Origins of the Tājika System of Astrological Aspects and Dignities

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MLA style citation form: Martin Gansten. “Origins of the Tājika System of Astrological Aspects and Dignities.” History of Science in South Asia, 6 (2018): 162–199. doi: 10.18732/hssa.v6i0.34.
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

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History of Science in South Asia

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The electronic versions were generated from sources marked up in \LaTeX{} in a computer running GNU/Linux operating system. PDF was typeset using Xe\TeX{} from \TeX{}Live. The base font used for Latin script and oldstyle numerals was \TeX{} Gyre Pagella developed by \texttt{gust}, the Polish \TeX{} Users Group.
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INTRODUCTION

The purpose of this paper is to examine the Indian reception of two related sets of astrological concepts transmitted through Arabic-language sources and codified in Sanskrit from the thirteenth to the seventeenth century: the astrological aspects and the dignities and debilities (or strengths and weaknesses) of the planets.\(^1\) Although pre-Islamic Indian versions of both doctrinal complexes exist, derived directly from the horoscopic astrology of the Hellenistic world, these were based on a limited subset of the ideas involved and subsequently developed in new directions. The versions received through Arabic source texts, though Sanskritized about a millennium later, more closely resemble those of the Hellenistic parent tradition. These later adaptations are found in the texts of the separate Tājika (“Persian”) school of astrology, and the present discussion will focus on the encyclopaedic digest of that school compiled by Balabhadrā in 1649 under the title Hāyanaratna on the basis of some forty earlier Tājika works.\(^2\) While technical terms will be briefly defined as they appear below, readers not familiar with the conceptual apparatus of astrology may find general introductions to the subject helpful in providing a broader context.\(^3\)

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1 I use the word “planet” in the earlier sense, still prevalent in astrological contexts, of any heavenly body apparently moving against the background of the fixed stars – thus including the sun and moon.

2 A critical edition and annotated English translation of the Hāyanaratna is forthcoming (Hāyanaratna). References to the text below refer to the numbered sections of that edition. For the date of the Hāyanaratna, see also Gansten 2017.

3 Accessible introductions are found in Barton 1994 and Brennan 2017, while Beck 2006 is encumbered by its compulsion to ridicule its subject matter at every turn; the same is true of the now largely outdated Bouché-Leclercq 1899. For an erudite and in-depth account of many issues, see Heilen 2015.
Aspects and dignities form the twin foundations of the so-called sixteen configurations (ṣoḍaśayoga) which are perhaps the most distinctive and ubiquitous feature of Tājika astrology. As demonstrated elsewhere, these configurations were derived from the popular introductory work of Sahl ibn Bishr (former half of the ninth century) known under several Arabic titles including Kitāb al-aḥkām ʿalā n-niṣba al-falakīya. Both this work, to which I shall refer simply as the Introduction, and a second work by Sahl, the Kitāb fi l-masāʾil wa-l-aḥkām on interrogations, were first epitomized in Sanskrit by Samarasiṃha, probably in the latter half of the thirteenth century. As we shall see below, Sahl’s Introduction appears to be a major source not only for the sixteen yogas but for Tājika teachings on aspects and dignities generally, relayed by Samarasiṃha in two separate works: the Tājikāśāstra (consisting of three semi-independent treatises) and the Karmaprakāśa. The former of these is, to my present knowledge, no longer extant, but is quoted extensively in Balabhadra’s Hāyanaratna and more sparingly in some other texts.

1. NAMES AND TYPES OF ASPECTS

Known in Sanskrit as drṣṭi, or by any verbal noun denoting seeing, an astrological aspect is an angle of longitudinal separation prevailing between two signs of the zodiac or between the planets occupying them, which are conceived of as beholding, and thereby affecting, each other. Unlike the aspects of classical Indian astrology, the historical development of which remains to be fully investigated, the aspects employed in Tājika – discussed in detail in the second chapter of the Hāyanaratna – are identical with those of the Hellenistic, Perso-Arabic, and medieval European astrological traditions. They are based on the division of the circle of twelve zodiacal signs by whole numbers, forming different geometrical figures as shown in Table 1.

The conjunction or “bodily conjunction” is often distinguished in astrological tradition from the “aspectual conjunction” or aspect proper. Any given planet will distribute its influence through the zodiac by means of seven such aspects

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4 See Gansten and Wikander 2011. Certain assumptions made in that article about planetary dignities in the Tājika tradition (based partly on Pingree 1997) must, however, be revised in the light of the discussion below.
5 See Sezgin 1979:125 ff.
6 See Gansten 2014. Pingree put the probable floruit of Samarasiṃha at 1274; see Pingree 1981: 97, 1997: 81 (where the date is said to be merely provisional, but based on a manuscript copied in 1293), and Pingree 2004: 214 (where it was last repeated, without qualification and with reference to the planned volume A6 of the CESS, never published; see Pingree 1970–1994).
7 Samarasiṃha and his works are discussed in some detail in Gansten 2018.
or “glances:” one opposition and two each of the sextile, square and trine. With regard to angular separation, it should be noted that astrological authors typically count signs inclusively, so that the square is called a fourth-sign aspect; the trine, a fifth-sign aspect; etc.

