

History of Science in South Asia

A journal for the history of all forms of scientific thought and action, ancient and modern, in all regions of South Asia

Special issue:

Transmutations: Rejuvenation, Longevity, and Immortality Practices in South and Inner Asia

Edited by Dagmar Wujastyk, Suzanne Newcombe, and Christèle Barois

Stretching Life Out, Maintaining the Body. Part I: Vayas in Medical Literature

Christèle Barois University of Vienna

MLA style citation form: Christèle Barois. "Stretching Life Out, Maintaining the Body. Part I: Vayas in Medical Literature." *History of Science in South Asia*, 5.2 (2017): 37–65. DOI: 10.18732/hssa.v5i2.31.

Online version available at: http://hssa-journal.org

HISTORY OF SCIENCE IN SOUTH ASIA

A journal for the history of all forms of scientific thought and action, ancient and modern, in all regions of South Asia, published online at http://hssa-journal.org

ISSN 2369-775X

Editorial Board:

- Dominik Wujastyk, University of Alberta, Edmonton, Canada
- Kim Plofker, Union College, Schenectady, United States
- Dhruv Raina, Jawaharlal Nehru University, New Delhi, India
- Sreeramula Rajeswara Sarma, formerly Aligarh Muslim University, Düsseldorf, Germany
- Fabrizio Speziale, Université Sorbonne Nouvelle CNRS, Paris, France
- Michio Yano, Kyoto Sangyo University, Kyoto, Japan

Publisher:

History of Science in South Asia

Principal Contact:

Dominik Wujastyk, Editor, University of Alberta Email: (wujastyk@ualberta.ca)

Mailing Address:

History of Science in South Asia, Department of History and Classics, 2–81 HM Tory Building, University of Alberta, Edmonton, AB, T6G 2H4 Canada

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

Copyrights of all the articles rest with the respective authors and published under the provisions of Creative Commons Attribution-ShareAlike 4.0 License.

The electronic versions were generated from sources marked up in LTEX in a computer running GNU/LINUX operating system. PDF was typeset using XHEX from TEXLive. The base font used for Latin script and oldstyle numerals was TEX Gyre Pagella developed by GUST, the Polish TEX Users Group.

Stretching Life Out, Maintaining the Body. Part I: Vayas in Medical Literature

Christèle Barois

University of Vienna

THE REPRESENTATION OF THE PROCESS OF HUMAN LIFE is at the crux of questions about longevity and rejuvenation practices, and possibly also those that aim at immortality. The key Sanskrit term for "age" is *vayas*, which means "vigour," "youth," or "any period of life." The term is already attested in the *Rgveda* with these same meanings, but also meaning "sacrificial food," in the sense that it "gives strength, vitality"¹. As a criterion for the examination of the patient, *vayas* is invariably divided into three periods: childhood, middle age and old age, and precisely defined in the ancient medical compendia. It refers to the age of the individual body in relation to its form and transformation during life.²

This essay is an attempt to clarify the representation of *vayas*, "age," in Sanskrit medical literature and, in so doing, to provide elements for a more refined understanding of the compound *vayaḥsthāpana*, "stabilization of youthful age," a widespread promise of medical *rasāyana*.

third, evening Soma pressing—are identified with the age of man: the twenty-four syllables of the *gāyatrī* with the twenty-four years of the life of man ; the forty-four syllables of the *triṣṭubh* with the next forty-four years of his life; the forty-eight syllables of the *jagatī*, with the next forty-eight years of his life. To my knowledge, this is the oldest association of a precise tripartition of the duration of life with *vayas* (even if longevity is widely invoked in Vedic texts, in the same way as immortality, fame, strength, etc.). For further discussion, see Barois 2017.

¹ See the entry for *"vayas"* in Grassmann 1873. See also the article by Renou (1958: 38–40), which discusses the meanings of *vayas* in the *Rgveda*.

² Note also the mention of *vayas* in section 16 of chapter 3 of the *Chāndogya Upaniṣad*, as part of a broader framework of longevity practices, involving both sections 15 and 16 of chapter 3. In *Chāndogya Upaniṣad* 3.16, the number of syllables of each of the three meters (*gāyatrī*, *triṣṭubh* and *jagatī*) which are chanted at the three different pressings (*savana*)—the morning, the midday and the

I examine how *vayas* is defined in the *Carakasaṃhitā*, the *Suśrutasaṃhitā*, the *Aṣṭāṅgahṛdayasaṃhitā* and the *Aṣṭāṅgasaṃgraha*.³ I also examine their commentaries: the *Āyurvedadīpikā*, a commentary to the *Carakasaṃhitā* by Cakrapāṇidatta (late 11th c.); two commentaries to the *Suśrutasaṃhitā*, the *Bhānumāti* by the same Cakrapāṇidatta and the *Nibandhasaṃgraha* by Dalhaṇa (12th–13th c.); the *Sarvāṅgasundarā*, a commentary to the *Aṣṭāṅgahṛdayasaṃhitā* by Aruṇadatta (13th c.); and the *Śaśilekhā*, a commentary to the *Aṣṭāṅgasaṃgraha* by Indu (10th–11th c.). Particular attention is given to the context of the definitions of *vayas*.

The detailed examination of *vayas* in the ancient medical compendia and their commentaries is sufficient to give a fairly comprehensive view of the representation of age in Sanskrit medical literature as a whole. For example, the *Bhāvaprakāśa* of Bhāvamiśra (16th c.) takes up the definition of the *Suśrutasaṃ-hitā*,⁴ and today many articles written by āyurvedic doctors rely on these ancient divisions of age.⁵

1. DEFINITION OF VAYAS IN CARAKASASAMHITĀ VIMĀNASTHĀNA 8.122

A DETAILED DEFINITION OF VAYAS OCCURS in the "Book on the Fundamental Means" (*Vimānasthāna*) of the *Carakasaṃhitā*, in chapter eight, entitled: "Fundamental Means For the Treatment of Diseases" (*rogabhiṣagjitīyaṃ vimānam*).⁶

Chapter eight of the *Vimānasthāna* is a long chapter, much of which expounds the conditions in which the disciple is taught and the modalities of debate, de-

3 The *Carakasaṃhitā* is the result of the compositions of several authors from the fourth century BCE to the fifth century CE. See Dominik Wujastyk 2003: xx and Meulenbeld 1999–2002: IA, 105–15. The *Suśrutasaṃhitā* also consists of several historical layers, from the third century BCE to the fifth century CE. See Dominik Wujastyk 2003: xx and Meulenbeld 1999–2002: IA, 342–4. Both the *Aṣṭāṅgahṛdayasaṃhitā* and the *Aṣṭāṅgaasaṃgraha* are attributed to Vāgbhaṭa, placed *ca.* 600 CE. On the date and authorship of the *Aṣṭāŋgahṛdayasaṃhitā* and the *Aṣṭāṅgasaṃgraha*, see Meulenbeld 1999–2002: IA, 613–35.

4 See Bhāvaprakāśa, Pūrvakhaņḍa, Bālaprakaraņa 42–50.

5 To give just one recent example, Namdeo and Vilas (2017) begin their article "Con-

sequences of Aging" with a general review of the concept of age, *vayas*, according to the *Carakasamhitā* and the *Suśrutasamhitā*. This review follows an introduction that praises the principles of Āyurveda, thanks to which it would be possible "to slow down the process of aging, restore physical and mental strength and prevent the consequences of aging to a certain extent."

6 This translation of *vimānasthāna* is in keeping with Dominik Wujastyk's suggestion that the term "could be viewed as belonging to the word-group *pramāņa* 'authority for correct knowledge' and *anumāna* 'inference' " (see Dominik Wujastyk 2017). On the structure of the *Vimānasthāna*, see Preisendanz 2007. See also Preisendanz, Pecchia, and Maas (forthcoming).

bate being an integral part of a physician's practice (Ca.Vi. 8.3–67). The passage devoted to vayas is a subsection of a broader discussion on the knowledge required to assess the state of the patient and to decide on treatment. Here, we are in the general context of the patient's examination $(par\bar{i}ks\bar{a})$ for the purpose of diagnosis. Ten subjects (prakarana) are defined and explained in detail from the point of view of medical praxis (Ca.Vi. 8.68–132). Briefly, these ten topics are as follows: (1) the doer (*kāraņa*) is the physician; (2) the instrument (*karana*) is the remedy (*bhesaja*); (3) the source of the act (*kāryayoni*) is the unsuitable ratio of bodily constituents (*dhātuvaisamya*);⁷ (4) the act (*kārya*) is the balanced ratio of bodily constituents (*dhātusāmya*); (5) the result (*kāryaphala*) is comfort (*sukha*); (6) the consequence (anubandha) is life $(\bar{a}yus)$; (7) the place (deśa) is land (bhūmi) as well as the patient ($\bar{a}tura$);⁸ (8) time ($k\bar{a}la$), which is defined as transformation (*parināma*), is the year (*samvatsara*) as well as the state of the patient ($\bar{a}tur\bar{a}vasth\bar{a}$);⁹ (9) activity (pravrtti) is the implementation of medical treatment (pratikarman); (10) the means (*upāya*) is excellence of the physician, etc., and accuracy of the medical prescription (abhividhāna).

Against all expectation, the discussion concerning *vayas* is not directly related to the subject of "time" but to that of "place" (*deśa*) by virtue of the fact that the patient is the "place of application of the therapeutic act" (*kāryadeśa*) (Ca.Vi. 8.94).¹⁰ In this context, the examination of the patient aims, on the one hand, at the knowledge of the measure of *āyus*, that is to say of the life expectancy, and, on the other, at the knowledge of the measure of the strength and intensity of the disease.¹¹ As indicated by the *Carakasaṇhitā*, the knowledge concerning the measure of life-expectancy is referred to elsewhere, in two other sections,¹² and the remainder of the exposé exclusively concerns the evaluation of the degree of the patient's strength and pathology. This evaluation is important because it allows for determining the dosage and power of drugs according to the condition of the patient (Ca.Vi. 8.94). Since strength determines the intensity of disease, a

7 "Bodily constituents" follows the translation by Maas (2009: 147).

8 *deśa* has the general meaning of "environment" (Dominik Wujastyk 2003: 31).

9 On *pariņāma* in relation with the process of aging, see Tilak 1988: 206–21.

10 This is also clear because $k\bar{a}la$ is then defined as "year" (*samvatsara*) and "condition of the patient" ($\bar{a}tur\bar{a}vasth\bar{a}$), both of which relate to the appropriate time to carry out such treatment, to administer such medicine. Age is not mentioned.

11 Ca.Vi. 8.94: तस्य परीक्षा आयुषः प्रमाणज्ञानहेतो-

र्वा स्यादु, बलदोषप्रमाणज्ञानहेतोर्वा।

12 It is stated briefly in Ca.Vi. 8.124 that the characteristics which make it possible to know the measure of life are explained in the Book dealing with the symptoms of imminent death (*indriyasthāna*), and in the chapter entitled "Principles relating to birth" (*jātisūtrīya*) of the Book relating to the body (*śārīrasthāna*), a chapter which evaluates infants' life expectancy essentially on the basis of their anthropometrical proportions (Ca.Śā 8.51). complex system involving ten criteria for evaluating the strength of the patient is then explained point by point. These ten criteria for strength are: constitution (*prakṛti*), morbidity (*vikṛti*), temperament [according to preeminence] of the bodily constituents (*dhātusāra*),¹³ compactness (*saṃhanana*), measure (*pramāṇa*), personal suitability (*sātmya*), mind (*sattva*), digestive capability (*āhāraśakti*), capability for physical effort (*vyāyāmaśakti*), and age (*vayas*). This shows both the complexity and the importance of the notion of strength, which is part of the more general prerequisite knowledge acquired during the examination of the state of the patient. In this context, *vayas*, "age," is a variable of the degree of strength of the patient.

