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# The Body of the Muṣician The Embryology and Anatomy in Indian Musicology

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The Sanskrit musicological text from the thirteenth century, the *Sanḡitaratnākara* (= SR), ‘the Ocean of Music’, written by Śārṅgadeva is considered to be one of the most important texts on this subject.<sup>1</sup> It deals with musical theoretical topics like intervals (*śruti*, *svara*), scales (*grāma*), modes (*jāti*) etc., and also contains many compositions with their notations. But the contents of the second chapter of the first section, entitled *Piṇḍotpatti Prakaraṇa*, ‘the Chapter of the Arising of the Embryo,’ is rather peculiar. The first half of this chapter deals with Āyurvedic embryology and anatomy, and the second half deals with *cakra*-s and *nāḍī*-s, or the respiratory tubes, in accordance with Haṭhayoga. I studied this chapter for my dissertation,<sup>2</sup> where I formulated two questions: Why are these topics dealt with in a musicological text? Of what origin is the Āyurvedic theory of embryology and anatomy?

I would like to address the second question first. As the result

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<sup>1</sup>Sastri 1992: ix.

<sup>2</sup>Kitada 2006. See also Kitada 2003.

of my comparative study of classical medical texts and purāṇas which deal with embryology and anatomy, I found that the medical theory of the SR is closest to Vāgbhaṭa's *Aṣṭāṅgasamgraha*, although there are also many differences. It seems that the medical theory was handed down in the family of the author Śārṅgadeva. His was a family of medical doctors, originally from Kashmir but settled later in the kingdom of Yādavas in the Deccan.<sup>3</sup> Therefore, his theories must come from a medical tradition either of Kashmir or of the Deccan, a tradition closely connected to that of Vāgbhaṭa, but nevertheless independent from it.

Actually I found a parallel text, the *Śivagītā*, which is a purāṇic text.<sup>4</sup> Most of the embryological and anatomical verses in the *Śivagītā* are identical, word for word, to those in the SR. But this fact does not mean that the SR is indebted to the *Śivagītā*. The SR contains theories which are parallel to the classical medical texts like the *Aṣṭāṅgasamgraha*, but which are not contained in the *Śivagītā*. Meanwhile, some of the medical theories contained in the *Śivagītā* are more archaic than those in the SR. For instance, the SR contains a statement on the state in the first month of embryonic development in accordance with the classical medical texts, mentioning *ghana*, *peśī* and *arbuda* according to the embryo's three sexes,<sup>5</sup> while the *Śivagītā* contains a totally different system of embryonic development, mentioning *budbuda*, *kalala*, *peśī*, *ghana* and *pinḍa* as the states in the first and second month without any association to the embryo's sex, which is not a classical medical theory, but a theory in accordance with the *purāṇas*. Therefore, it seems more logical to assume a third text which the SR and the *Śivagītā* are both indebted to.

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<sup>3</sup>Kitada 2006: xiii-xiv.

<sup>4</sup>On the *Śivagīta*, cf. Vallauri 1942. On the embryological verses contained in the *Śivagītā*, cf. Comba 1981.

<sup>5</sup>I.e., male, female and the third sex.

This third text is supposed to be a treatise on medical science unknown to our days.

Now to the first, more difficult, question: why are topics like Āyurveda and Haṭhayoga dealt with in a musicological treatise? The reason for Haṭhayoga being dealt with is not difficult to find. The author Śārngadeva associates music with *anāhata nāda*, the subtle sound perceived only by Yogins. But the reason why embryology and anatomy are dealt with is not so easy to answer. I could assume the following:

Many non-medical texts like purāṇas also contain verses on embryology and anatomy. In such texts, these topics usually occur in relation to *saṃnyāsins* or ascetics. Ascetics investigate the wandering of the soul, including the birth of the human body, and describe the process of birth as the origin of pain and suffering.<sup>6</sup> Thus the code of law, *Yājñavalkyasmṛti*, contains embryology and anatomy in its chapter on ascetics (*yatidharma-prakaraṇa*).<sup>7</sup> Intriguingly, in this text, in the verses immediately after the verses on embryology and anatomy, the Haṭhayogic theory of respiratory tubes and the playing of music are mentioned. According to this statement, secular music, i.e. singing of songs from the *Nāṭyaśāstra* and playing the *vīṇā* or lute, are praised as a substitute means to attain *mokṣa* or liberation.<sup>8</sup>

I assume that the SR is based on the *Yājñavalkyasmṛti*, namely the tradition of ascetics. As a matter of fact, the author Śārngadeva, in concluding the chapter *Piṇḍotpatti*, states that music is a means to attain liberation, a substitute for the

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<sup>6</sup>Hara 1980.

<sup>7</sup>Cf. Yamashita 2001/2003.