The Sanskritized forms of the Arabic aspect names are all feminine, presumably to agree with dṛṣṭi. David Pingree’s conjecture that “the aspects with new definitions are given Sanskrit names and those that remained the same are given Arabic names,” though ingenious, rests on a textual corruption. The relevant passage in the Hāyanaratna reads:

It is mukārinā in one sign, mukāvilā on the seventh, and the aspect on the tenth and fourth is taravī: [these] three are said to bring danger.

The aspect on the third and eleventh, called tasdī, is most excellent; the aspect on the ninth and fifth, called taślī, is greatly auspicious.

In some of the later text witnesses of the Hāyanaratna, including the printed edition apparently chiefly consulted by Pingree, the names taślī and tasdī have been corrupted into valī and tadā, respectively, leading him to mistake the Sanskrit adjectives describing them (“most excellent,” “greatly auspicious”) for proper names.

Table 1: The aspects.

| Divisor | Separation (signs) | Separation (degrees) | English name | Arabic name | Sanskritized name |
|---------|--------------------|----------------------|--------------|-------------|-------------------|
| 1       | 12/0               | 360°/0°              | conjunction  | muqārina    | mukārinā          |
| 2       | 6                  | 180°                 | opposition   | muqābila    | mukāvīla          |
| 3       | 4                  | 120°                 | trine        | tathlīth    | taślī             |
| 4       | 3                  | 90°                  | square       | tarbiṛ      | taravī            |
| 6       | 2                  | 60°                  | sextile      | tasdīs      | tasdī             |

Pingree 1997: 87.

Hāyanaratna 2.1: mukārinā syād ekarkṣe sap-tame syān mukāvilā | taravī dīkāturthe tu ti-srāṭ proktā bhaya-pradāṭ || tṛtya-kādaśe dṛṣṭis taślī proktā mahottamā | navapāpacamayor dṛṣṭis taślī proktā mahāśubhā || These two stanzas appear to be a quotation, although, unusually, no source is mentioned by Balabhadra. The first stanza and a half are quoted, again without attribution, in Daivajñasaṃtoṣanī ad Karmapraṇāsa 2.10–11 (see below for these works).

The edition, listed under References below, was published in the first quarter of 1905 (māgha saṃvat 1961, śake 1826), although Pingree (1970–1994: A4: 236b, 1981: 99, 1997: 86) consistently gives the year of publication as 1904.
The understanding of some Tājika authors, including Samarasiṃha, that the conjunction is included among the evil or inimical aspects (known as $kṣud$- or $kṣuta-dṛṣṭi$, of unknown derivation)\(^\text{11}\) appears to stem from a misunderstanding of Sahl’s terse phrasing:

And the strongest of these aspects is the conjunction and the opposition – and [the opposition] is the more intense by place, and the more extreme, and this aspect indicates enemies and fighters, and contrariety and contention.\(^\text{12}\)

While the Arabic employs the singular, describing only the opposition as inimical,\(^\text{13}\) the Latin translator, too, apparently misunderstood Sahl’s intention and translated the clause using the plural, thus including the conjunction.\(^\text{14}\)

### 2. STRENGTH OF ASPECTS

Sahl’s reference to the varying strength or impact of the aspects – the conjunction and opposition being the strongest – has a bearing on a further Tājika misunderstanding. Balabhadra quotes a statement by Samarasiṃha to the effect that the conjunction and opposition have maximum strength, the trine has $\frac{3}{4}$ of that, and the square has $\frac{1}{4}$. Of two planets in sextile aspect, the one in the preceding zodiacal sign (measured by the shortest distance) has a $\frac{2}{3}$ impact, while the planet in the following sign has a mere $\frac{1}{6}$. The notion of such numerical evaluations of aspect strength ($dṛṣṭibalā$), though using different ratios, is found in pre-Islamic Indian astrology, and probably acted as a distorting lens through which Graeco-Arabic teachings on aspects were viewed. Samarasiṃha’s figures appear to be derived ultimately from Sahl’s *Introduction*; the relevant passages from both authors read as follows (emphases added):

11 While the words $kṣut$ and $kṣuta$ do exist in Sanskrit, derived from the onomatopoeic root $kṣu$ “to sneeze,” these are almost certainly unrelated to the Tājika technical term, which may be of non-Indian origin. Samarasiṃha, quoted in *Hāyanaratna* 2.3, appears to expect the word to be unfamiliar to his readers: [...] *tīrṣro 'ridṛśaḥ kṣutākhyāḥ syah* "[These] three inimical aspects are called $kṣuta.""