वयस्तश्चेति कालप्रमाणविशेषापेक्षिणी हि शरीरावस्था वयोऽभिधीयते। तद्वयो यथास्थूल-भेदेन त्रिविधं — बालं, मध्यं, जीर्णमिति। तत्र बालमपरिपकधातुमजातव्यञ्जनं सुकुमार-मक्ठेशसहमसंपूर्णबलं श्लेष्मधातुप्रायमाषोडशवर्षं, विवर्धमानधातुगुणं पुनः प्रायेणानवस्थि-तसत्त्वमात्रिंशद्वर्षमुपदिष्टं; मध्यं पुनः समत्वागतबलवीर्यपौरुषपराक्रमग्रहणधारणस्मरण-वचनविज्ञानसर्वधातुगुणं बलस्थितमवस्थितसत्त्वमविशीर्यमाणधातुगुणं पित्तधातुप्रायमाष-ष्टिवर्षमुपदिष्टम; अतःपरं हीयमानधात्विन्द्रियबलवीर्यपौरुषपराक्रमग्रहणधारणस्मरणवच-नविज्ञानं भ्रश्यमानधातुगुणं वायुधातुप्रायं क्रमेण जीर्णमुच्यते आवर्षशतम्। वर्षशतां ख-त्वायुषः प्रमाणमस्मिन् काले; सन्ति च पुनरधिकोनवर्षशतजीविनोऽपि मनुष्याः; तेषां वि-कृतिवर्ज्यैः प्रकृत्यादिबलविशेषैरायुषो लक्षणतश्च प्रमाणमुपलभ्य वयसस्नित्वं विभजेत्।¹⁴

And [the patient should be examined] according to age. What is referred to as *vayas* is the condition of the body with regard to the particular measure of time. According to a rough subdivision,¹⁵ *vayas* is threefold: young, middle and old.

Of these, young [age] [is characterized by] the immaturity of the bodily constituents¹⁶, the lack of secondary sexual characteristics, delicateness, difficulty in enduring pain, deficient strength, prominence of

13 I use "temperament" in its modern meaning of a set of innate traits that characterize a person both from a psychological and physiological point of view and not in its ancient meaning which refers to the predominance of humours. Here, temperament is the pre-eminence of the one among eight bodily constituents. In his edition (Carakasamhitā), Sharma translates *dhātusāra* as "constitutional essence."

14 Carakasamhitā, Vimānasthāna 8.122.

15 This suggests that the author(s) of the *Carakasamhitā* was familiar with a more refined classification of age, maybe close to

that proposed by the *Suśrutasaṃhitā* (see below). Cakrapāṇidatta's commentary indicates that the mention "according to a rough subdivision" shows that there are other subdivisions of age, namely the condition of being young, very young, etc. See *Āyurvedadīpikā ad* Ca.Vi.8.122: यथास्थूलभेदेनेति व-चनादु बालवालतराद्यवस्थाभेदादधिकमपि वयो भवतीति दर्शयति ।

16 The list of bodily constituents is somewhat unstable, sometimes elusive, and even varies within the same treatise depending phlegmatic humour, up to sixteen years. Further, it is specified that the development of the bodily constituents and the unsteadiness of mind (*sattva*)¹⁷ generally last up to the age of thirty years.

As for the middle [age], [it is characterized by] the obtaining of a stable condition of strength, virility, manliness, force, comprehension, concentration, memory, speech, discernment, and all the bodily constituents. It is specified that the strength is firm, the mind (*sattva*) is steady, the condition of the bodily constituents remains undamaged, and the bilious humour is prominent up to sixty years.

Then, there is a decline of the bodily constituents, the sense organs, strength, virility, manliness, force, comprehension, concentration, memory, speech, and discernment; gradually the condition of the bodily constituents collapses and the windy humour becomes prominent: this is called old [age], it lasts up to one hundred years.

Certainly the lifespan is one hundred years; in these times¹⁸ However, some human beings live more or less than one hundred years. As for these, after having determined the measure [of their life] by means of the criteria for strength: constitution (*prakṛti*), etc., irrespective of *vikṛti*, "morbidity," and [also] according to the marks of a long lifespan, [the physician] divides *vayas* into three.

Thus, within the context of the examination of the patient (*deśa*), *vayas* is defined as the state of the body according to the measure of time. It is divided into three stages: *bāla*, young, *madhya*, middle, and *jīrṇa*, old, corresponding to three periods of life to which different lengths of time are assigned.¹⁹ Each period of life is associated with specific characteristics. Young age is characterized by a general incompleteness of body development and a preponderance of the phlegmatic humour. This incompleteness lasts up to thirty years with regard to the development of the bodily constituents and the stability of the mind (*sattva*). Middle

on the medical context in which it occurs. See Maas (2009: 135–46), who examines the different lists of bodily constituents in medical literature, as well as in Epic, Purāṇic and Buddhist literature. In the present case, I consider the reference list to be the one given in Ca.Vi. 8.102, in the context of the examination of the temperament according to the preeminence of the bodily constituents (*dhātusāra*): skin, (*tvac*), blood (*rakta*), flesh (*māṇisa*), fat (*medas*), bone (*asthan*), marrow (majjan), semen (śukra), mind (sattva).

17 Ca.Vi. 8.119: सत्त्वमुच्यते मनः ।

18 *Āyurvedadīpikā ad* Ca.Vi.8.122: अस्मिन् काल इति कलौ। "'In these times,' i.e., during the age of *kali.*"

19 See Table 1, p. 52 below, that compares the subdivisions of *vayas* according to the *Carakasamhitā*, the *Suśrutasamhitā*, the *Aṣṭāṅgahṛdayasamhitā* and the *Aṣṭāṅgasamgraha*. age is characterized by stability of the bodily constituents and a preponderance of the bilious humour. Old age corresponds to a general collapse, with predominance of the windy humour.

Cakrapāṇidatta (late 11th c.) confirms this division of young age into two periods: a first period corresponding to the immaturity of the bodily constituents (*aparipakvadhātu*) up to sixteen years, and a second corresponding to the increasing of the bodily constituents (*vardhamānadhātu*) up to thirty years.²⁰ Such a division is not found in the *Suśrutasaṇhitā*, or in the two compendia of Vāgbhaṭa. Cakrapāṇidatta also justifies this division, saying that it makes possible "the distinction with respect to the [appropriate] treatment".²¹ And he specifies: "It should have been said in the treatise that the young [patient] up to sixteen is treated with mild (*mṛdu*) medication in small quantities (*alpa*), and that beyond the age of sixteen, though young, [the patient] should not be treated with medication in small quantities."²² Thus, Cakrapāṇidatta corroborates that *vayas* in the *Carakasaṇhitā* serves to decide the dosage and the power of the drugs to be administered to the patient.

In this respect, it is interesting to note that these divisions of age are given for the canonical lifespan of one hundred years and that, according to whether life is more or less long, childhood, middle age or old age do not correspond to the same ages! This is the reason why the *Carakasamhitā* explains how to calculate the "age" of those who have a lifespan greater or less than one hundred years: one must first assess the potential lifespan, literally the measure (*pramāņa*) of life (*āyus*), and then divide the result by three.

Cakrapāṇidatta is particularly interested in this issue. He explains that the examination of the ten criteria for strength, that is the constitution, etc.,²³ makes it possible to determine the degree of inferior, median or superior strength which conditions life expectancy. For example, the one whose strength is superior with regard to constitution (*prakṛtibala*) has a long life because he has a constitution with phlegmatic predominance or humoral balance; if his strength is inferior with regard to constitution, his life is short; and the same goes for temperament (*sāra*) and the other criteria for strength. The one whose degree of strength is excellent for all the criteria lives beyond one hundred years. Cakrapāṇidatta further clarifies that, in order to assess life expectancy, one should not consider only

20 Āyurvedadīpikā ad Ca.Vi.8.122: बालो द्विविधः अपरिपकधातुराषोडशवर्षात, तथा वर्धमानधातुरात्रिंशत्तमात्।

21 Ayurvedadīpikā ad Ca.Vi. 8.122: तदेतयोर्बा-लभेदयोरुपयुक्तत्वेन भेदमाह।

22 Āyurvedadīpikā ad Ca.Vi. 8.122: षोडशव-

र्षीयो हि बालोऽल्पमृदुभेषजोपचर्यत्वादिना शास्त्रे वक्तव्यः, तदर्ध्वं बालोऽपि नाल्पभेषजत्वादिना तथोपचर्यते।

23 As for the list of these ten criteria for strength, see above. But morbidity (*vikrti*) should not be taken into account in this case, as the *Carakasamhitā* states, and as Cakrapāṇidatta confirms. the ten criteria for strength as indicated, but also the "characteristics for [long] life exposed in the Book relating to the body".²⁴

Interestingly, Cakrapāņidatta gives specific examples for calculating vayas:

If the life expectancy [of the patient] is one hundred and twenty years, then he is young up to thirty-six, by deduction, in proportion to the age previously indicated; he is middle-aged until seventy-two, and old the rest [of his life]. The one who is considered to have a short life limited to eighty years because of the mediocrity of [his strength relating to] constitution (*prakrti*), etc., he is young up to twenty-five years, he is middle aged until fifty and then he is old, etc. This is the way to divide.²⁵

Finally, Cakrapāņidatta specifies that:

... this proportional division of age into youth, etc., is only valid for those whose lives are neither very far above nor far below one hundred years. For those whose ultimate measure of life does not exceed twenty years, etc., there can be no division of age by deduction, since they die before they reach the condition of middle age.²⁶

Thus, *vayas* is a relative concept. The determination of these three periods is likely to change according to life expectancy, which means that the length of each period depends on the individual. From the point of view of the *Carakasamhitā*, the knowledge of *vayas* does not relate to long-life issues but has a very direct pragmatic application in the dosage of medications.

2. DEFINITION OF VAYAS IN SUŚRUTASAMHITĀ SŪTRASTHĀNA 35.29–31

A NOTHER DEFINITION OF *VAYAS* is given in the "Book relating to principles" ($S\bar{u}$ -*trasthāna*) of the *Suśrutasaṃhitā*, in chapter thirty-five entitled: "Initial approach of the patient" ($\bar{a}turopakraman\bar{n}ya$).²⁷

24 Ayurvedadīpikā ad Ca.Vi. 8.122: न के-वलं प्रकृत्यादिनायुरवधार्यं, कित्वायुरुंक्षणेरपि शरीरप्रति-बद्धेः शारीरे वक्तव्येरित्याह । Cakrapāṇidatta refers here to Ca.Śā 8.51, which describes the physical characteristics of the infant destined for a long life (see note 15 above).

25 Ayurvedadīpikā ad Ca.Vi. 8.122: तेन, तस्य विंशतिवर्षाधिकशतं यद्यायुरुपलभ्यते, तदा पूर्वोक्तवयोवि-भागानुमानादाषदु त्रिंशद्वर्षाणि स बालो भवति, द्विसप्तति-वर्षश्च स मध्यः, शेषे तु वृद्धः; यस्तु प्रकृत्यादीनां मध्यमत्वे-नात्पायुरशीतिवर्षोऽवधार्थते, स पञ्चविंशतिवर्षाणि बालः, पञ्चाशतं मध्यः, ततो वृद्ध इत्यादि विभजनीयम्। 26 Ayurvedadīpikā ad Ca.Vi. 8.122: अयं च स्तो-कन्यूनाधिकशतायुषां बाल्यादिविभागः कर्तव्यः; येषां तु विंशतिवर्षादि परमायुषो मानं न तेषां तदनुमानेन वयो-भेदः, ते ह्यप्राप्तमध्यावस्था एव म्रियन्ते।

27 Meulenbeld (1999–2002: IA, 21) states that this chapter "contains an exposition on general principles related to treatment (*upakramaṇa*)," Sharma, in the Suśrutasaṃhitā edition, says "case-taking." This chapter deals with the initial observation ($par\bar{l}ks\bar{a}$), in other words, clinical examination. The first duty of the physician is to examine the duration of life ($\bar{a}yus$), that is to say, again, the life expectancy of the patient. If the patient is viable²⁸ the physician should then undertake the examination of diseases ($vy\bar{a}dhi$), seasons (rtu), digestion (agni), age (vayas), body (deha), strength (bala), disposition (sattva), personal suitability ($s\bar{a}tmya$), constitution (prakrti), drugs (bhesaja), and place (desa). This chapter describes each of these parameters one by one for the knowledge of the general pathological level of the patient.

