta* 3.3.11\* (cf. Jolly 1901, p. 49, ubi alia); or at sixty years, according to other [texts], *Suśruta* trad. 2, p. 136, n.\* The Sanskrit sources do not generally indicate that there is an age limit for male fertility; we sometimes see seventy years [mentioned] (Jolly 1901, 49).

<sup>19</sup> Cf. Jolly 1901, p. 51, section 40; p. 55.

<sup>20</sup> “(*māu-*)*oyaṃ*”: *ārtavaṃ soṇitam*, as the *vṛtti* translates. Considering the role assigned by the *Tandulaveyāliya* to *soṇiya-* (*lavayā*) (*āryā* 10-11) and the use of the compound *ratta(-sukka)* (*śloka* 23), one would be tempted to understand “(maternal) blood,” cf. *Tandulaveyāliya* (Schubring 1969, 23). However, Mr. Jean Filliozat has pointed out to me that the commentary does not necessarily give the semantic equivalent of *oyā*, *ojaḥ*; rather, it is natural that the text wishes to evoke the “blood of the fertile season of the mother”: this [fertile blood] carries the *ojas* and can thus feed the embryo (see *Caraka* references in footnotes below, [i.e. fn. 22, 27, 28, 29, 31, 42, 43]).

<sup>21</sup> *imo khalu jīvo ammā-piu-saṃyoge māu-oyaṃ piu-sukkaṃ taṃ tad-ubhaya-saṃsatṭhaṃ kalusaṃ kibbisam tap-paḍhamayāe āhāraṃ āhāritā gabbhattāe vakkamai*.

The expression of the *Tandulaveyāliya* here is a little convoluted. We better understand the meaning and the scope if we compare it with the parallel and more ancient text of the *Viyāhapannatti*.<sup>22</sup> We note, then, that *Tandulaveyāliya* condenses two teachings in this phrase: one, which takes for its basis the respected canonical text [of the] *Viyāhapannatti*, deals [50] with the mode of feeding at the initial stage of fetal life<sup>23</sup> and announces the important development that will be devoted to the nutrition of the embryo (*āhāraṃ āhārei*) later on; the other, which defines the moment of conception, does not appear explicitly in the *Viyāhapannatti*, where there is no more precise indication of the stages observed in the growth of the fetus; but the *Tandulaveyāliya* will easily graft the enumeration onto this introductory sentence.

What results from the reorganization, seemingly rather benign, that the *Tandulaveyāliya* has implemented? There is a link established between, on the one hand, the subjects treated in the *āryās*, and on the other, the canonical teachings on nutrition (borrowed from the *Viyāhapannatti*) which will follow (p. 5,13-34). This transition is not only formal: it was necessary to point out how the ephemeral *jīvas* [12-15] transitions to the living *jīva* at the origin of the human *gabbha* [Skt: *garbha*] (p. 5,1-3). This first addition led to another which makes it possible to specify the evolution of the *gabbha* thus defined (*śloka* 17 and p. 5,6-12). At the same time, the new wording of the initial sentence, while retaining the very terms used in the *Viyāhapannatti*, modifies its meaning. The *Viyāhapannatti*, in effect, did not say anything about the very process of conception (see above, fn. 23); on the contrary, the text of the *Tandulaveyāliya* clearly states the simultaneous presence, at the moment of conception, of the three elements: the spiritual principle of “life” (*jīva*), the mother’s *oyā*, [and] the father’s sperm.<sup>24</sup> This doctrine [51] accords with the classical theory according to which all procreation implies the triple conjunction of *śukra*-, *śoṇita*-, *jīva*- (*Caraka* 4.4.5, etc.).

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<sup>22</sup> And, on the other hand, with the doctrines of classical *saṃhitās*, *Caraka* 4.4.5, *Suśruta* 3.5.3; cf. also, “the birth of beings,” *bhūtōtpatti*, according to the first *khaṇḍa* of *Vārāhapariśiṣṭa*, see Rolland 1972, 131: “The so-called embryo is produced during the meeting of breath (*asu*) which is [the] third [element], with the blood of the season (favorable to the conception) and the man’s sperm.”