12 Translation based on Dykes 2018, modified (Dykes has “assembly” for “conjunction”).

13 Benjamin Dykes, personal communication.

14 Salio 1493:123r: *Igitur his aspectibus fortior est coniunctio atque oppositio. Et hi sunt fortioris operis atque inimicitias: et hi aspectus significant inimicos palam nocentes: et significant contrarietates et participaciones.*
And as for the aspect of the sextile (and it is one sixth of the circle), it is if a planet looks at a planet from the third sign in front of it (and it is called the aspect of the first sextile), and it looks at it from behind it, from the eleventh sign (and it is called the aspect of the second sextile).

Here, Sahl’s “one sixth of the circle” (that is, 60°) seems to have been misinterpreted as one sixth of a full unit of aspect strength or impact, the geometric idiom partly used to describe the aspect being alien to classical Indian astrology. The derivation of Samarasiṃha’s “less by a third” is not as transparent. It seems likely that he, or whoever first translated these instructions, may have been working from a paraphrase or an abbreviated version rather than from Sahl’s original text.

And as for the aspect of the square (and it is one fourth of the circle), it is if a planet looks at a planet from the fourth sign in front of it (and it is called the aspect of the first square), and it looks at it from the tenth sign, from behind it (and it is called the aspect of the second square).

The aspect on the tenth and fourth here is a quarter-aspect [...].

Translation based on Dykes 2018, slightly modified.

Quoted in Hāyanaratna 2.1: tārtīyaikādaśa-yor drṣṭau yo viśaṭe tṛtiyaḍrśā | taddṛṣṭis tryaṃ-śonānyasya tu saḍbhāgadṛṣṭiś ca |

A corresponding passage from Samarasiṃha’s Karmaprakāśa (2.11–12) differs from the no longer extant Tājikaśāstra by stating, according to all text witnesses examined, that the sextile is “an aspect of one-third and one-sixth [strength]” (tryaṃśaśadaṃśa-dṛṣṭih). If this reading is correct, Samarasiṃha may have revised his understanding of the Arabic source text in the interim between authoring these works, though still without understanding the intention of the original. (The relationship between and relative dating of the Tājikaśāstra and the Karmaprakāśa is treated in Gansten 2018.) Nilakaṇṭha’s Saṃjñātantra (2.9–10) contains a pastiche of the Tājikaśāstra passage, confirming the wording used here: tryaṃśonā kathitā tryaṃśādṛṣṭih saḍbhāgadṛṣṭih bhavah ||

Quoted in Hāyanaratna 2.1: daśamacatu-rihā drṣṭih pādadṛg iha [...]

15 Translation based on Dykes 2018.
16 Quoted in Hāyanaratna 2.1.
17 A corresponding passage from Samarasiṃha’s Karmaprakāśa (2.11–12) differs from the no longer extant Tājikaśāstra by stating, according to all text witnesses examined, that the sextile is “an aspect of one-third and one-sixth [strength]” (tryaṃśaśadaṃśa-dṛṣṭih). If this reading is correct, Samarasiṃha may have revised his understanding of the Arabic source text in the interim between authoring these works, though still without understanding the intention of the original. (The relationship between and relative dating of the Tājikaśāstra and the Karmaprakāśa is treated in Gansten 2018.) Nilakaṇṭha’s Saṃjñātantra (2.9–10) contains a pastiche of the Tājikaśāstra passage, confirming the wording used here: tryaṃśonā kathitā tryaṃśādṛṣṭih saḍbhāgadṛṣṭih bhavah ||
18 Quoted in Hāyanaratna 2.1: daśamacatu-rihā drṣṭih pādadṛg iha [...]

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Here again, the fraction of the circle involved has been reinterpreted as a fraction of strength.

**Sahl**

And as for the aspect of the trine (and it is one third of the circle), it is if a planet looks at a planet from the fifth sign in front of it (and it is called the aspect of the first trine), and it looks at it from the ninth sign (and it is called the aspect of the second trine).