Much space is devoted to the examination of life expectancy (Su.Sū. 35.4– 17), which is evaluated according to two criteria for longevity: on the one hand external features, essentially the size of the different parts and sub-parts of the body, which allow the physician to know if a patient has a long (without indication of duration), middle (seventy years) or short (twenty-five years) life expectancy;²⁹ on the other hand, temperaments (*sāra*), which are determined according to the pre-eminence of one of the bodily constituents among mind (*sattva*), semen (*śukra*), marrow (*majjan*), bone (*asthan*), fat (*medas*), flesh (*māṃsa*), blood (*rakta*), and skin (*tvac*).³⁰

Except for age (*vayas*), mental disposition (*sattva*), personal suitability (*sāt-mya*), and place (*deśa*), which are contextual criteria that relate to the patient as an individual, the other parameters–diseases (*vyādhi*), seasons (*rtu*), digestion (*agni*), body (*deha*),³¹ strength (*bala*), constitution (*prakṛti*), and drugs (*bheṣaja*)— are only briefly described in the pragmatic perspective of clinical observation, and the specific definitions are referred to elsewhere in the treatise.

In the general framework of assessing the degree of severity of the patient's illness, the *Suśrutasamhitā* is insistent throughout this chapter on the question of the patient's viability, that is, his curability.³²

In this context a definition of *vayas* is expounded:

28 सत्यायुषि (Su.Sū. 35.3) is commented upon by Dalhaṇa as follows: सत्यायुषीति विद्यमाने जी-विते व्याध्यादीना परीक्षा कर्तव्या। "If there is life, that is, if life is attested, the observation of diseases and the other [parameters] must be conducted."

29 Su.Sū. 35.4-16. This passage has a long description of the "normal" proportions of the full grown body, which corresponds to twenty-five years old for a man and to sixteen years old for a woman, according to the verse which closes the description (Su.Sū. 35.13: पञ्चविशे ततो वर्षे पुमान नारी तु पो-डरो। समत्वागतवीयौँ तौ जानीयात् कुशठो भिषक्।). The compound समत्वागतवीर्य is explained as the "completeness of bodily constituents" by Dalhana. This stage is never considered within the definitions of *vayas*.

30 Su.Sū. 35.17. Compare with Ca.Vi. 8.102 ff. (see note 17).

31 Here *deha* refers to obese (*sthūla*), lean (*krśa*), and medium (*madhya*) corpulence, which is dealt with in detail in Su.Sū. 15.32–35, as indicated by Cakrapāņidatta.

32 As a general rule, a physician should not accept patients he cannot cure, but "his decision not to treat a patient should be based on his informed and accurate assessment of the case," On this issue, see Dagmar Wujastyk 2012: 110–16. वयस्तु त्रिविधं—बाल्यं, मध्यं, वृद्धमिति। तत्रोनषोडशवर्षा बालाः। तेऽपि त्रिविधाः— क्षीरपाः, क्षीरान्नादा, अन्नादा इति। तेषु संवत्सरपराः क्षीरपाः, द्विसंवत्सरपराः क्षीरान्नादाः, परतोऽन्नादा इति। षोडशसप्तत्योरन्तरे मध्यं वयः। तस्य विकल्पो वृद्धिर्यौवनं सम्पूर्णता हानिरिति। तत्र, आविंशतेर्वृद्धिः, आत्रिंशतो यौवनम्, आचत्वारिंशतः सर्वधात्विन्द्रियब-लवीर्यसम्पूर्णता, अत ऊर्ध्वमीषत्परिहाणिर्यावत् सप्ततिरिति। सप्ततेरूर्धं क्षीयमाणधात्वि-न्द्रियबल्वीर्योत्साहमहन्यहनि वलीपलितखालित्यजुष्टं कासश्वासप्रभृतिभिरुपद्ववैरभिभूय-मानं सर्वक्रियास्वसमर्थं जीर्णागारमिवाभिवृष्टमवसीदन्तं वृद्धमाचक्षते। (29)

तत्रोत्तरोत्तरासु वयोऽवस्थासूत्तरोत्तरा भेषजमात्राविशेषा भवन्ति, ऋते च परिहाणेः; तत्रा-द्यापेक्षया प्रतिकुर्वीत। (30)

```
भवन्ति चात्र। बाले विवर्धते श्रेष्मा मध्यमे पित्तमेव तु।
भूयिष्ठं वर्धते वायुर्वृद्धे तद्वीक्ष्य योजयेत्। (31)<sup>33</sup>
```

Vayas is threefold: childhood, middle [age] and old [age]. In this case, those under sixteen are young; they are divided into three according to whether they drink milk, or eat milk and rice, or eat rice [only]. Those up to one year drink milk, up to two years they eat both milk and rice, and beyond [up to sixteen years] they eat rice [only].

Middle age is between sixteen to seventy years. Its subdivisions are: growth,³⁴ youth, completeness, and decline. In this case, growth is up to twenty [years], youth is up to thirty [years], completeness of all bodily constituents, sense organs, strength and virility is up to forty [years]. Beyond [forty years], there is a slight decline, up to seventy [years].

Beyond [seventy years], the one whose bodily constituents, sense organs, strength, virility,³⁵ energy decline day by day, who is affected by wrinkles, grey hair and baldness, who is afflicted with illnesses beginning with cough and affection of breath, unfit for any kind of work, and sinking down like a decayed and rain-soaked house, is called an old man. (29)

Therefore, the dosages of medication increase progressively according to the progressive increase of the stages of *vayas*, except in the case of decline; in this case, [the physician] must treat [the patient] as for the first [division, *i.e.* young].³⁶ (30)

33 Suśrutasamhitā, Sūtrasthāna 35.29–31.

34 Sharma, in his Suśrutasamhitā edition,

translates *vrddhi* as "adolescence."

35 Dalhana glosses vīrya by retas "semen."

36 Bhānumāti ad Su.Sū. 35.30: आद्यं बाल्यं, तद-

पेक्षया भेषजमात्रा क्रमेण हीनमात्रा कर्तव्येत्यर्थः। "First

(*ādya*), i.e. childhood: the dosage of medication should be decreased gradually according to the [divisions of childhood]. This is the meaning." Dalhaṇa's explanation is consistent with the *Bhānumāti*. And there are [the following verses]: during young [age], the phlegmatic humour prevails, during middle age, the bilious humour [prevails]. During old [age], the windy humour abounds. Having considered thus, [the physician] applies [the treatment]. (31)

As in the *Carakasaṃhitā, vayas* is divided into three periods: *bālya*, childhood, ³⁷ *madhya*, middle age, and *vrddha*, old. This division of life into three parts, as well as the humoural predominance for each of the three divisions is stable in all the texts consulted (see Table 1, p. 52).

The contribution of the Suśrutasamhitā consists, for the young age, in a subdivision into three according to the nature of the food absorbed; this subdivision defines precise ages; similarly, for the middle age, the *Suśrutasamhitā* proposes a new subdivision into four: growth (*vṛddhi*), youth (*yauvana*), completeness (*saṃpūrṇatā*), decline (*hāni*), which is stated to be only a "slight decline" (*īṣatparihāṇi*). Old age begins at seventy years, meaning that one is old here later than in the *Carakasaṃhitā*.³⁸ The adaptation of the dosage of medications according to the age of the patient is mentioned as part of the presentation on *vayas*. It should also be noted that the *Suśrutasaṃhitā* gives a vivid description of old age, specifying external and visible transformations of the body (wrinkles, gray hair and baldness) and also mentioning diseases (cough and affection of breath), all these elements being absent from the *Carakasaṃhitā*.

Some additional details are provided by Cakrapāṇidatta: he explains that youth (*yauvana*) derives from the verbal root "*yu*" expressing a "junction" (*miśraṇa*). Thereby youth is to be understood as the junction between growth (*vṛddhi*) that precedes and completeness ($p\bar{u}rṇat\bar{a}$) that follows.³⁹ Dalhaṇa takes up this same explanation. Cakrapāṇidatta also states that completeness corresponds to the condition of stability ($t\bar{a}dr\bar{u}pya$) of the "bodily constituents, sense organs, strength and virility".⁴⁰ He concludes his comment with the statement that "the increase of the different humours is inferred through the (different) conditions of *vayas*".⁴¹ Dalhaṇa's *Nibandhasaṃgraha* (12th–13th c.) does not add any essential element to Cakrapāṇidatta's commentary.

37 To be noted, however, is the substantivation of the first period, *bālya*, "childhood," which refers to the concept of "period of human life," while the other texts considered use *bāla*, an adjective which means "young," but also the masculine noun for "child," "young boy," which can be made a feminine noun. 39 *Bhānumāti ad* Su.Sū. 35.29: यौवनमिति `मुS मिश्रणे, इत्यस्माद्रूपं; तेन पूर्वाया वृद्धेस्तु या परायाश्च पूर्ण-ताया मिश्रणं यौवनं ज्ञेयम्।

40 *tādrūpya* refers to a quantitative stability, it does not imply a balanced state and therefore the absence of pathology.

41 Bhānumāti ad Suśrutasamhitā 1.35.31: दोष-विशेषवृद्धमपि वयोऽवस्थालक्षणीयमाह—बाले इत्यादि।

³⁸ This difference is minimized or evaded in the commentaries.

CHRISTÈLE BAROIS

3. DEFINITION OF VAYAS IN THE AṢṬĀŅĠAHŖDAYASAŅHITĀ ŚĀRĪRASTHĀNA 3.105

T^{HE} *AṣṬĀNGAHŖDAYASAMHITĀ* PROVIDES A LACONIC DEFINITION of *vayas* in chapter three of the "Book relating to the body," entitled "Apportionment of the [different] parts of the body" (*aṅgavibhāgam śārīram*): this title is in accordance with the first part of the chapter (Ah.Śā. 3.1–76), being followed by the definition of the threefold strength (*bala*), the three kinds of environment (*deśa*), the weight of the bodily constituents in a stable condition (*samadhātu*), the seven kinds of constitutions—whose presentation follows the same pattern as the *Aṣṭāṅgasaṃ-graha*, see below—and finally the definition of *vayas*. The chapter ends with a description of the auspicious bodily characteristics auguring a lifespan of one hundred years, a brief mention of the eight temperaments (*sāra*) of the bodily constituents, and the mention of a group of heterogeneous items that promote long life⁴².

Here is the verse on vayas:

वयस्त्वाषोडशाद्वालं तत्र धात्विन्द्रियौजसाम्। वृद्धिरासप्ततेर्मध्यं तत्रावृद्धिः परं क्षयः।⁴³

Up to sixteen [years], *vayas* is young: in that case there is an increase of the bodily constituents, sense organs and vitality (*ojas*). Up to seventy [years], [*vayas*] is median: in that case, there is no increase. Beyond [seventy years], there is decline.