<sup>23</sup> Cf. *Viyāhapannatti* (ed. Suttāgame, vol. 1, p. 406, 7-9): *jīve ṇam bhante gabbhaṃ vakkamāṇe tap-paḍhamayāe kim āhārei?* – *Goyaṃā, māu-oyam piu-sukkaṃ taṃ tad-ubhaya-saṃsiṭṭhaṃ kalusaṃ kibbisaṃ* (ed. -vv-) *tap-paḍhamayāe āhāraṃ āhārei*, “The *jīva*, when it is transmuted into a fetus, what does it first take as food? - *Goyaṃā* [responds]: The *oyā* of the mother, the sperm of the father, this filthy, foul mixture of the two, this is what it first takes as food,” Cf. *Viyāhapannatti* I (7) (Deleu 1970, 82). On *oyā*, see above, fn. 20.

<sup>24</sup> Within the *Tandulaveyāliya* prose, p. 5,1-3, compare *āryā* 11: by invoking the authority of the Jinās (plural *maiestatis*), the text bluntly affirms that the primary elements are blood and sperm (see fn. 20). - We know that the *āryā* is a meter characteristic of recent portions of the canon (Alsdorf 1965, 53, *ubi alia*).

The doctrine is different, or differently expressed, in *Sūyagaḍaṅga* [Skt: *Sūtrakṛtāṅga*], an ancient text which also examines the origin of various kinds of creatures and humans (2.3.21, beginning, Suttāgame vol. 1, p. 163, 1

After this introduction, the *Tandulaveyāliya* describes the development of the fetus; first in a *śloka* ([17]; perhaps a mnemonic?) which enumerates the names of four successive stages of its growth; then, in a more detailed development, in prose (p. 5,6-12).

According to this *śloka*, after seven days the *gabbha* becomes *kalala*; seven days later, [it becomes] *abbuya* (*arbuda*-), then *pesī* (*peśī*-), and *ghaṇa* (*ghana*-). These terms are found in the Brahmanic texts, but, it seems, differently applied, and indeed [also used similarly] with fluctuations.<sup>25</sup>

The variants were probably without serious consequences, since the prose that follows the *śloka* joins (or reverses?) the last two terms. Here are the stages of development as recorded in prose: 1st month: the fetus weighs three quarters of a pala (about 75 grams).<sup>26</sup> 2nd month: it becomes *pesī* “muscle,” compact (or: it goes from *ghaṇa* to *pesī*);<sup>27</sup> 3rd month: appearance of the double heart, and cravings of the mother;<sup>28</sup> 4th month: it makes the body of the mother swell;<sup>29</sup> 5th month: five protuberances indicate hands, feet, head;<sup>30</sup> 6th month: it accumulates bile and blood;<sup>31</sup> 7th month: it develops 700 channels (*sirā*), 500 muscles (*pesī*), 9 large vessels

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and following; see also *Sūyagaḍaṅga* 45, Jacobi 1895, 393): *tesim ca ṇaṃ ahā-bīṇaṃ ahā’vagāseṇaṃ itthīe purisassa ya kamma-kaḍāe jonīe ettha ṇaṃ mehuṇa-vattiyāe nāmaṃ saṃjoge samuppajjai. te duhao vi siṇehaṃ saṃciṇanti. tattha ṇaṃ jīvā ithittāe purisattāe napumsagattāe viuttanti, te jīvā māu-oyam (ed. māo-uyam) piusukkaṃ taṃ tad-ubhayaṃ saṃsaṭṭaṃ kalusaṃ kibbisaṃ (ed. -vv-) taṃ paḍhamattāe āhāraṃ āhārenti. tao pacchā jaṃ se māyā nāṇā-rasa-vihō āhāraṃ āhārenti tao ega-deseṇaṃ oyam āhārenti...* Apart from the complementary elements that the *īkā* will add, this text says: “There in the *yonī* resulting from *karman*, the union takes place - ‘mating’ of the woman and the man—(the difference between the sexes being explained by) according to the (proportions of) seminal [liquids] and according to the location (in the womb) - (there) they deposit both (literally: “doubly”) their humors. There, the *jīva* becomes female, (or) masculine, (or) neuter. The *jīva* first takes for food the maternal *ojas*, the paternal sperm, [and] the foul, filthy mix of the two, then [the embryo] takes [nourishment] (in the form of) *ojas*, through one single point, from all the food that their mothers eat...” - on *oyā / soṇita*, see fn. 20 above.

<sup>25</sup> See references collected by Rolland 1972, 134; Jolly 1901, p. 54.