**Samarasiṃha**

The aspect on the ninth and fifth [signs] is strong, less than a full aspect by a quarter. 19

This last instance is quite opaque, though it is possible that some paraphrase of “one third” was misunderstood as “three [quarter] parts,” the quarter (pāda, literally “foot”) being a ubiquitous fraction in Indian culture. Later Tājika authors – including Haribhaṭṭa and Vāmana, both quoted by Balabhadra – in fact abandon the seemingly arbitrary fractions of 2/3 and 1/6 in favour of a straightforward division into quarters: the two sextiles each get 1/4 of full strength; the squares, 1/2; the trines, 3/4; and the conjunction and opposition retain full strength. These are the same ratios found in classical Sanskrit sources, though applied to a different set of aspects. 20 While Balabhadra notes that they conflict with the ratios given by Samarasiṃha, who is anointed to the rank of a sage, and that their basis is therefore “questionable” (mṛgya), 21 his own method of calculating exact aspect strength is based on these same streamlined ratios. 22

3. DEXTER AND SINISTER

A lthough Sahl does not quantify the strength of various aspects numerically, we have seen that he considers the conjunction and opposition to be

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19 Quoted in Hāyanaratna 2.1: *navapañca-mayor dṛṣṭih pādonā sarvadrṣṭitah sabalā |* While the sentence on the trines appears last in the passage quoted from Sahl (which proceeds from lesser to greater angular distances), it has been moved to the beginning of Samarasiṃha’s epitome (thus grouping the benefic aspects together).

20 The standard system (see, e.g., Bṛhajjātaka 2.13) is: 1/4 on the third and tenth signs; 1/4 on the fifth and ninth; 3/4 on the fourth and eighth; full strength on the seventh. A more detailed method of calculation is found in Jātakakarnapaddhati 2. For further sources, see also Pingree 1978: II 223.

21 Hāyanaratna 2.1: *tatra rṣīsthānābhīṣiktasamarasimhavirodhād vāmanādivekāye mūlam mṛgyam.*

22 Hāyanaratna 2.3. The exact strength is considered to vary with the deviation from the ideal aspect angle; cf. the section on margins and orbs of light below.
stronger than the rest. He further states that aspects cast from the eleventh, tenth
and ninth signs (for the sextile, square and trine, respectively) are stronger than
those cast from the third, fourth and fifth signs. In other words, an aspect is
stronger when cast forward in the order of zodiacal signs. This is the classical
distinction between what is known as dexter and sinister aspects. To an observer
in the northern hemisphere gazing up at the aspecting planet – for instance, when
it is culminating in the south – planets in preceding signs will appear to the right;
planets in following signs, to the left. A planet casting an aspect forward along
the zodiac to a following sign (e.g., a sextile from Aries to Gemini) will therefore
hold the dexter or right-hand end of the aspect, while the planet casting its as-
pect backwards to the preceding sign will hold the sinister or left-hand end. As
demonstrated by Hellenistic interpretation texts, the planet at the dexter end is
considered more powerful.\(^{23}\)

This distinction between dexter and sinister was likewise misunderstood by
Tājika authors. Balabhadra quotes “Hillāja” and Vāmana to the effect that the
180° from the ascendant to the descendant, measured forward along the zodiac
(that is, below the horizon), comprise the dexter half of the horoscope, while the
remaining 180° make up the sinister half.\(^{24}\) While the origin of this misunder-
standing is not known, it may quite conceivably have arisen from a hypothetical
example featuring a planet located in the rising degree, and Balabhadr in his ex-
position of the doctrine in fact makes use of just such an example. He then quotes
another example from Samarasimha, involving a planet placed in the midheaven
and aspecting the fourth place by opposition. This, says Balabhadra, is a strong
aspect because it is dexter, while an opposition cast from the fourth place to the
midheaven would be sinister and therefore weaker. The reasoning seems to be
that the former aspect terminates in the “dexter zone,” the latter in the “sinister
zone.” By the original definition of the terms, an opposition can be neither dex-
ter nor sinister: the distinction is applicable only to the aspect angles formed in
two opposite directions by the same planet: 60°, 90° or 120°.

4. ASPECT MARGINS AND ORBS OF LIGHT

A

lthough an aspect figure is considered complete only when the two points
involved occupy the same degree, or even the same minute and second of
arc, within their respective zodiacal signs, it is active both while in the process

\(^{23}\) See, for example, Firm. Math. VI 3-14. The translation by Holden (2011: 307-29)
helpfully provides corresponding excerpts from an anonymous Greek work (CCAG 2:
160-80).