Aruṇadatta's commentary (13th c.) provides further details, which are mainly borrowed from the *Aṣṭāṅgasaṃgraha* (see below). The only notable contribution of the *Aṣṭāṅgahṛdayasaṃhitā* with respect to *vayas* is the recourse to the notion of *ojas*.⁴⁴ Aruṇadatta explains it thus: "There is an increase of *ojas*, i.e., it causes an augmentation of all the bodily constituents." ⁴⁵ Aside from this concise definition of *vayas*, the *Aṣṭāṅgahṛdayasaṃhitā* mentions the predominance of the three *doṣa* according to the tripartition of *vayas* in *Sūtrasthāna* 1.8, and states that *vayas* is to be investigated during the examination of the patient in *Sūtrasthāna* 12.67.

42 Ah.Śā. 3.120: दानशीलदयासत्यब्रह्मचर्यकृतज्ञ-ताः। रसायनानि मैत्री च पुण्यायुर्वृद्धिकृद्रणः। "The group that increases virtue and [lengthens] lifespan is generosity, compassion, trust, abstinence, and gratitude, as well as elixirs and benevolence."

44 It seems that Arunadatta's explanation is consistent with the conception of *ojas* in the *Suśrutasaṃhitā* as summarized by Meulenbeld (2008: 158) : "Ojas is one single, undivided substance, so closely yoked to *bala* as to make the two terms interchangeable. *Ojas* is pictured as the essence of all the $dh\bar{a}tus$, the series of seven types of tissue. It is the source of unhampered functioning of all the organs of sense (*indriya*). Bodily strength (*bala*) also finds its ground in *ojas*." On this problematic substance, see Meulenbeld 2008.

45 Sarvāngasundarā ad Ah.Śā. 3.105: तथा सर्व-धात्वाप्यायकस्य — ओजसो, वृद्धिः ।

⁴³ Ah.Śā. 3.105.

4. DEFINITION OF VAYAS IN AṢṬĀŅĠASAMĠRAHA ŚĀRĪRASTHĀNA 8.25-34

D^{ESPITE A FEW REPETITIONS, since the *Aṣṭāṅgasaṃgraha* borrows from the *Caraka-saṃhitā* and the *Suśrutasaṃhitā*, I will examine the section on *vayas* in this text, which includes interesting variations as well as new elements. The definition of *vayas* is found in chapter eight entitled "Typology of constitutions relating to the body" (*prakṛtibhedhīyaṃ śārīram*) of the "Book relating to the body".⁴⁶ As stated by Meulenbeld (1999–2002: IA, 528), this chapter is the corresponding part of the *Aṣṭāṅgahṛdayasaṃhitā*, *Śārīrasthāna* 3 (*aṅgavibhāgam śārīram*).}

Its starts with the description of seven kinds of constitutions ($v\bar{a}taprakrti$, pit-taprakrti, kaphaprakrti, the three known as samsargaprakrti,⁴⁷ and samaprakrti⁴⁸) according to the degree of prevalence of the three humours (dosa). This combination is fixed at the time of the embryonic development, and lasts until death (As.Sā. 8.1–20). Then seven other kinds of constitutions are briefly mentioned, characterized by the degree of prevalence of the three qualities (guna, specifically sattva, rajas, tamas), organized according to the same principle as the three $dosa^{49}$ (As.Sā. 8.21). Finally, seven constitutions are mentioned that are characterized by class ($j\bar{a}ti$), family lineage (kula), place of birth or residence (desa), time ($k\bar{a}la$), age (vayas), strength (bala), and individual singularities ($praty\bar{a}tma$), each of which define different characters ($bh\bar{a}va$) of man.⁵⁰ Only age and strength are given detailed consideration, followed by a passage on temperament ($s\bar{a}ra$) according to the pre-eminence of the bodily constituents as a criterion for strength. The chapter ends with a lengthy passage on measurements of the body distinguishing auspicious from non-auspicious (anista) measurements (As.Śā. 8.41–48).

Here is the passage on *vayas*:

वयस्त्रिविधं बालं मध्यं वृद्धं च। तत्राषोडशाद्वर्षाद्वालम्। आषष्टेर्मध्यम्। ततो वृद्धम्। (25) तेष्वपि स्तन्याहारोभयवृत्त्या बालं त्रिविधम्। तस्मिन् देहप्रमाणवृद्धिः श्लेष्मोद्रेकश्च। तेन बा-लस्य स्नेहमार्दवसौकुमार्याल्पकोधत्वसौभाग्यानि भवन्ति। (26)

मध्यमपि त्रिविधं यौवनं सम्पूर्णत्वमपरिहानिश्च। तस्मिन् पित्तोद्रेकः। तेन दीप्ताम्निता प्रज्ञा-धिक्यपरिपाकौ व्यवसायश्च। तत्रात्रिंशतो यौवनमाचत्वारिंशतः सर्वधात्विन्द्रियबलवीर्यपौ-रुषस्मरणवचनविज्ञानप्रश्रयगुणसम्पूर्णत्वमतःपरमपरिहानिः। (27)

46 All the references to the *Aṣṭāṅgasaṃ-graha* follow the division and numbering of the edition of Kiñjavaḍekara (Aṣṭāṅgasaṃ-graha), with the commentary of Indu entitled *Śaśilekhā*.

47 samsargaprakrti is a constitution where there is prevalence of two doşa (pitta-vāta, pitta-ślesman or ślesman-vāta). 48 *samaprakṛti* is a constitution where there is equality between the three *doṣa*.

49 Meulenbeld (1999–2002: IB, 634, n. 417) points out a similar passage in the Ah.Śā. 3.104ab.

50 As.Šā. 8.22: दृश्यन्ते हि पुरुषाणां जात्यादिनिय-तास्ते ते भावविशेषाः। वृद्धं तु शश्वत् क्षीयमाणधात्विन्द्रियादिगुणं वलीखलतिकासश्वासाग्निसादादिभिरभिभूयमानं जीर्णं भवनमिवाभिवृष्टमवसीदति। तस्मिन्मारूतोद्रेकः। तेन श्रथसारमांससन्ध्यस्थिता त्व-क्पारुष्यमवनामः कायस्य वेपथुः कासः श्वासः श्रेष्मसिङ्घाणकोदीरणं धातुक्षयश्च। (28)

अन्ये पुनराहुः । (29)

बाल्यं वृद्धिः प्रभा मेधा त्वक्शुकाक्षिश्रुतीन्द्रियम्। दशकेषु कमाद्येति मनः सर्वेन्द्रियाणि च। (30)

```
एवं वर्षतमायुषः प्रमाणमस्मिन्काले। (31)
```

सन्ति पुनः कर्मविशेषादूनाधिकवर्षशतजीविनो मनुष्याः। (32)

तेषां यथोक्तैः प्रकृतिविशेषैरायुषः प्रमाणमुपलभ्य वयस्त्रिधा विभजेत्। अपि च। (33)

वर्षं वर्षं क्षयं याति नृणां याते शते शते । आयुषोऽपुण्यबाहुल्याद्यदा यन्मानमिष्यते। (34)51

Vayas is threefold: young, middle and old. In this case, [*vayas*] is young up to sixteen years; it is middle up to sixty [years]; then, it is old. (25)

Among these, young is threefold, depending on whether one lives on breast milk, on [solid] food, or on both. During [young age], there is an increase in the size of the body and a predominance of phlegm. Thus, at young [age], unctuousness, softness, tenderness, little of anger, and beauty occur. (26)

Middle [age] is also threefold: youth, completeness and nondecrease. During [middle age], there is a predominance of bile. Thus, there is good digestive power, maturity, and a high degree of discrimination, as well as [capability for] physical exertion. In this case, up to thirty [years] is youth; up to forty [years] is completeness of all bodily constituents, sense organs, strength, virility, manliness, memory, speech, discernment and of the quality of having a respectful demeanour; then, there is no decrease. (27)

An old [man] is characterized by a continual decline of the bodily constituents, sense organs, etc. Afflicted by wrinkle, baldness, cough, affection of the breath, weakness of digestion, etc., he sinks down like a decayed and rain-soaked house.

During [old age], there is a predominance of wind. Thus, there occurs laxity of the temperament, flesh, joints and bones, roughness of skin, a hunched body, tremor, cough, affection of the breath, excretion of nasal mucus proceeding from phlegm, and decline of the bodily constituents. (28)

51 Asțāngasangraha, Śārīrasthāna 8.25–34.

On the other hand, others say: (29)

Childhood, growth, radiance, mental acuity, skin, semen, the sense organs that are the eyes and ears, the mind, and [then] all sense organs: gradually [these ten] disappear [one by one] every ten [years]. (30)

Thus, by these times, the measure of life is one hundred years. (31)

However, there are men who live more or less than one hundred years, depending on the variety of their $actions.^{52}$ (32)

For them, one must divide *vayas* into three, after having ascertained the measure of life expectancy according to the peculiarities of their constitution as has been explained.

Moreover: (33)

For men, the prescribed measure of life diminishes by one year every one hundred [years] that pass, due to the abundance of [their] demerit. (34)

The divisions of age according to the *Aṣṭāṅgasaṃgraha* conform to those given by the *Suśrutasaṃhitā* with regard to childhood, except there is no indication of precise durations. For the first time, the increase of the measure of the body (*dehapramāṇa*) is mentioned as part of the definition of *vayas*. Also to be noted is a very different list from the other texts to characterize childhood: unctuousness, softness, tenderness, little of anger, beauty.

Middle age has three divisions (against four for the *Suśrutasaṃhitā*), with the absence of growth (*vṛddhi*). Another peculiarity is that the third middle age period (forty to sixty years) is called "non-decrease" (*aparihāni*), while the *Suśrutasaṃhitā* proposes, as we have seen, a slight decline for a longer period (from forty to seventy years). This is corroborated by Indu (10th-11th c.), who comments thus: "Beyond forty years, it is *aparihāni*, that is to say that there is neither increase nor decrease".⁵³ In addition, Indu introduces the passage which deals with old age by these words: "The qualities, namely the stability of the body (*vapuḥsthairya*), etc. which have been mentioned before, perish continually, that is, completely,"⁵⁴ where the compound *vapuḥsthairya* leaves no doubt about the conception of middle age as being a period not subject to change.

52 Indu specifies that men live more or less than one hundred years according to their acts caused by fate (*daiva*) or resulting from human effort (*pauruṣa*). See Śaśilekhā ad As.Śā. 8.32: केचित्तु मनुष्या दैवस्य पौरुषस्य च कर्मणो विशेषादूनाधिकवर्षशतजीविनोऽपि सन्ति। 53 Sasilekhā ad As.Sā. 8.27: चत्वारिंशतः परमप-रिहानिर्न वृद्धिर्नाप्यपचयः ।
54 Sasilekhā ad As.Sā. 8.28, क्षीयमाणा पूर्वोक्ता व-पुःस्थैर्यादयो गुणाः शश्वत्समन्तात् । As in the *Carakasamhitā*, old age begins at sixty years (against seventy years for the *Suśrutasamhitā* and the *Aṣṭāngahṛdayasamhitā*), however the description of old age is literally borrowed from the *Suśrutasamhitā*, supplemented with other details relating to the external condition of the body (laxity of joints and bones, roughness of skin, a hunched body, tremor).

It seems, therefore, that the *Aṣṭāṅgasaṇŋgraha* provides a synthetic overhaul of the question of age according to the preceding treatises, but also to other unidentified sources. Indeed, it exposes another way of dividing age according to ten criteria: childhood (*bālya*), growth (*vṛddhi*), radiance (*prabhā*), mental acuity (*medhā*), skin (*tvac*), semen (*śukra*), the sense organs that are the eyes (*akṣi*) and ears (*śruti*), mind (*manas*), and [then] all the sense organs, which disappear one by one every ten years, thus justifying a canonical lifespan of one hundred years.⁵⁵ The inclination towards exhaustivity and synthesis of the *Aṣṭāṅgasaṇ-graha* is also clear when the text takes up from the *Carakasaṇhitā* the subject of calculation of age for those who live more or less than one hundred years.