<sup>8</sup>*Yājñavalkyasmṛti* 3.115:

*vīṇā-vādana-tattvajñāḥ śruti-jāti-viśāradaḥ |*  
*tālañjāś cāprayāsena mokṣamārgaṃ niyacchati ||*

Hathayogic meditation.<sup>9</sup>

But his way of associating music with Haṭhayoga is not very convincing. As previously remarked, Śārngadeva's verses on embryology and anatomy are identical to the *Śivagītā*'s. Surely Śārngadeva quoted these verses from the medical treatise inherited from his ancestors. On the other hand, I found out that the verses on the *nāḍī*-s or respiratory tubes of Haṭhayoga are parallel to the *Yogayājñavalkya*, the Haṭhayogic text ascribed to the ancient sage. Unfortunately I could not identify the source of the verses on the *cakra*-s: the SR mentions 10 *cakra*-s, i.e. 3 *cakra*-s added to the well-known 7-*cakra* system. But I am convinced that these verses are also a quotation from another text.<sup>10</sup>

<sup>9</sup>SR 1.2.163cd-168:

*evamvidhe tu dehe 'smiṇ mala-sañcaya-saṃvṛte* ||163cd ||  
*prasādayanti dhīmantō bhuktīm muktīm upāyataḥ* |  
*latra syāt saḡuṇād dhyānād bhuktir muktis tu nirguṇāt* ||164 ||  
*dhyānam ekāgra-cittaika-sādhyam na sukaram nṛṇām* |  
*tasmād atra sukhopāyam śrīman-nādam anāhatam* ||165 ||  
*gurūpadiṣṭa-mārgeṇa munayah samupāsate* |  
*so 'pi rakti-vihīnatvān na manorañjako nṛṇām* ||166 ||  
*tasmād āhata-nādasya śrutyādi-dvārato 'khilam* |  
*geyam vitanvato loka-rañjanam bhavabhañjanam* ||167 ||  
*utpattim abhidhāsyāmas tathā śrutyādi hetutām* ||168ab || (This verse, while concluding the *Piṇḍotpattiprakaraṇa*, opens the next chapter.)

<sup>10</sup>Concerning this topic, I would like to call attention to the following fact. In SR 1.2.119, Śārngadeva mentions another work of his own, the *Ādhyātmaivēka*. The English translator, R. K. Shringy (Shringy 1999: Introduction, xiv) states that this text is no more available to us. Intriguingly Avalon 1924 presents the same 10-*cakra* system, based on the description in the SR. But besides the SR, he refers to another text entitled *Ādhyātmaivēka*! The respective descriptions of the *cakra*-s which Avalon quotes from this '*Ādhyātmaivēka*' are very similar to those in the SR.

Therefore I would like to suggest that Avalon is possibly mentioning here the identical *Ādhyātmaivēka*, i.e. the work composed by Śārngadeva. However, we have to remain cautious with regard to this matter, for the book mentioned in SR 1.2.119 seems to be a treatise on anatomy, while the one mentioned by Avalon is obviously a treatise on *cakra*-theory.

Śārṅgadeva took these three parts from three separate sources and joined them together, without providing logical connections between one another. The text makes an awkward impression: one part is abruptly interrupted and the next is suddenly started, and the gap between them remains explicitly perceptible.

Therefore I am very skeptical as to what degree these statements on *cakra*-s and respiratory tubes reflect the reality of the musical practice of that time. One could certainly speculate that the music described in the SR was utilized for the Haṭhayoga practices of meditating on the *cakra*-s and controlling the respiratory tubes. But the text, being a mere patchwork of fragments which originally had nothing to do with one another, provides neither proof nor concrete information. In my opinion, the author Śārṅgadeva probably only quoted the verses on *cakra*-s and respiratory tubes to legitimize the practice of secular music.

Anyway the *cakra*-theory does not occur further in the other parts of the book. The chapter following the *Piṇḍotpattiprakaṛaṇa*, which describes the process of producing the intervals and the octave, does not contain any single word belonging to the *cakra*-theory. The commentaries (*Kalānidhi* and *Sudhākara*), which explain the concise expression of the original text in more detail, do not mention the *cakra*-s either.<sup>11</sup>

R. K. Shringy, who translated the SR into English, mentions a very useful text for elucidating the character of the *Piṇḍotpattiprakaṛaṇa*, namely Śāradātanaya's *Bhāvaprakāśana* ('the Manifestation of Aesthetic Mental States') which is a dramaturgical

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<sup>11</sup>However, it is also true that practice does not anticipate a consistent system of theory. A musician might describe his musical practice by more than one system which could differ from one another. E.g. a musician might describe his personal experience of voicing by using the vocabulary of the *cakra*-theory, while he might rely on another theoretical system to explain the origin of intervals and octave.

text containing a chapter on music. This chapter on music, in the opening verses, deals with embryology and anatomy in relation to music. The author, Śāradātanaya, was almost a contemporary of Śārṅgadeva. Therefore the two authors might supplement each other reciprocally.