<sup>26</sup> On the stages of fetal growth, see Jolly 1901, section 41; Filliozat [and Renou] 1947, section 1656. It does not seem that it is customary to give the weight of the fetus in the first month, as does the *Tandulaveyāliya*.

<sup>27</sup> *bīe māse pesī saṃjāyae ghaṇā*, p. 5,6; (*pesī ghaṇa-svarūpā*, ct.); more... *pesīo ya ghaṇaṃ bhava* (17d). Compare to the version in *Caraka* 4.4.10: *dvitīye māsi ghaṇaḥ saṃpadyate piṇḍaḥ peśy arbudaṃ vā*.

<sup>28</sup> *Māue dohalaṃ jaṇai, Tandulaveyāliya*, p. 5,7. Cf. *Caraka* 4.4.11 and 15: development of sense organs and the limbs; accordingly, [this two-hearted connection is called] *dvaihrdayya*. *Suśruta* 3.3.18 places [this development] in the fourth month.

<sup>29</sup> Cf. *Caraka* 4.4.11; 20, *guru-gātratva*.

<sup>30</sup> Cf. see above, fn. 28.

<sup>31</sup> *pitta-soṇiyaṃ uvaciṇei, Tandulaveyāliya*, p. 5,9. In the sixth month, *Tandulaveyāliya* brings together two processes [that appear] separate [in the] *Caraka* 4.4.21-22: in the fifth month, the growth of flesh and blood

(*dhamaṇī*), 9,900,000 pores (*roma-kūva*), excluding those of the beard and hair, or 35,000,000 if these are included in the total.<sup>32</sup>

[By the] eighth month: [the pregnancy] is over.<sup>33</sup>

[52] In this paragraph, the teachings of the *Tandulaveyāliya* are very similar to that of the *Caraka*, without being identical.<sup>34</sup>

The *Tandulaveyāliya* then examines the nourishing of the fetus. It therefore resumes the [discussion of] development initiated earlier, and, as we saw, immediately suspended. The *Tandulaveyāliya* reproduces here the dialogic exposition of the *Viyāhapannatti* without even modifying the names of the protagonists, Mahāvīra and his disciple Goyama. But once again, the text reworks the presentation [of the subject], and introduces an important addition. It is instructive to compare the two passages. Here, first, are the teachings of the *Viyāhapannatti*, whose more ancient text is also less complex. Goyama and Mahāvīra exchange questions and responses in the following order:

1. “What does the *jīva* eat at the beginning when he becomes an embryo? - Maternal *oyā* (*ojas*) [maternal vitality/juice], paternal sperm, [the] foul, impure mixture of both.”<sup>35</sup>
2. “When he has become a fetus (*gabbha*), how does the *jīva* feed itself? - All that the mother eats - the various productions of organic juice (or ‘chyle’ [a milky fluid consisting of fat droplets and lymph], *rasa*) - the *jīva* eats (in the form of) vital juice (*oyā*), via a single point.”<sup>36</sup>

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(*māṃsa-śoṇitōpacaya*-); in the sixth month, strength and pigmentation (*bala-varṇpacaya*-). However, the text divides between the third and fifth months the processes that are observed together in the third month according to the *Caraka* (see fn. 28).

<sup>32</sup> General development of the fetus, *Caraka* 4.4.21-23. In the sets mentioned here by the text, the number of organs sometimes varies with the traditions, cf. Rolland 1972, 136-37.

<sup>33</sup> *vittī-kappo havai, Tandulaveyāliya*, p. 5,12; *śarīram āśritya niṣpanna-prāyo bhavati*. We know that classical medicine insists on the exchanges of *ojas* which occur between the mother and the child in the eighth month: consequently, if it is born at that point, the child does not survive.

<sup>34</sup> [This passage] is further away from the *Suśruta*, which signals the awakening of *manas*- in the fifth month, and of the *buddhi*- in the sixth month, 3.3.30.

<sup>35</sup> See above, fn. 23.

<sup>36</sup> *jīve ṇaṃ bhante gabbha-gae samāṇe kim āhāram āhārei? - Goyamā, jaṃ se māyā nāṇā-vihāo rasa-vigaṇo āhāram āhārei tad ekka-deseṇaṃ oyam āhārei, Viyāhapannatti* 406.9-11. Note the clarity of this statement, compared to *Tandulaveyāliya*, p. 5,27-29.