The examination of *vayas* in the *Carakasamhitā*, the *Suśrutasamhitā*, the *Aṣṭāṅga-hṛdayasamhitā*, and the *Aṣṭāṅgasamgraha* reveals a subtle, complex and unstable conception not only of the periods of life, but also of the gradual differentiated processes of transformation that characterize them. There is indecision regarding the transition from childhood to adulthood and the divisions of middle age. But the tripartition and the preeminence of humours for each period are the same for all texts.

Vayas is conceived as part of a general process of transformation (*pariņāma*) governed by time. The fact that age is counted from the moment of conception,

55 The Pūrvakhanda, Bhāvaprakāśa, Bālaprakaraņa 42-50, whose definition of vayas follows the Suśrutasamhitā (four divisions of middle age), also includes a list of items that decrease successively for each period of ten years, respectively: childhood (bālya), growth (vrddhi), splendour (chavi), mental acuity (medhā), skin (tvak), vision (dṛṣți), semen (śukra), valour (vikrama), intellect (buddhi), organs of action (karmendriya), consciousness (cetas), life (jīvita). This somewhat different list in fact comprises twelve elements, but it is possible to count just ten elements if we consider that semen and valour are worth one (as they are in a compound, śukravikramau) and that jīvita marks the time of death. Surprisingly, a

tenfold division for the age of horses is given in works on veterinary medicine, where the method for the "knowledge of age" (vayojñāna), essentially according to shape, colour and number of teeth, is rather well developed. See, for example, the Aśvasāstra and the Aśvacikitsā of Nakula (ca. 1000 CE). Furthermore, the Aśvasāstra (1952) lists the length of life of human beings (one hundred years), elephants (one hundred and twenty years), horses (thirty-two years), cows (twenty-four years), asses and camels (twenty-five years), dogs (sixteen years), jackals (twenty-five years), worms (seven days) and bees (fourteen days). On Nakula's works, see Meulenbeld 1999-2002: IIA, 567-8.

As.Śā. 8.25–34 (bāla, madhya, vṛddha)	Ah.Śā. 3.105 (bāla, madhya, para)	Su.Sū. 35.29–31 (bālya, madhya, vṛddha)	Ca.Vi. 8.122 (bāla, madhya, jīrņa)	
Up to 16 years divided into three (<i>stanyavṛtti</i> , <i>āhāravṛtti</i> , <i>ubhayavṛtti</i>) without any mention of duration	Up to 16 years	Up to 16 years: - up to 1 year (<i>kṣīrāpa</i>) - from 1 to 2 years (<i>kṣīrānnāda</i>) - from 2 to 16 years (<i>annāda</i>)	Up to 16 years (general immaturity) Up to 30 years (continuation of the development of the bodily constituents and unsteadiness of mind)	Young (predominance of <i>śleșman</i>)
From 16 to 60 years - from 16 up to 30 years (<i>yauvana</i>) - from 30 up to 40 years (<i>saṇipūriṇatva</i>) - from 40 up to 60 years (<i>aparihāni</i>)	From 16 to 70 years	From 16 to 70 years - from 16 to 20 years (<i>viddhi</i>) - from 20 up to 30 years (<i>yauvana</i>) - from 30 up to 40 years (<i>saṇipūrṇatā</i>) - from 40 up to 70 years (<i>hāni</i>)	From 30 to 60 years	Middle (predominance of <i>pitta</i>)
From 60 years onwards	From 70 years onwards	From 70 years onwards	From 60 to 100 years	Old (predominance of <i>vāta</i>)

Table 1: Comparative table of the divisions of the ages of life according to Ca., Su., Ah, and As.

History of science in south asia 5.2 (2017) 37-65

as stated by the *Carakasamhitā*, the *Suśrutasamhitā*⁵⁶ as well as the *Mānavadharmaśāstra*,⁵⁷ confirms that it refers to a process of transformation at a subtle level or inaccessible to the senses. In this context, the meaning of *āyus* as "life expectancy" or "potential length of life" is prevalent. The measure of *āyus* is evaluated at two moments that leave no doubt as to its meaning: at birth, after the naming sacrament of the infant and also, in the present case, at the first examination of a patient by a physician. The fact that life expectancy influences the division of age shows the relativity and flexibility of the representation of age and accounts for its persistent meaning of "vigour".⁵⁸

5. VAYAS IN TERMS OF DIAGNOSIS AND MEDICAL PRESCRIPTION

H^{OW} IS *VAYAS* TAKEN INTO CONSIDERATION in medical practice? Which treatments require special attention to age? It may be expected that *vayas* plays an active role in diagnosis and prescription, insofar as it is a criterion for strength. The contexts of use examined in the *Carakasamhitā* and the *Suśrutasamhitā* betray differences between texts:

In the *Carakasamhitā*, *vayas* is taken into consideration among a list of other criteria⁵⁹ of the patient's examination (Ca.Sū. 15.5; Ca.Vi. 1.3), especially during emesis (*vamana*) or purgation (*virecana*) treatments (Ca.Sū. 15.17), or in the case of unctions (*abhyanga*), oily and non-oily enemas (*anuvāsana*, *āsthāpana*) and the drinking of oil (*snehapāna*) (Ca.Vi. 2.13). Some notable occurrences can be found in the section on sexual stimulants (*vājīkaraņa*), where *vayas* refers to youth and qualifies the attractive woman (Ca.Ci. 2.1.9) or the vigour of the young man (Ca.Ci. 2(3).30). In the fourth part of chapter two of *Cikitsāsthāna*, which deals with sexual stimulants that fortify the strength of man (*pumāñjātabalādikam*, *vājīkaraṇapādam*), four kinds of men are listed: those whose strength proceeds

56 See Ca.Śā 4.7–26 and Su.Śā. 3, 18 and 30, which describe the embryo's development from conception onwards.

57 Mānavadharmaśāstra 2.36 ("Time for initiation"): "For a Brahmin, the vedic initiation should be carried out in the eighth year from conception; for a Kşatriya, in the eleventh year from conception; and for a Vaiśya, in the twelfth year from conception." Olivelle observes *ad Mānavadharmaśāstra* 2.24 (Mānavadharmaśāstra: 246): "*sixteenth year*: we must assume on the basis of the statement in verse 36 that all ages are counted from conception rather than from birth."

58 In some cases, vayas means only "vigour," see, for example, Ca.Sū. 27.64. 59 Ca.Sū. 15.5 = Ca.Sū. 15.17 = Ca.Vi. 2.13: दोषभेषजदेशकालवलश्वरीराहारसात्म्यसत्त्वप्रकृतिवय-साम, affection, medication, environment, time, strength, body, diet, personal suitability, mind, constitution, and age. Ca.Vi. 1.3 adds sāra, temperament, to this list (दोषभेषजदेशकालवलश्वरीररसाराहारसात्म्य-सत्त्वप्रकृतिवयसाम्). from time, those who are firm through practice, those who manage by means of effort, and those who are bulls by nature.⁶⁰ As might be expected, the strength related to time falls under age and seasons, according to Jejjața (*ca*. 8th c.),⁶¹ who indicates that *vayas* refers to "youth" (*yauvana*), a term absent from the definition of *vayas* in the *Carakasaṃhitā*, but which is used in the definitioas given by the *Suśrutasaṃhitā*, and the *Aṣṭāṅgasaṃgraha*. In a different vein, the *Carakasaṃhitā* teaches that the venomousness of certain snake species depends on age.⁶²

But what particularly distinguishes the use of *vayas* in the *Carakasamhitā* is the persistence of a conception correlated with the development of bodily constituents (*dhātu*). The causal link of age with the increase, stability or decline of the bodily constituents, which in this case encompass all the bodily components that proceed from *rasa* as well as *mala*, is evident in Ca.Sū. 28, which deals with different kinds of food and drink (*vividhāśitapītīya*): Ca.Sū. 28.4 indicates that "all bodily constituents, whether they be bodily excretions or 'favouring' constituents (*prasāda*), which thrive through *rasa* and *mala*, conform to their own (normal) measure depending on the age and body".⁶³ The compound *yathāvayaḥśarīram*, "according to age and body" is interpreted by Cakrapāṇidatta as being, on the one hand the measure of bodily constituents according to body, which is tall, small, lean or obese depending on the constitution.⁶⁴

In the *Suśrutasaṃhitā*, *vayas* in practice has a somewhat different usage. Su.Sū. 2, on the initiation of the student (*śiṣyopanayanīyam adhyāyam*), indicates that age should be taken into consideration for initiation: according to Dalhaṇa, *vayas* refers in this case to childhood (*bālya*) or youth (*tāruṇya*);⁶⁵ according to Cakrapāṇidatta, it refers to the "first stage of the middle age since [this age is] adapted for the study [of the Āyurveda]" ⁶⁶ (that is to say from sixteen to twenty years, if one refers to the definition of *vayas* in the *Suśrutasaṃhitā*, see Table 1, p. 52). On another note, the *Suśrutasaṃhitā* frequently applies the criterion of

64 Ayurvedadīpikā ad Ca.Sū. 28.4: यथावयः श-

रीरमिति यस्मिन् वयसि बाल्यादौ यादशं मानं धातूनां ता-दशं पुष्यन्तः, तथा यस्मिन्शरीरे प्रकृत्या दीर्घे ह्रस्वे कृशे वा स्थूले वा यादशं मानं धातूनां तादशं पुष्यन्त इति योजना। Sharma goes wrong when he notes that, "the word *yathāvayaḥ* is interpreted by Cakrapāṇidatta as the condition and measure of *dhātus* and parts of the body according to age." (Carakasaṃhitā: 3. 255–6).

65 Nibandhasamgraha ad Su.Sū. 2.3: वयः अत्र बाल्यं तारुण्यं वा।

66 Bhānumatī ad Su.Sū. 2.3: वय इति प्रथममध्यममेवाध्ययनोचितत्वात्।

⁶⁰ Ca.Ci. 2.(4.)7: कालयोगबलाः केचित् केचि-दभ्यसनध्रुवाः। केचित् प्रयलैर्व्यज्यन्ते वृषाः केचित् स्वभावतः।

⁶¹ See Meulenbeld 1999–2002: IA, 191–4. Sanskrit text according to Carakasamhitā: 4. 42–3.

⁶² Ca.Ci. 23.136, chapter on the treatment of poisoning (*visacikitsitam*).

⁶³ Ca.Sū. 28.4: ते सर्व एव धातवो मलाख्याः प्र-सादाख्याश्च रसमलाभ्यां पुष्यन्तः स्वं मानमनुवर्तन्ते यथावयःशरीरम्।

age to the vegetable world: age of a tree (Su.Sū. 11.11, Su.Ci. 10.13), of a grain and also of meat (Su.Sū. 46.338).⁶⁷ It shares with the *Carakasamhitā* the criterion of age for the venomousness of certain species of snake.⁶⁸

More importantly, in the *Suśrutasanhitā*, *vayas* is necessarily taken into consideration in the treatment of bone and joint trauma and in the application of enemas:

Suśrutasaņhitā, Nidānasthāna 15, on the pathology of fractures (*bhagnānāņ nidānam*), emphasizes that the patient's curability depends on age: certain types of fractures and dislocations are difficult to treat when the patient is lean, or old, or if he is a child.⁶⁹ In addition, the ideal time to treat fractures is during the "three stages of middle age," which enables the solidification [of the bone] of the patient if treated by experts.⁷⁰ In the *Suśrutasaṃhitā*, these "three stages of middle age" correspond to the period between sixteen and forty years (see Table 1, p. 52), which Dalhaņa confirms exactly.⁷¹ Age is also considered at length in the corresponding chapter of the *Cikitsāsthāna* on the treatment of fractures (*bhagnānāṃ cikitsitam*): here it is stated that fractures are easily treated in the "first age, when the patient is unlikely to be subject to disease, and during the cold season," with the specification that "the [broken] joint becomes firm in one month for the first age, in two months for the middle age and in three months beyond," that is to say, in old age.⁷²

Lastly, the *Suśrutasamhitā* provides an excellent example of age being taken into account for medical prescription, in chapter thirty-five of the *Cikitsāsthāna*, "On the treatment according to the proportional measurements of the clyster and substances for enemas" (*netrabastipramāņapravibhāgacikitsitam*). First, the dimensions of the clyster are given according to age: a length of six *angula*, a girth corresponding to the little finger, a retaining ring⁷³ at a distance of a finger and a half, a mouthpiece the size of a heron's feather, and a flow the dimension of a lentil (*mudga*) for the one-year-old patient. A length of eight *angula*, a girth corresponding to the index finger, a retaining ring at a distance of two fingers, a mouthpiece the size of a hawk's feather, and a flow the size of a [small] bean

67 The *Carakasamhitā* also sometimes indicates the age of plants or trees for certain formulations, but without using the term *vayas*. 68 Su.Ka. 4.32, chapter on method for the treatment of poisoning by snake-bites ("*sarpadasṭaviṣāvijñānīyam kalpam*").