Shringy believes that Śāradātanaya supports Śārṅgadeva's argument on the relationship between music and *cakra*-s.<sup>12</sup> In this context I may quote Shringy's statement: 'He (= Śāradātanaya) relates the seven tones to seven different places located in the body [...] These places roughly correspond to the psychophysical centres (= *cakra*-s). It can, therefore, be concluded that the line of thought linking musical sound (*āhata nāda*) to the yogic experience of *anāhata nāda* already existed in his time.'<sup>13</sup>

I examined the verses of the *Bhāvaprakāśana* in question. What Shringy states seems to be true up to a certain degree, but the matter is actually a little more complicated. The verses do not directly deal with the *cakras*, but with a different theory.<sup>14</sup>

The theory presented in the *Bhāvaprakāśana* is pseudo-Āyurvedic. According to this theory, which looks like an Āyurvedic one, the seven musical tones originate in the seven *dhātu*-s, or the seven elements of the human body, namely the well-known seven links of the metabolic chain according to

<sup>12</sup>SR (b), p. 393ff., Appendix II.

<sup>13</sup>Ibid, p. 102.

<sup>14</sup>The *Bhāvaprakāśana* actually presents two different theories. One of them (pp. 184-186) is, however, not relevant to my discussion here. It is stated that the seven musical tones arise in various areas in the human body, namely the throat, the root of the palate (*tālu-mūla*), the lips, the middle of the head, and the teeth; these areas are connected to each other with the *nāḍī*-s or respiratory tubes. A similar, but slightly different theory is dealt with by the *Sudhākara* commentary on SR 1.3.24ab-25 (SR(a), pp.102-103). There, the areas of sound manifestation are: the nose, throat, chest, palate, tongue, teeth, navel, head (*śīrṣa*), and heart.

Āyurveda. These seven elements are skin, blood, flesh, fat, bone, marrow, and semen.<sup>15</sup> The *Bhāvaprakāśana* intriguingly states that the *dhamanī*-s, or vessels, nourishing the seven *dhātu*-s are situated in certain areas of the human body. The four vessels nourishing semen are in the 'bulb' (*kanda*) of the base area; the three nourishing marrow are in the navel; the two nourishing bones are in the heart; the four vessels for fat are in the throat; the four for flesh are in the root of the palate; the three for blood are in the head; and the two for skin are in the middle of the brows. The seven musical tones, which originate in the seven *dhātus*, therefore arise in the seven areas of the body, namely the base area (*ādhāra*), the navel, heart, throat, the root of the palate, the head, and the middle of the brows successively. Actually, this theory deviates from the classical medical theory of Āyurveda. The numbers of the vessels (4, 3, 2, 4, 4, 3, 2) have no equivalents in the classical medical theory. These numbers are in reality derived from the musicological theory: the octave contains 22 microtones, and the respective intervals between the seven musical tones are 4, 3, 2, 4, 4, 3, 2 microtones successively.<sup>16</sup>

After this statement, the *Bhāvaprakāśana* mentions the lotus of the heart and the hollow in the heart which is called 'dahara'. This statement concerning the heart is not Āyurvedic, but Haṭhayogic in origin. So this musicological school presented in the *Bhāvaprakāśana* seems to try to integrate the Āyurvedic theory of the seven *dhātu*-s with the Haṭhayogic theory of the heart-lotus. In other words, this school has a theory which has similarities to Āyurveda and Haṭhayoga, but is, at the same time, independent of the two.

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<sup>15</sup> According to the classical medical theory, the first link of this chain is usually nutritious fluid. But musicological works mention skin as the first; cf. Das 2003:547.

<sup>16</sup> On the so-called *Saḍja-grāma*, cf. Gomperts 2000: esp. p. 575.



Concerning this, one question springs to mind: whether these seven areas of the human body in which the seven *dhātu-s* and the seven musical tones arise could be identified with the seven *cakra-s*. These areas, namely the base area (*ādhāra*), the navel, heart, throat, the root of the palate, the head, and the middle of the brows, seem to correspond closely to the *cakra-s*, as Shringy has already noted. But they are not called 'cakra' at all in this text. The question is whether it is appropriate to consider this theory, which is contained in the *Bhāvaprakāśana*, to be identical to the *cakra*-theory in the SR.

Actually there is another text which mentions *dhātu-s* and *cakra-s* in relation to music, namely Mataṅgā's *Bṛhaddeśī*, which is a musicological text of an earlier date than the SR and is quoted in the *Sudhākara* commentary on the SR (1.3.56-59; (a), p.120, ll.6-10). The *Bṛhaddeśī* (*anuccheda* 29) contains the statement that the seven musical tones are derived from the seven *dhātu-s* of the human body too. In the same paragraph, the *Bṛhaddeśī* states that the seven musical notes are also related to the seven *cakra-s* and seven continents! This passage suggests that the musical tones, *dhātu-s* and *cakra-s* are somehow associated with one another. But this statement is too fragmentary to provide any substantial facts which would help answer the question posed.

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