3. When he is an embryo, does the *jīva* make excrement? - No, [with] what he eats, he builds the sense organs.<sup>37</sup>
4. Is he in a position to take mouthfuls with his mouth? - No; he feeds himself ... from everywhere. From a first vessel (*māu-jīva-rasa-haraṇī*, the one that carries the organic juice of the maternal life - which is attached to the mother's *jīva* and in contact with the 'life' of the child), he takes and transforms the food; from a second vessel (*putta-jīva-rasa-haraṇī*, the one "that carries the organic juice of the 'filial life'—which is attached to the 'life' of the child and in contact with the mother), he builds (himself) and constitutes (himself)."<sup>38</sup>

[53] Here ends the presentation on nutrition. Goyama then asks what are the so-called "maternal" and "paternal" body parts (*Tandulaveyāliya* p. 5,32-34).

Now for the questions and answers exchanged in the *Tandulaveyāliya*. Here, they are presented in a different order, as we will see.

The initial question of the *Viyāhapannatti* is, in the *Tandulaveyāliya*, transformed into a complex preliminary assertion (see above). Further on, the dialogue begins:

1. When he has become a *gabbha* (fetus, embryo), does the *jīva* make excrement? - No: the food he eats is used to build organs of the senses, bones, marrow, various types of hair, nails.<sup>39</sup>

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<sup>37</sup> *jīvassa ṇaṃ bhante [gabbha]-gayassa samāṇassa atthi uccāre i vā pasāvaṇe i vā khele i vā siṃghāṇe i vā vante i vā pitte i vā [sukke i vā soṇie i vā?] [Goyamā] no iṇ'atṭhe samaṭṭhe, se keṇ'atṭheṇaṃ [evaṃ vuccai: jīvassa ... soṇie i vā]? —Goyamā, jīve ṇaṃ [gabbha]-gae samāṇe jam āhārei taṃ ciṇāi so-indiyattāe java phās'indiyattāe atṭhi-atṭhimijja-kesa-mamsu-roma-nahattāe, se teṇ'atṭheṇaṃ..., *Tandulaveyāliya* p. 5,11-14. Compare, in classical doctrine, less exhaustively, *Suśruta* 3.2.53; Jolly 1901, p. 55, section 41.*

<sup>38</sup> *jīve ṇaṃ bhante [gabbha]-gāe samāṇe pabhū muheṇaṃ kāvaliyaṃ āhāraṃ āhārittae? —Goyamā, no iṇ'atṭhe samaṭṭhe; se keṇ'atṭheṇaṃ? —Goyamā, jīve ṇaṃ gabbha-gae samāṇe savvao āhārei savvao pariṇāmei s. ussasai s. nissasai, abhikkhaṇaṃ āhārei a. p. a. u. a. n., āhacca ā. ā. p. ā. u. ā. n. māu-jīva-rasa-haraṇī putta-jīva-rasa-haraṇī: māu-jīva-paḍibaddhā putta-jīvaṃ phuḍā tamhā āhārei tamhā pariṇāmei;avarā vi ya ṇaṃ putta-jīva-paḍibaddhā māu-jīva-phuḍā tamhā ciṇāi tamhā uvaciṇāi, se teṇ'atṭheṇaṃ ... jāva no pabhū muheṇaṃ kāvaliyaṃ āhāraṃ āhārittae, *Tandulaveyāliya*, p. 5,15-32. The description of the two carriers of the juice is not found in *Sūyagaḍaṅga*. 2.3.21 (above); where, on the contrary, we find the first and second of the teachings dispensed in the *Viyāhapannatti*. As for the *Tandulaveyāliya*, we will see that it eliminates nothing.*

<sup>39</sup> The *Tandulaveyāliya*'s writing is, with a few minor exceptions, identical to that of the *Viyāhapannatti*. However, after *pitte i vā*, the *Tandulaveyāliya* in the process adds: *sukke i vā soṇie i vā* (p. 5,14); but it was already said (p. 5, 9): *chaṭṭhe māse pitta-soṇiyaṃ uvaciṇe*.

2. Is he in a position to eat food in the form of mouthfuls with his mouth? - No, he eats, transforms the food, breathes ... from everywhere, without stopping, (or) from time to time.