69 Su.Ni. 15.11: कृशवृद्धबालानाम्।

71 Nibandhasamgraha ad Su.Ni. 15.15cd: म-

ध्यस्येत्यादि। तिस्रोऽवस्था इति षोडशवर्षादूर्ध्वं चत्वारिं-शद्यावत् पूर्यते।

72 Su.Ci. 3.15cd–17ab: प्रथमे वयसि त्वेवं भन्नं सु-करमादिशेत्। अल्पदोषस्य जन्तोस्तु काले च शिशिरा-त्मके। प्रथमे वयसि त्वेवं मासात्सन्धिः स्थिरो भवेत्। मध्यमे द्विगुणात्कालादुत्तरे त्रिगुणात् स्मृतः। See also Ah.Utt. 27.25d–27ab.

73 The *karnika*, literally "ear," is an element attached to the pipe, guarding against its being thrust into the rectum.

⁷⁰ Su.Ni. 15.15cd-16ab: मध्यस्य वयसोऽवस्था-स्तिस्रो याः परिकीर्तिताः । तत्र स्थिरो भवेजन्तुरुपकान्तो विजानता ।

 $(m\bar{a}sa)$ for the eight-year-old patient. A length of ten *angula*, a girth corresponding to the middle finger, a retaining ring at a distance of two and a half fingers, and a flow the dimension of a chickpea (*kalāya*) for the sixteen-year-old patient.⁷⁴

The quantity of substances for the non-unctuous enema is also calculated according to age: two, four or eight *prastha* for the patient of one, eight and sixteen years respectively, which are measured according to the capacity of the patient's hand.⁷⁵ The same degree of detail is also expounded for the patient above twenty-five years (Su.Ci. 35.9).

Then it is stated that the measurement of the clyster for old age patients is the same as for adults, but that the quantity of drug is that prescribed for a sixteenyear-old patient.⁷⁶ Finally, it is specified that a mild enema is particularly suitable for children and old people, because pungent enema affect their strength and lifespan.⁷⁷ These statements are in perfect conformity with the aforementioned definitions of *vayas*.

The accuracy of these details indicates that with regard to practical and technical issues, age is taken into particular consideration in the *Suśrutasamhitā*, whereas the *Carakasamhitā* shows greater homogeneity and theoretical coherence, which may also reflect a greater distance from the reality of the implementation of the treatments. These two tendencies are in keeping with the definitions of *vayas* in the *Suśrutasamhitā* and the *Carakasamhitā*, respectively.

6. MAINTAINING THE AGE (VAYAHSTHĀPANA)

A SIDE FROM THE USE OF VAYAS ALONE to denote age within the context of the practice of medicine, the term appears repeatedly within a verbal locution (for example: *vayas tiṣṭhati*) or in the compound *vayaḥsthāpana*, meaning literally "stabilization of age," a positive effect attributed to certain drugs and remedial measures in the context of medical *rasāyana*.⁷⁸ It is interpreted quite differently depending on the authors:

74 Su.Ci. 35.7: तत्र सांवत्सरिकाष्टद्विरष्टवर्षाणां षडष्ट-दशाङ्गुलप्रमाणानि कनिष्ठिकानामिकामध्यमाङ्गुलिपरिणा-हान्यग्रेऽध्यर्धाङ्गुलब्द्यङ्गुलार्धतृतीयाङ्गुलसंनिविष्टकर्णिकानि कङ्करयेनबर्हिणपक्षनाडीतुल्यप्रवेशानि मुद्रमाषकलायमा-त्रस्रोतांसि विदृध्यान्नेत्राणि ।

75 Su.Ci. 35.7–8: तेषु चास्थापनद्रव्यप्रमाणमातुरह-स्तसंमितेन प्रसृतेन संमितौ प्रसृतौ द्वौ चत्वारोऽष्टौ च वि-धेयाः । (7) वर्षान्तरेषु नेत्राणां बस्तिमानस्य चैव हि। व-योबलश्तरीराणि समीक्ष्योत्कर्षयद्विधिम्। (8)

76 Su.Ci. 35.9: सप्ततेस्तूर्ध्वं नेत्रप्रमाणमेतदेव, द्रव्यप्र-

माणं तु द्विरष्टवर्षवत्।

77 Su.Ci. 35.10: मृदुर्बस्तिः प्रयोक्तव्यो विशेषाद्वालवृ-द्वयोः । तयोस्तीक्ष्णः प्रयुक्तस्तु बस्तिर्हिस्याद्वलायुषी। 78 An introduction to the sections dealing with *rasāyana* therapies in the *Carakasaṇihitā*, the *Suśrutasaṇihitā* and later medical texts is found in **wujad-2015**, as well as a review of the multiplicity of interpretations of the term *rasāyana*. See also Dagmar Wujastyk's contribution in this issue. Chapter four of *Carakasaṃhitā*, *Sūtrasthāna*, "On the six hundred kinds of evacuatives" (*ṣaḍvirecanaśatāśritīyam adhyāyam*) contains a list of fifty great extractives (*mahākaṣāya*), distributed in ten groups (*varga*).⁷⁹ The last group includes five categories of plants/substances that aim at "maintaining" (*sthāpana*), among which there is a group of ten plants for "age-sustaining" (*vayaḥsthāpana*) (Ca.Sū. 4.8).⁸⁰

In this passage, where it is used as an adjective, the editor Sharma explains *vayaḥsthāpana* by "that which stabilizes the (youthful) age.⁸¹ In other words it prevents senility." He notes that Cakrapāṇidatta interprets *sthāpana* differently, depending on the category of plants,⁸² and proposes that a "uniform pattern should be followed and as such, '*sthāpanam*' should be interpreted as 'that which stabilizes' ".⁸³ Meulenbeld (1999–2002: IA, 13) translates *vayaḥsthāpana* as "preserving youthful vigour." As for Sircar (1984), he refers to those plants collectively named *vayaḥsthāpanāni* as "anti aging and geriatric drugs;" In their edition, 'sarmā and Dash prefer "longevity promoters" (Ca.Sū. 4.18), but in another context they translate *vayaḥsthāpana* as "causing rejuvenation" (Ca.Sū. 25.40).⁸⁴

In the *Carakasamhitā*, except for the group of ten plants for "age-sustaining" listed *Sūtrasthāna* 4, all the other plants that have the property of stabilizing age are mentioned in the context of *rasāyana* complex formulations: these include the

79 Meulenbeld (1999–2002: IA, 13) emphasizes that: "The groups begin with medicinal substances which are *jīvanīya* (vitalizing) and end with those which are *vayaḥsthāpana* (preserving youthful vigour), thus stressing the *rasāyana* aspect of *āyurveda*. The arrangement, names and actions of the fifty groups are remarkable in several respects and suggest that Sū. 4 may represent an old part of the *Carakasaṃhitā*." As.Sū. 15.42–46 is a parallel passage to Ca.Sū. 4.8. The group of plants named "*sthāpana*" is identical to that given by Ca.Sū. 4.18, and includes the category of "age-stabilizers" *vayaḥsthāpana*. See Meulenbeld 1999–2002: IA, 495.

80 These ten plants are: *amṛtā*, *abhayā* (= *harītakī*), *dhātrī* (= *āmalakī*), *muktā*, *śvetā*, *jīvantī*, *atirasā*, *maņdūkaparņī*, *sthirā* and *punarnavā* (Ca.Sū. 4.18). This group of ten plants is also referred to in the section on *rasāyana* therapies (Ca.Ci. 1(3).3).

81 Carakasamhitā: 3. 67–8. For this definition, Sharma relies on Cakrapāṇidatta ad Ca.Sū. 4.8: वयस्तरुणं स्थापयन्तीति वयःस्थापनम्। It should be noted that *vayas* also means "old" in medical treatises, with a connotation of experience or respectability (Ca.Sū. 7.58), a quality applied to the teacher (Ca.Sū. 8.18) or the sages (Ca.Sū. 26.6).

82 Ca.Sū. 4.8: शोणितस्थापनो वेदनास्थापनः सं-ज्ञास्थापनः प्रजास्थापनो वयःस्थापन इति पञ्चकः क-षायवर्गः। "There are the [following] group of evacuatives: haemostatic, sensostatic, resuscitative, fœtus-promoting, and agesustaining" (tr. Carakasamhitā). From this list, it is clear that *sthāpana* is conceived as a general therapeutic effect that applies to different specific circumstances.

83 This discussion is due to the fact that *sthāpana* means "maintaining," "preserving," "prolonging," or even "strengthening," depending on the context. 84 Carakasamhitā. They thus make *vayaḥsthāpana* a synonym for *rasāyana*, which they also translate as "causing rejuvenation," attributed to a milk and ghee regimen (Ca.Sū. 25.40: क्षीरघृताभ्यासो रसायनानाम् 1). plants *āmalakī*, *hāritakī*, *pippalī*,⁸⁵ *nāgabāla*,⁸⁶ *bhallātaka*⁸⁷. In the *Suśrutasaņhitā*, "age-sustaining" is attributed to milk,⁸⁸ clarified butter,⁸⁹ castor oil,⁹⁰ as well as, in the context of *rasāyana* therapies, cold water, milk, honey and ghee,⁹¹ the plant *balā*⁹² when taken by the patient being treated indoors,⁹³ and the *śaṇaphala*.⁹⁴ Finally, in *Suśrutasaṇhitā Cikitsāsthāna* 33, the chapter on the treatment of disorders curable by means of emetics and purgatives (*vamanavirecanasādhyopadravacikitsitam*), purgation is attributed with the ability to stabilize age, or at least to slow down its progression.⁹⁵

The chebulic myrobalan ($har\bar{\imath}tak\bar{\imath}$) and the emblic myrobalan ($\bar{a}malaka$ or $\bar{a}malak\bar{\imath}$) are at the heart of the *rasāyana* formulations in *Carakasaṃhitā*, *Cikitsāsthāna* 1, the chapter dedicated to *rasāyana*. For example: Among the many

85 See Ca.Ci. 1(3).40: वृंहणं स्वर्यमायुष्यं ष्ठीहोद्र-विनाशनम्। वयसः स्थापनं मेध्यं पिप्पलीनां रसायनम्। "The *rasāyana* based on long pepper (*pippalī*) strengthens [the body], improves the voice, lengthens lifespan, eliminates the spleen enlargement, stabilizes the age, and increases mental acuity."

86 Ca.Ci. 1(2).11 (recipe named *nāgabāla rasāyana*): संवत्सरप्रयोगादस्य वर्षशतमजरं वय-स्तिष्ठति। "Through the use of the *nāgabāla rasāyana* for one year, his age is maintained free from decrepitude for one hundred years."