\(^{24}\) Hāyanaratna 2.2. For the fictitious authority “Hillāja,” see Gansten 2012.
of forming (an applying aspect) and of dissolving (a separating aspect). The standard margin given for this by Sahl is twelve degrees, a figure repeated by Samarasimha:

Sahl

As for the union (and it is the conjunction), indeed that comes to be if two planets were in one sign, the heavy one in front of the light one, and between the two of them in degrees are 12° and what is less than that: for that is the limit of the conjunction.25

Samarasimha

For if all these aspects occur within twelve degrees, then they should be known to be particular[ly effective]. All results [come to be] in accordance with the aspects.26

In explaining the concept of application (Arabic ittiṣāl), however, Sahl – for reasons not entirely clear – abandons this generic twelve-degree margin in favour of the concept of individual “bodies” of light for each of the seven planets, known in European tradition as “orbs of light:” 15° to either side for the sun, 12° for the moon, 9° for Saturn and Jupiter, 8° for Mars, 7° for Venus and Mercury. Tājika authors faithfully reproduce both systems, typically without addressing the discrepancy. Balabhadra, mirroring the arrangement of Sahl’s text eight centuries earlier, gives the twelve-degree rule when discussing the aspects generally and introduces the individual orbs of light (Sanskritized as dīptāṃśa “illumined degrees”) in connection with “the configurations beginning with itthaśāla” – that is, application – at the opening of the following chapter. While Balabhadra prefers to quote Tejāsimha and Haribhāṭṭa on this topic, the transmission of the orb doctrine does go back to Samarasimha, as seen from the latter’s Karmaprapāśa (where the curious phrase “within thirty degrees” probably reflects Sahl’s initial clause):

25 Translation based on Dykes 2018, modified. In Sahl’s text, this sentence is immediately followed by an exposition of the other aspects, beginning with the sextile; the twelve-degree limit was presumably meant to apply to all aspects.

26 Quoted in Hāyanaratna 2.1: sarvāś caitā hi drśo dvādabhaṅgāntare bhucyeś cēt | tat saavi-śesā jīteyā dṛṣṭyaṃsārūt phalṣam sarvam ||
Know that the body of the Sun is 30°, so one half of them are in front of him and one half of them behind him: so if there was from a degree to 15° between the Sun and one of the planets, then he has already shone his light, and he is connected with [the planet]. And the light of the Moon is 12°, in front of her and behind her. And the light of Saturn and Jupiter (each one) is 9° in front of him and likewise behind him. And Mars is 8° in front of him and likewise behind him. And Venus and Mercury (each one of them) is 7° in front of it and likewise behind it. So by the extent of these lights, they are connected one to the other.

Fifteen, twelve, eight, seven, nine, seven and nine are the respective illumined degrees of the sun and other [planets] within thirty degrees, in front and behind. The configurations form in accordance with these.

5. DIVISIONS OF THE ZODIAC: DOMICILES, EXALTATIONS AND TERMS

As will be seen below, aspects may in themselves constitute a form of dignity or debility for the aspected planet – that is, conditions under which it is considered particularly well or ill placed in the horoscope, indicating favourable or unfavourable outcomes, respectively. The most fundamental type of planetary dignity, however, is the occupation of particular zones of the zodiac. Early
Tājika authors preserved the notion of a fivefold zodiacal dignity (pañcavargī) found in the Perso-Arabic tradition, where the five categories are domicile, exaltation, terms, triplicity and decan (the last-mentioned also known as “face”). Three of these constitute different classifications of the zodiacal signs themselves, while two – terms and decans – are based on subdivisions of the signs.

| Planet    | Domicile | Exaltation | Fall    |
|-----------|----------|------------|---------|
| Sun       | Leo      | Aries      | Libra   |
| Moon      | Cancer   | Taurus     | Scorpio |
| Mercury   | Virgo, Gemini | Virgo | Pisces |
| Venus     | Libra, Taurus | Pisces | Virgo |
| Mars      | Scorpio, Aries | Capricorn | Cancer |
| Jupiter   | Sagittarius, Pisces | Cancer | Capricorn |
| Saturn    | Capricorn, Aquarius | Libra | Aries |

Table 2: The domiciles, exaltations and falls.

The domiciles and exaltations of Tājika astrology are identical to those found in pre-Islamic Indian sources, and the same Sanskrit nomenclature is employed, grha (with several synonyms, such as kṣetra or sadman) designating domiciles, and ucca, exaltations. While the principles behind the domicile system are at least partly discernible – the adjacent signs Cancer and Leo being assigned to the position appears to be as stated here – that a strong or dignified planet is always more disposed to do good – but some authors do suggest that it is better for the malefic planets to be weak. Instances of this view can be found in Hāyanaratna 6, dealing with the results of the planets in the twelve places (houses) from the ascendant. The domiciles and exaltations are further identical with those found in Hellenistic and Arabic sources, except that the particular degrees identified as the “highest exaltations” of the planets differ in some cases, undoubtedly due to textual corruptions; cf. Pingree 1978: II 220 f. On this topic, Balabhadra (Hāyanaratna 2.5) quotes Yādava’s Tājikayogasudhānādiḥ 4.16, which reproduces the classical Indian rather than the Graeco-Arabic degrees. It may be parenthetically remarked here that Pingree’s estimation of the exaltation degrees listed in Mīnarāja’s Vṛddhayavanajātaka 1.43-46 as “completely confused” is somewhat exaggerated. The author seems to have been working from a Greek list where some form of Κριός “Aries” – perhaps curtailed as κς – was misread as χζ “27,” causing all subsequent numerals to be displaced. (Cf. Gundel 1933: 98 for similar instances of curtailment: Λέος “Leo,” πς for Παρθένος “Virgo,” etc.) Once this mistake has been corrected, the figures are identical to those found in most Indian texts.
moon and the sun, respectively, and the remaining signs to either side allotted to the five planets proper in order of apparent velocity – both the theoretical basis and the historical origin of the exaltations are debated issues. The sign opposite a planet’s exaltation, known as its fall or depression (nīca), is another category common to both traditions, as well as to Greek and Arabic sources; but a planet’s occupation of the sign opposite its domicile (sometimes called its exile) is not regarded as a debility in classical Indian astrology, and although the notion did exist in the Hellenistic tradition, it appears to have been little emphasized by the earliest authors.