There are two vessels, the one “which bears the organic juice of the maternal ‘life’” (*māu-jīva-rasa-haraṇī*) is attached to the mother's ‘life’ principle (*jīva*), in contact with that of the child; the second, “which carries the organic juice of filial ‘life’” (*putta-jīva-rasa-haraṇī*), is attached to the ‘life’ of the child, in contact with that of the mother. The first ensures the feeding of the embryo, the second its growth.<sup>40</sup>

3. What is his diet? - “He eats (his share in the form of) vital juice (*oyam āhārei*) from the nine different productions of flavors of organic juice (*rasa*) ... that his mother eats.<sup>41</sup> He has an umbilical cord, [meaning a] vessel of organic juice (*nābhi-rasa-haraṇī*) - like the stem of a fruit, with the hollow stem of the lotus - attached to the mother and her own belly button. Through this navel, the embryo eats the organic juice (*oyam aiyai*). With the organic juice irrigating him, the embryo grows until it is born.”<sup>42</sup>

As we see, the third and last of the teachings that the *Tandulaveyāliya* presents in this passage is, in a way, double.

The method used is of the same type as before: the *Tandulaveyāliya* takes for its point of departure the second paragraph of the *Viyāhapannatti*. And it explains [54] one of the terms (common, moreover, to the *Viyāhapannatti* and *Sūyagaḍaṅga*, cf. fn 36 and 24); far from being a simple gloss, this explanation is a detailed addition: it provides clarifications that the *Tandulaveyāliya* obviously considers essential. Does it complete [or] does it invalidate the teaching on the double vessels *māu* and *putta-jīva-rasa-haraṇī*? There is no doubt, in any case,

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<sup>40</sup> The writing is identical (with very few variations) in the *Tandulaveyāliya* and the *Viyāhapannatti*.

<sup>41</sup> To answer this question, the *Tandulaveyāliya* rewrites the *Viyāhapannatti* text in detail; in *Viyāhapannatti* 406, 9-11 (see above, fn. 36), compare *Tandulaveyāliya* p. 5,27-29; *jīve ṇam gabbha-gāe s. kim āhārām āhārei? Goyamā je se māyā nāṇa-vihāo nava rasa-vigaṇo titta-daḍuya-kasāy’ambila-mahurāiṇṇ davvāiṇṇ āhārei tao ega-deseṇam oyam āhārei*. The *Tandulaveyāliya* is obviously referring to the nine varieties of “flavors.”

<sup>42</sup> *Tandulaveyāliya*, p. 5,29-31: *tassa phala-viṇṇa-sarisā uppala-nālōvamā bhavai nābhi-rasa-haraṇī jaṇaṇīe sayāe nābhīe tīe gabbho oyam āiyai, aṇhayantīe oyāe tīe gabbho vivaḍḍhai java jāo tti*. In this presentation, *oyā*, not being associated with *sukka*, clearly has its technical meaning of “vital juice;” cf. Filliozat [and Renou] 1947, section 1653; Jolly 1901, p. 42. Compare the teaching professed by *Tandulaveyāliya*, p. 5,27-31 and *Caraka*, 4.6.22 ss.; *Suśruta* 3.3.31 (*mātus tu khalu rasavahāyāṇṇ nāḍyāṇṇ garbha-nābhi-nāḍī pratibaddhā, sā ‘sya mātur āhāra-rasa-vīryam abhivahati...* ).

that it succeeds in reducing the possible differences between the science expounded to the Jaina and the doctrines professed in classical Indian medicine. The latter, even while describing the irrigation of the fetus by its entire surface, insists on the nourishing function of the umbilical cord, *nābhi-nāḍī*.<sup>43</sup> The *Tandulaveyāliya* does not expressly mention its name; but it undoubtedly suggests it (*uppala-nālôvamā ... nābhi-rasa-haraṇī*) at the same time as it takes its time describing [the umbilical cord]. In short, although it alters the order of the *Viyāhapannatti*'s wording, and the relative importance of its terms, the *Tandulaveyāliya*'s writing respects the ancient text. However, by adding a precision of great importance, it reduces the differences that could be raised between the theories of classical medicine and Jaina medicine.

On most of the other points that are later mentioned in this section of the *Tandulaveyāliya*, the Jainas apparently share the beliefs common in India.

Thus, some of the child's "members" are called "maternal" - flesh, blood, brain; others are "paternal" - bone, marrow, as well as hair, beard, body hair, nails. [These are the] same classifications, [the] same distribution [as] in *Viyāhapannatti* 406, 22-24. They agree with the teachings, with more details, of the *Suśruta*, *Caraka*, etc. (Jolly 1901, 55).