87 Again, two recipes of marking nuts (*bhallātaka*) mixed with milk or honey have the same effects (तत्प्रयोगाद्वर्षशतमजरं वयस्ति-छति). See Ca.Ci. 1(2).13 (recipe named *bhallā-takakṣīra*) and Ca.Ci. 1(2).14 (recipe named *bhallātakakṣaudra*).

88 In Su.Sū. 45, a long chapter on how to use liquid substances ("*dravadravyavidhim adhyāyam*"), a passage is devoted to the effects and numerous properties of different kinds of milk (Su.Sū. 45.47–64), among which is the stabilization of age (*vayaḥs-thāpana*).

89 In the same chapter (Su.Sū. 45, on how to use liquid substances), a passage is also devoted to the effects and numerous properties of various kinds of clarified butter (Su.Sū. 45.96–105), among which is also mentioned stabilization of age (*vayaḥs-thāpana*).

90 Still in the same chapter (Su.Sū. 45, on how to use liquid substances), in a passage

devoted to the effects and properties of various oils (*taila*) (Su.Sū. 45.112–130), one of the various effects attributed to castor oil is stabilization of age (*vayaḥsthāpana*).

91 Su.Ci. 27.6: शीतोदकं पयः क्षौद्रं सर्पिरित्येकशो द्विशः। त्रिशः समस्तमथवा प्राकु पीतं स्थापयेद्वयः। "Cold water, milk, honey and clarified butter, taken alone, either two, three or all together, on an empty stomach, stabilize age." 92 Su.Ci. 27.10 : एवं द्वादशरात्रमुपयुज्य द्वादश व-र्षाणि वयस्तिष्ठति; एवं दिवसशतमुपयुज्य वर्षशतं वय-स्तिष्ठति।, "The use of bala mixed with milk during twelve days stabilizes age for twelve years; administered for one hundred days [this treatment] stabilizes age for one hundred years." The other plants quoted in Su.Ci. 27.10 (atibāla, nāgabalā, vidārī and *śatāvarī*) are said to be used in the same way. 93 On the indoor rasāyana treatment, see wujad-2015.

94 Su.Ci. 27.13: पयसा सह सिद्धानि नरः शणफलानि यः। भक्षयेत्पयसा सार्धं वयस्तस्य न शीर्थते। , "The age of a man who eats *sana* fruits prepared with milk accompanied with half the milk [as beverage] does not decay."

95 Su.Ci. 33.27: बुद्धेः प्रसादं बलमिन्द्रियाणां धातु-स्थिरत्वं बलमप्रिदीप्तिम्। चिराच पाकं वयसः करोति वि-रेचनं सम्यगुपास्यमानम्।, "Properly implemented purgation results in clarity of intellect, strength of sense organs, stability of bodily constituents, strength, improvement of digestive power, and slowing down of the ripening process of age." The same formulation is also found in Ah.Sū. 18.60. properties attributed to chebulic myrobalan (Ca.Ci. 1(1).29–35) is an excellent ability to stabilize age;⁹⁶ a decoction of chebulic myrobalan (which also contains emblic myrobalan) promises a life of one hundred years free from old age, etc., including age stabilization⁹⁷ if used for three years. A clarified butter recipe with emblic myrobalan, as well as an electuary made from emblic myrobalan and long pepper (*pippalī*) promise the same effects.⁹⁸

The capacity of the three myrobalans (*triphalā*) to stabilize age is mentioned both in the *Carakasaṃhitā*, where a *triphalā rasāyana* allows for living a hundred years free from old age and disease, and in the *Suśrutasaṃhitā*, in a chapter devoted to purgative formulations: a recipe of *triphalā* mixed with clarified butter cures all diseases and stabilizes the age provided it is used over a long period.⁹⁹

As a conclusion to the list of properties and actions of the two *rasāyana* substances par excellence, chebulic myrobalan and emblic myrobalan, *Carakasamhitā*, *Cikitsāsthāna* 1(1).37 states: "Thus, with such effects, the physician must consider the fruits of the chebulic and emblic myrobalans as elixirs of immortality".¹⁰⁰

To this, Cakrapāṇidatta adds an interesting commentary, which differentiates the two plants in terms of medical application. He says, in essence: "Even if other substances are qualified for *rasāyana* formulations that afford a lifespan of one thousand years, nevertheless the chebulic myrobalan and the emblic myrobalan are mentioned at the beginning of the chapter [dedicated to *rasāyana*] along with their properties and effects, because of their twofold application, namely dispelling disease and promoting vitality; even if, in this case, the emblic myrobalan [is mentioned] among [the substances that] stabilize age, considering that it is the chebulic myrobalan which suppresses the disease, the chebulic myrobalan is thus mentioned first."¹⁰¹

By commenting in this way on the question of the priority of the exposé of the two substances, Cakrapāṇidatta not only highlights the distinction of the effects of *rasāyana*: to cure, on the one hand, to strengthen life, on the other hand, but he clearly places age stabilization on the strengthening side. Thus, *vayaḥsthāpana* is

96 Ca.Ci. 1(1).30: वयसः स्थापनीं पराम्।

- 97 Ca.Ci. 1(1).77: त्रिवर्षप्रयोगादस्य वर्षशतमजरं वयस्तिष्ठति।
- 98 Ca.Ci. 1(2).4 (recipe named *āmalak-aghṛta*): अस्य प्रयोगाद्वर्षशतं वयोऽजरं तिष्ठति। ; Ca.Ci. 1(2).7 (recipe named *āmalakāvaleha*): अस्य प्रयोगाद्वर्षशतमजरं वयस्तिष्ठति।

99 See Ca.Ci. 1(3).42: प्रयोजयन्समामेकां त्रिफ-लाया रसायनम्। जीवेद्वर्षशतं पूर्णमजरोऽव्याधिरेव च।; Su.Sū. 44.71cd–72ab: त्रिफला सर्वरोगझी त्रिभाग- घृतमूर्च्छिता। वयसः स्थापनं चापि कुर्यात् संततसेविता। 100 Ca.Ci. 1(1).37: अतश्चामृतकल्पानि विद्यात् कर्म-भिरीदृद्यैः। हरीतकीनां शस्यानि भिषगामलकस्य च। 101 *Āyurvedadīpikā ad* Ca.Ci. 1(1).37: यद्यपि द्रव्यान्तराणि दशवर्षशतायुष्कररसायनाधिकृतानि सन्ति, तथापि हरीतक्यामलके एव रोगहरत्वायुष्करत्वरूपोभयध-र्मयोगादध्यायादौ गुणकर्मभ्यामुच्येते; तत्रापि यद्यपि आ-मलकं वयःस्थापनानाम् (सू अ २५) इत्युक्तं तथापि रोग-हरत्वे हरीतकी प्रकर्षवतीति कृत्वा हरीतक्यग्रेऽभिहिता। concerned with the healthy body only, which concurs with the fact that old age and time-related transformations are inherent diseases (*svābhāvika*) (by the very fact of having a body).¹⁰²

The effort of the early medical compendia to systematize the time-related variables of change according to individuals, as reflected in the definition of *vayas*, testifies to a quest for a thorough knowledge of the ageing process, and consequently for the mastery of age stabilization and rejuvenation.

The condition of non-decrease (*aparihāni*), that is to say a stable state, which escapes change, is clearly envisaged for the period of forty to sixty years in the *Aṣṭāṅgasaṃgraha*, and supported by the commentary of Indu. Non-decrease is also mentioned in the brief definition of *vayas* in the *Aṣṭāṅgahṛdayasaṃhitā*. In a way, this state of non-decrease is close to that described in the *Carakasaṃhitā*, namely "a stable condition (*samatva*)¹⁰³ of strength, virility, manliness, strength, comprehension, concentration, memory, speech, discernment and all the bodily constituents" as well as a stability of the bodily constituents, etc. for the entire middle age (from thirty to sixty years). This may also correspond to the period of completeness (*saṃpūṛṇata*) of all the bodily constituents, etc. described in the *Suśrutasaṃhitā*, for the period of thirty to forty years, an interpretation supported by Cakrapāṇidatta, who explains that this is a state of stability (*tādrūpya*).

Furthermore, although this link is never explicit in the texts, we should note a convergence of the variables at stake with regard to *vayas* with the effects of the *rasāyana* treatments. For example, in the *Carakasamhitā*, middle age is defined as the obtaining of a stable condition of strength, virility, manliness, force, comprehension, concentration, memory, speech, discernment, and all the bodily constituents (Ca.Vi. 8.122, see above), while the effects of *rasāyana* are longevity, memory, mental acuity, youth, nobility of radiance, complexion and voice, great strength of the body and sense organs, perfection of speech, esteem and beauty, and *rasāyana* is defined as a mean for attaining excellent bodily constituents.¹⁰⁴ This convergence is even more significant in the *Asṭāṅgasaṃgraha*, whose definition of *vayas* mentions radiance (*prabhā*) and mental acuity (*medhā*) (As.Śā. 8.30, see above).

102 See Ca.Śā 1.110–115, on the "natural" (svābhāvika) diseases: old age, death, together with all the other disorders influenced by the time factor. On the category of svābhāvika diseases as the specific object of rasāyana therapies, see Oliver Hellwig 2008. 103 *samatva* also means "normal condition," but this is unlikely in this particular context. 104 Ca.Ci. 1.7-8: दीर्घमायुः स्मृतिं मेधामारोग्यं त-रुणं वयः । प्रभावर्णस्वरौदार्थं देहेन्द्रियबलं परम्। वाक्सि-द्धि प्रणतिं कान्ति लभते ना रसायनात्। लाभोपायो हि शस्तानां रसादीनां रसायनम्। For a discussion of this passage, see **wujad-2015**, as well as the papers of Dagmar Wujastyk and Philipp A. Maas in this volume.

Does vayahsthāpana denote "non-decrease" in the context of medical rasāyana and specifically refer to the period of stability described in the definitions of vayas? In fact, the meaning of vayahsthāpana as it appears in the texts is quite allusive: on the one hand, we observe that if the property of stabilizing age is attributed to a relatively large number of substances, vayahsthapana is never the unique property of a given substance, but only one property among many others. Longevity (*dīrghāyus*) and health (*arogya*), which appear repeatedly in these lists of properties, are categories of effect sufficiently analogous to create confusion and doubt about the meaning of vayahsthāpana. On the other hand, there is no general definition or explanation of vayahsthāpana either in the medical treatises or in the commentaries, even though we might expect one in relation to the elaborate definitions of *vayas*. In order to clarify the meaning or meanings of *vay*ahsthāpana in medical compendia and beyond, it is therefore necessary to separately examine its contexts of use within the lists of properties as well as in the definitions of rasāyana, where vayahsthāpana or synonymous locutions occur systematically.105

ACKNOWLEDGEMENTS

THIS ARTICLE WAS MADE POSSIBLE through funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 639363. I would also like to thank the anonymous reviewers for their comments and suggestions, as well as Philipp A. Maas and Dominik Wujastyk.



ABBREVIATIONS

- Ah. Astāngahrdayasamhitā
- As. Astāngasamgraha
- Ca. Carakasamhitā
- Ci. Cikitsāsthāna
- Ka. Kalpasthāna

105 The context of use of vayahsthāpana is

examined in Barois (in preparation).