Tājika sources, however, include it in the definition of duruḥpha (with many variants, from Arabic ḍuʿf “weakness”), the last of the “sixteen configurations,” on the unacknowledged authority of Sahl.

The terms have only a slightly more complex history. A subdivision of each sign into five unequal segments, assigned to the rulership of the non-luminary planets and known as trimśāṃsā (“thirtieth-parts”), exists in pre-Islamic Indian astrology. This is obviously a form of terms (Greek ὀρία, but often called simply μοίραι “degrees,” that is, thirtieths of a sign), though not an exact match for any of the several systems of terms found in extant Greek sources. Unlike the Hellenistic terms, the classical Indian trimśāṃsās also have rather few practical uses. The system employed in Tājika sources is, with two minor variations, identical with the so-called Egyptian terms, which may justifiably be called the standard system of the Hellenistic tradition, and even more so of the Arabic. The variations, which may easily be the result of textual corruptions, consist of a simple reversal of the order of the terms of Venus and Jupiter in Gemini, and of those of Mars and Saturn in Sagittarius: see Table 3.

The terms are nearly always designated in Tājika sources by the loanword hadda or haddā (from Arabic ḥadd, plural ḥudūd), but their analogy with the

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31 While a Mesopotamian origin has been assumed by many scholars over the past century, identifying the exaltations or ὑψώματα with the “secret houses” (bīt niṣirti) of the planets, Egyptian and Hellenistic origins have likewise been suggested. For an accessible introduction to the subject, see Brennan 2017: 242–8; cf. also Heilen 2015:713–7.
32 See Brennan 2017:249–52.
33 Hāyanaratna 3.16. See also Gansten and Wikander 2011.
34 “Terms” (from Latin termini) is the traditional designation of this dignity, used in English at least since the seventeenth century. Although some modern scholars and practitioners have attempted to popularize other translations – including “limits,” “bounds” and “confines” – I see a value in preserving the technical language of earlier works, which will otherwise grow increasingly unintelligible to modern readers.
35 See Pingree 1978:II 211–16; Jones and Steele 2011; Heilen 2015:718–31; Brennan 2017:275–9. The μοίραι in this sense should not be confused with the μονομοιρία or attribution of planetary rulers to single degrees, a less common zodiacal dignity found in some preserved horoscopes and astrological works; see Paul. Al. 32 and, for a practical example, Greenbaum and Jones 2017.
Table 3: The terms.

classical Indian triṃšāṃśas was clear to the early Tājika authors: Balabhadra quotes both Samarasiṃha and Haribhaṭṭa (late fourteenth century?) as using the name triṃšāṃśa as a synonym of haddā at least once each.36

6. TRIPARTITE TANGLES

C onfusion sets in with the last two dignities. Triplicities are sets of three zodiacal signs, forming four equilateral triangles within the circle of the zodiac, while decans are divisions of a single sign into three equal parts of 10°.37 The triplicity classification system does survive to some extent in classical Indian astrology, but the rulerships connected with it do not, so that triplicities are not included in the scheme of planetary dignities.38 The decans – known as dṛkāṇa