Similarly, it is generally accepted in India, it seems, that the *gabbha* takes the same positions as his mother, that it depends entirely on her conditions (18-19 and p. 6,19-22; *Viyāhapannatti* 407, 15-19; cf. Jolly 1901, 55).

Then, the *Tandulaveyāliya* notes that the birth takes place in the "ninth month," *navame māse*, more or less exactly (p. 6,31; cf. Jolly 1901, 53, section 40).

The differences in the proportions of *oyā* and *sukka* explain the sex differences in the newborn (cf. *Sūyagaḍaṅga*, see fn. 24): "[if there is] a little *sukka* and a lot of *oyā*, a girl is born; if a little *oyā* and a lot of *sukka*, a boy is born; in case of equality of the two elements, blood and sperm (*ratta-sukkāṇaṃ*), a neutral being is born" (*ślokas* 22-23). Classical doctrine expresses the same convictions (Jolly 1901, 51, section 39).

The *Tandulaveyāliya* adds that, in the case of condensation of *oyā* [*itthi-oya-samāoge*], a "mass" (*bimba*)<sup>44</sup> is born, a particularity which does not seem to be recorded elsewhere, in this form at least (23 and p. 6,33-34). Finally, the *Tandulaveyāliya* indicates how the child presents itself at birth: by the head, by the feet, [or if] at an angle, stillborn.

[55] The *āryās* that end this section recall, in conclusion, the pain that accompanies birth as well as death (25); reflections also expressed by the *Viṣṇu-smṛti* (96, 33), [and the] *Garbhā-upaniṣad* (ed. Paṅsīkara 1925, 9-10; *Yājñavalkya* 3 [Mandlik 1880], 83). This suffering explains

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<sup>43</sup> *Caraka* 4.6.22; *Suśruta* 3.3.31.

<sup>44</sup> (23 c-d); interpretation proposed by Jean Filliozat, whom I thank for having kindly re-read these pages.

that the horror of the long stay in the maternal womb is immediately forgotten, in the midst of the humors and the most repulsive excretions: a point that the *Tandulaveyāliya* does not fail to develop (26-30), that [neither] the *Viṣṇu-smṛti* (96, 30-31), [nor the] *Garbha-upaniṣad* (cited above) omit. Thus, Jaina or Brahmanic, religion adopts the same point of view, unrelated to that of the doctor, who, on the contrary, notes the ease of childbirth if it has been well prepared (*Suśruta* 3.10.1-5).

### **What [should we] conclude from the preceding analysis?**

In the domain of human embryology, the Jainas naturally share, in large part, the opinions of their contemporaries. Nevertheless, certain beliefs or concerns seem to have been specific to them. Of these, some may be considered formal (birth as a *bimba*, for example, described above): the *Tandulaveyāliya* states them without alteration or commentary. Others may have important theoretical or practical consequences. It is apparent that the *Tandulaveyāliya* is aware of this discrepancy and is uncomfortable with it. In such a case, [the text] offers a kind of compromise.

The *Tandulaveyāliya* takes the text established by tradition, accredited by the *Viyāhapannatti*. It retains the general look and vocabulary. But it rewrites the presentation in a logical fashion: either it isolates a first teaching and transforms the statement so that it will carry not one, but two messages, the new being probably more important than the old one; or it alters the order of the propositions; or, above all, it grafts new data, related to those teachings of classical Indian medicine, onto the traditional teaching (of which it mimics the vocabulary and the pace); presented at the end of the exposition, they are meant to retain [the reader's] attention. Nowhere, however, does the *Tandulaveyāliya* expressly contest the doctrine professed in the *Viyāhapannatti*. On the contrary, it respects as much as possible the consecrated wording, to the point that its more recent writing is often lacking in ease and clarity.

As it is, the text proves the existence of several trends or schools of Jaina medicine, in the field of embryology at least. The oldest are more remote from classical doctrines than is a relatively late treatise like the *Tandulaveyāliya*. In fact, according to the passage analyzed above, it seems likely that the *Tandulaveyāliya* and the circles from which it emanates refrain, certainly, from denying the tradition retained by the old canonical texts; but, they seek to substitute for it a more complete teaching, and closer to the theories disseminated by the great Sanskrit *samhitā* of the *Suśruta* and *Caraka*.

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