- Ni. Nidānasthāna
- Śā. Śārīrasthāna
- Su. Suśrutāsamhitā
- Sū. Sūtrasthāna
- Vi. Vimānasthāna

TEXT EDITIONS

Așțāṅgahṛdayasaṃhitā	K. R. Srikantha Murthy (1991–1995). <i>Vāgbhaṭa's Aṣṭāñga</i> <i>Hṛdayam: Text, English Translation, Notes, Appendix, and</i> <i>Indices.</i> 3 vols. Krishnadāsa Āyurveda Sīrīja 27. Vara- nasi: Krishnadas Academy.
Așțāṅgahṛdayasaṃhitā	Aṇṇā Moreśvara Kuṇṭe, Kṛṣṇaśāstrī Navare, and Hariśāstrī Parādakara, eds. (1939). अष्टाङ्गहृद्दयम्, श्रीमद्वा- ग्भटविरचितम्, श्रीमद्रुरुणदत्तविरचितया सर्वाङ्गसुन्दर्याख्या व्याख्यया हेमाद्रिप्रणीतया आयुर्वेद्रसायनाह्वया टीकया च समुल्लसितम् = The Astāngahṛidaya. a Compendium of the Ayurvedic System Composed by Vāgbhaṭa with the Commentaries (sarvāngasundarā) of Arunadatta and (āyurvedarasāyana) of Hemādri. 6th ed. Bombay: Pāndurañg Jāwajī at the Nirṇaya Sāgar Press. URL: https://archive.org/ details/Ashtanga.Hridaya.of.Vagbhata (on 4 June 2017).
Așțāṅgasaṃgraha	 K. R. Srikantha Murthy (1995–1997). Astānga Samgraha of Vāgbhata: Text, English translation, Notes, Indeces [sic]. vols. Jayakrishnadas Ayurveda Series 79. Varanasi: Chaukhambha Orientalia.
Așțāṅgasaṃgraha	Rāmacandraśāstrī Kiñjavadekara, ed. (1938–1940). अष्टाङ्गसङ्घद्द मूलसूत्राणि शशिलेखाटीका, टुप्टिप्पणी, शरीरप- रिशिष्टम, अष्टाङ्गहृदयशारीरम, शारीरकोष्ठकानि, शारीरचित्राणि, सूत्र-शब्द-विषयसूच्यः, विषयप्रवेशः, निवेदनम, इत्यादिभिः सं- वलितम् = Aṣṭāṅga sangraha, with Indu's Śaśilekhā Commentary, Notes, Diagrams, and Appendices. 3 vols. Āyurvedakalpataruh 1. Poona: Citraśālā Mudraņālaya. Reprinted, Delhi: Sri Satguru Publications, 1990, with an introduction by Vaidya Bhagwan Dash.
Aśvaśāstra	S. Gopalan, Svāminātha Atreya, and K. S. Subramanya Śāstri (1952). <i>Ašvašāstram by Nakula. With Coloured Illus-</i> <i>trations</i> . Tanjore Saraswati Mahal Series 56. Tanjore: S. Gopalan.

Bhāvaprakāśa	K. R. Srikantha Murthy (1998–). <i>Bhāvaprakāśa of Bhāvamiśra: Text, English Translation, Notes, Appendices and Index.</i> 2 vols. Krishnadas Ayurveda Series 45. Varanasi: Krishnadas Academy. ISBN: 9788121800006.
Carakasaṃhitā	Priya Vrat Sharma (1981–1994). <i>Caraka-saṃhitā: Agni-</i> veśa's Treatise Refined and Annoted by Caraka and Redacted by Dṛḍhabala (text with English Translation). 4 vols. Vara- nasi, Delhi: Chaukhambha Orientalia.
Carakasaṃhitā	Rāma Karana Śarmā and Bhagwan Dash, eds. (1976– 2002). Agniveśa's Caraka Samhitā. Text with English Trans- lation and Critical Exposition Based on Cakrapāņi Datta's Āyurveda Dīpikā. 7 vols. Chowkhamba Sanskrit Studies 94. Varanasi: Chowkhamba Sanskrit Series Office. ISBN: 9788170800514.
Carakasaṃhitā	Yādavašarman Trivikrama Ācārya, ed. (1941). महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढवलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचकपाणिदत्तविरचितया आयुर्- वेददीपिकाव्याख्यया संवलिता = The Charakasamhitā by Agniveša Revised by Charaka and Dridhabala with the Āyurveda-Dīpikā Commentary of Chakrapāņidatta. 3rd ed. Mumbayyām: Nirnaya Sagara Press. URL: https://archive.org/details/Caraka1941 (on 1
Mānavadharmaśāstra	Jan. 2018). Patrick Olivelle (2006). <i>Manu's Code of Law: A Critical Edition and Translation of the Mānava-dharmaśāstra, with the Editorial Assistance of Suman Olivelle</i> . New Delhi: Oxford University Press. ISBN: 9780195681482.
Suśrutasaṃhitā	Priya Vrat Sharma (1999–2001). Suśruta-Saṃhitā, with English Translation of Text and Dalhaṇa's Commentary Alongwith (sic) Critical Notes. 3 vols. Haridas Ayurveda Series 9. Varanasi: Chaukhambha Visvabharati.
Suśrutasaṃhitā	Yādavašarman Trivikrama Ācārya and Nandakišora Śarman, eds. (1939). सुश्रुतसंहितायाः सूत्रस्थानम्, श्रीचकपा- णिदत्तविरचितया भानुमतीव्याख्याया समेतम् = Sushrut-sañhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāņi Datta with Introduction by Gaṇanāth Sen. Śrīsvāmi Lakṣmīrāma Nidhi Granthamālā = Shrī Swāmī Lak- shmī Rām Trust Series 1. Agra: Śyāmasundara Śarman. URL: https://archive.org/details/in.ernet. dli. 2015. 35080 (on 29 Jan. 2018). Printed at the Nirṇayasāgara Press, Bombay.

SuśrutasaṃhitāYādavaśarman Trivikrama Ācārya, ed. (1931). वैद्यव-
रश्रीडल्ह्णाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुछ्लसिता,
महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता सूत्र-निदान-शारीर-
चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः = The Sushrutasaṃhitâ of
Sushruta with the Nibandhsangraha Commentary of Shree
Dalhaṇâchârya. 2nd ed. Mumbayyāṃ: Pāṇḍuraṅga
Jāvajī at the Nirṇayasāgaramudrāyantrālaye. URL:
https://archive.org/details/susruta1931 (on 27
Feb. 2018).

SECONDARY LITERATURE

- Barois, Christèle (in preparation). "Stretching Out Life, Maintaining the Body, Part 2: *vayaḥsthāpana* in Medical Literature and Beyond". In preparation.
- (2017). "Longevity Practices from the Chāndogya Upaniṣad Onwards". Paper presented at the conference "Medicine and Yoga in South and Inner Asia," 1–3 August 2017, University of Vienna.
- Grassmann, Hermann Gunther (1873). Worterbuch zum Rig-veda. Leipzig: Brockhaus. URL: https://archive.org/details/in.ernet.dli.2015.6636 (on 28 Jan. 2018). Searchable at http://www.sanskrit-lexicon.uni-koeln. de/scans/GRAScan/2014/web/index.php.
- Hellwig, Oliver (1999–). DCS: Digital Corpus of Sanskrit. URL: http://kjc-sv013. kjc.uni-heidelberg.de/dcs/.
- (2008). "*Rasāyana* und die āyurvedische Krankheitskunde". In: *Traditional South Asian Medicine* 8, pp. 32–64.
- Jośī, Veņīmādhavaśāstrī and Nārāyaņa Harī Jośī (1968). आयुर्वेदीय महाकोशः अर्थात् आयुर्वेदीय शब्दकोशः संस्कृत–संस्कृत. 2 vols. Mumbaī: Mahārāsṭra Rājya Sāhitya āņi Saṃskṛti Maṃḍaḷa. URL: https://archive.org/details/ AyurvediyaSabdakosa1968.
- Maas, Philipp A. (2009). "The Concepts of the Human Body and Disease in Classical Yoga and Āyurveda". In: *Wiener Zeitschrift für die Kunde Südasiens* 51, pp. 123–62. DOI: 10.1553/wzkslis123.
- Meulenbeld, G. Jan (1999–2002). *A History of Indian Medical Literature*. 5 vols. Groningen Oriental Studies XV. Groningen: Egbert Forsten. ISBN: 9069801248.
- (2008). "The Woes of Ojas in the Modern World". In: *Modern and Global Ayurveda: Pluralism and Paradigms*. Ed. by Dagmar Wujastyk and Frederick M. Smith. Albany, NY: State University of New York Press, pp. 157–176. ISBN: 978-0-7914-7490-7.
- Namdeo, Kadam Krishna and Jadhav Viraj Vilas (2017). "Consequences of Aging". In: *World Journal of Pharmaceutical and Medical Research* 3.3, pp. 83–88.

URL: http://www.wjpmr.com/download/article/20042017/1491024955. pdf (on 29 Jan. 2018).

- Preisendanz, Karin (2007). "The Initiation of the Medical Student in Early Classical Āyurveda: Caraka's Treatment in Context". In: *Pramāņakīrtiḥ. Papers Dedicated to Ernst Steinkellner on the Occasion of His 70th Birthday*. Ed. by B. Kellner, H. Krasser, H. Lasic, M. T. Much, and H. Tauscher. Vol. 2. 2 vols. Wiener Studien zur Tibetologie und Buddhismuskunde 70. Wien: Arbeitskreis für Tibetische Und Buddhistische Studien Universität Wien, pp. 629–68. ISBN: 9783902501097. URL: https://www.istb.univie.ac.at/caraka/file_download/36 (on 29 Jan. 2018).
- Preisendanz, Karin, Cristina Pecchia, and Philipp A. Maas, eds. (forthcoming). *Text of the* Carakasamhitā, Vimānasthāna 8 *as Critically Edited by the "Philosophy and Medicine in Early Classical India" Projects at the University of Vienna*. Forthcoming.
- Renou, Louis (1958). *Etudes sur le vocabulaire du Rgveda*. Publications de l'Institut français d'Indologie 5. Pondichéry: l'Institut français d'Indologie.
- Sircar, N. N. (1984). "Pharmaco-therapeutics of Dasemani drugs". In: *Ancient Science of Life* 3.3, pp. 132–135.
- Tilak, Shrinivas (1988). "Religion and Aging in Indian Tradition: A Textual Study". PhD. Montreal: Faculty of Religious Studies, McGill University. URL: http://digitool.library.mcgill.ca/thesisfile75680.pdf (on 29 Jan. 2018).
- Wujastyk, Dagmar (2012). Well-Mannered Medicine: Medical Ethics and Etiquette in Classical Ayurveda. New York: Oxford University Press New York. 264 pp. ISBN: 9780199856275.
- (2016). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature". In: AION: Annali dell'Università degli Studi di Napoli "L'Orientale". Elisir Mercuriale e Immortalità. Cpitoli per una Storia dell'Álchimia nellÁntica Eurasia. A cura di Giacomella Orofino, Amneris Roselli e Antonella Sannino XXXVII.2015, pp. 55–77. ISSN: 11128-7209. URL: https://www.libraweb.net/articoli.php?chiave= 201509901&rivista=99 (on 16 Aug. 2017).
- Wujastyk, Dominik (1998). *The Roots of Ayurveda. Selections from Sanskrit Medical Writings.* 1st ed. Penguins Books. ISBN: 9780140436808.
- (2003). *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. 3rd ed. Penguin Classics. London, New York, etc.: Penguin Group. ISBN: 0140448241.
- (Aug. 6, 2017). "What is "vimāna" in the Compendium of Caraka?'" Presentation at International Congress on Traditional Asian Medicine, 6–12 August 2017 at Kiel, Germany. URL: https://www.academia.edu/34180036/ (on 29 Jan. 2018).

Please write to (wujastyk@ualberta.ca) to file bugs/problem reports, feature requests and to get involved. The History of Science in South Asia • Department of History and Classics, 2–81 HM Tory Building, University of Alberta, Edmonton, AB, T6G 2H4, Canada.