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36 Hāyanaratna 2.5 (quoting Tājikasāra 74), 4.6 (cf. note 59 below).
37 For an overview of these two categories, see Brennan 2017: 256–72 and 279–83, respectively. For the importance of the Egyptian decans in the development of horoscopic astrology, see also Greenbaum and Ross 2010; Heilen 2015: 1333–48.
38 The triplicities are particularly associated with the cardinal directions, a tradition with Mesopotamian roots; see Pingree 1978: II 223–7. A peculiarly Indian zodiacal dignity, the mūlatrikoṇa (lit. “root triangle”), appears from its name to be associated with the triplicities, but is conceptually more analogous to – though not identical with – the signs where, in the Hellenistic tradition, the planets “rejoice” (Pingree 1978: II 221 f.).
or dreškāna, with variants, from Greek δεκανός – do constitute such a dignity; but the Indian assignment of planetary rulers to the decans follows the order of the triplicities (so that, for instance, the three decans of Aries are assigned in turn to the domicile rulers of Aries, Leo and Sagittarius), suggesting that the two “groupings of three” were conflated at some point. The Graeco-Arabic rulership scheme for the decans, by contrast, commences with Mars in the first decan of Aries and proceeds in the so-called Chaldean or Ptolemaic order of the planets, that is, order of apparent velocity (Saturn as the slowest-moving body being followed in turn by Jupiter, Mars, the sun, Venus, Mercury and the moon): see Table 4.

| Sign      | First (up to 10°) | Second (up to 20°) | Third (up to 30°) |
|-----------|------------------|--------------------|-------------------|
| Aries     | Mars             | Sun                | Venus             |
| Taurus    | Mercury          | Moon               | Saturn            |
| Gemini    | Jupiter          | Mars               | Sun               |
| Cancer    | Venus            | Mercury            | Moon              |
| Leo       | Saturn           | Jupiter            | Mars              |
| Virgo     | Sun              | Venus              | Mercury           |
| Libra     | Moon             | Saturn             | Jupiter           |
| Scorpio   | Mars             | Sun                | Venus             |
| Sagittarius | Mercury       | Moon               | Saturn            |
| Capricorn | Jupiter          | Mars               | Sun               |
| Aquarius  | Venus            | Mercury            | Moon              |
| Pisces    | Saturn           | Jupiter            | Mars              |

Table 4: The decans.

In Tājika astrology, this confusion was compounded by the introduction of two new terms which were variously interpreted: the Sanskrit neologism trairāśika or trirāśi and the loanword musallaha or muşallaha (from Arabic muthallatha “trigon, triplicity”). Both were apparently coined by Samarasimha, who is quoted by Balabhadra on the five dignities as follows:

39 See Pingree 1978:II 209 f. The Graeco-Arabic and Indian rulership systems both begin with Mars followed by the sun, a fact that may have contributed to the confusion.

40 Although trairāśika was a recognized mathematical term in the sense of “rule of three,” this unrelated astrological usage was an innovation.
Domicile, exaltation, haddā, triplicity (trairāśika) and musallaha are the five dignities of the planets. Without dignity, a planet is not strong.41

A planet is strong in its domicile, triplicity (trirāśi), haddā, exaltation or musallaha.42

While Samarasiṃha interpreted the notion of triplicities correctly as referring to a group of entire zodiacal signs, he also appears to be responsible for a mis- or reinterpretation of the rulership scheme associated with them that still survives today. To understand how it arose, it will be helpful first to grasp the original Graeco-Arabic system of triplicity rulerships, shown in Table 5.

| Signs                  | Day       | Night      | Participating |
|------------------------|-----------|------------|---------------|
| Aries, Leo, Sagittarius| Sun       | Jupiter    | Saturn        |
| Taurus, Virgo, Capricorn| Venus    | Moon       | Mars          |
| Gemini, Libra, Aquarius| Saturn   | Mercury    | Jupiter       |
| Cancer, Scorpio Pisces | Venus    | Mars       | Moon          |

Table 5: The Graeco-Arabic triplicities.

Each triplicity consists of three zodiacal signs located at 120° intervals in the zodiac, and each sign in the triplicity is jointly ruled by three planets. If the horoscope is diurnal (the sun being above the horizon), the day ruler is primary and the night ruler secondary; vice versa if the horoscope is nocturnal. The participating ruler is of tertiary importance at all times.43

Samarasimha offers two different interpretations of the system, perhaps based on a table similar to the above. The first of these is described in a stanza apparently found in his no longer extant Tājikaśāstra as well as in the preserved

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41 Quoted in Hāyanaratna 2.5: svaggṛham svoccaṃ haddā trairāśikam attha musallahaṃ ceti | paṅca grahādhikāraṃ vissūḍhikāram graho na balī |
42 Quoted in Hāyanaratna 2.6.1: sabalī svagṛhatrirāśihaddoccamusallahaṃ va khetajah |
43 This system, used extensively by Arabic authors, rests largely on Dorotheus' Pentateuch (no longer extant in Greek but preserved in a second-hand translation into Arabic via Middle Persian, edited as Carmen astrologicum with an English translation by Pingree (1976a); an improved translation was recently published by Dykes (2017)). Cf. the slightly different system of Ptol. Tetr. I 18, which excludes the participating rulers. Both versions appear to be elaborations of Mesopotamian associations between triplicities and planets, presumably based on considerations rather different from those found in later astrological tradition.
Karmapракāśa (or Manusyaajātaka).

While terse, it is most naturally understood as reflecting the standard Graeco-Arabic model just described:

The rulers of the four triplicities beginning with Aries are the sun, Venus, Saturn and Venus by day; Jupiter, the moon, Mercury and Mars by night; Saturn, Mars, Jupiter and the moon at all times.

The phrase “the four triplicities” (catustrairāśika) is plausibly understood by Nārāyaṇa[bhaṭṭa] Sāmudrika in his Daivajñasaṃtoṣaṇī commentary – a late text as identical to the catustrirāśika mentioned in the stanza immediately preceding, which indisputably refers to the Graeco-Arabic triplicities. It thus seems that Samarasiṃha was aware of and understood the traditional system. I shall refer to this system below as method A. Balabhadra, however, interprets the expression catustrairāśika as referring to three groups of four consecutive signs:

44 The stanza in question is quoted by Balabhadra in Ḥāyanaratna 5.7, immediately followed by another in the same metre (ārgha). In the Karmapракāśa, it is followed instead by two stanzas in a different metre (upajāti); cf. note 50.

45 Karmapракāśa 1.21: meṣādicatustrairāśikeśvarā ravisitārkibhṛgavo 'hni | guruśaśibudhabhaumā niśi śanikujagurvindavaḥ satatam ||

46 Pingree 1970–1994: A3 166b gives the author’s floruit as c.1725, a date repeated in Pingree 1981:97. I am not aware of the existence of any earlier commentary on the Karmapракāśa.

47 Karmapракāśa 1.20ab reads: ajamakaratulākulīrapūrvā navalavajāś ca catustrirāśikāsyat | “[The domains] arising from the ninth-parts of the four triplicities begin with Aries, Capricorn, Libra and Cancer, [respectively].” As noted by Pingree (1978:II 211), this formulation of the distribution of ninth-parts, repeating in signs forming equilateral triangles within the zodiac, is a commonplace of Sanskrit astrological literature. This is explicitly confirmed by the Daivajñasamtoṣani ad 1.20–21 (daṇḍaś inserted for ease of reading): pūrvam yānti caturāśi rāśikāny uktāni tatra navamāṇekāramu likhyate | tad yathāpi deedhānavāṃśā niśaḥ navamāṇāḥ jñeyāḥ | virakaramākaresu nikaram ārāḥṣa pratyekanavāṃśā jñeyāḥ | mithu- natulākumbheśu tulāyā navamāṇāṃśā jñeyāḥ | karkvaścikamiṇeśu karkvāyā navamāṇāṃśā jñeyāḥ [...]

This is explicitly confirmed by the Daivajñasamtoṣani ad 1.20–21 (daṇḍaś inserted for ease of reading): pūrvam yānti caturāśi rāśikāny uktāni tatra navamāṇekāramu likhyate | tad yathāpi deedhānavāṃśā niśaḥ navamāṇāḥ jñeyāḥ | virakaramākaresu nikaram ārāḥṣa pratyekanavāṃśā jñeyāḥ | mithunālu-kumbheśu tulāyā navamāṇāṃśā jñeyāḥ | karkvaścikamiṇeśu karkvāyā navamāṇāṃśā jñeyāḥ [...]

The rulers by day, at night, and constantly, of the four triplicities described above are as follows: by day, the sun, Venus, Saturn, and Venus; at night, Jupiter, the moon, Mercury, and Mars; constant rulers, Saturn, Mars, Jupiter, and the moon, as follows: for Aries, Leo, and Sagittarius, the sun [rules] by day; Jupiter is the night ruler; Saturn is the constant ruler. It should be understood thus for all [the triplicities].”
If [it should be asked] what, then, is meant by the word “triplicity” (trairāśika), [in reply] it is said: among the twelve signs (rāśi) beginning with Aries, the first group (rāśi) is the four beginning with Aries; the second group is the four beginning with Leo; [and] the third group is the four beginning with Sagittarius. The three groups thus produced are denoted by the word “triplicity”.\textsuperscript{48}

Balabhadra’s interpretation hinges on the double meaning of rāśi as “group” and “zodiacal sign” (an ambiguity which he exploits in other contexts as well, citing the Anarakaśa),\textsuperscript{49} by which trairāśi and its derivative trairāśika may be taken as referring not to “three signs” but to “three groups [of four signs].” Although it is not clear how he envisages this variant being applied in practice, Balabhadra’s understanding of the underlying concept clearly differs from Graeco-Arabic tradition and may be designated as method A\textsuperscript{2}.

The second system of triplicity rulerships given by Samarasiṃha is clearly based on a table similar to the one given above, but read differently: in each group of three signs, the day ruler is assigned to the first sign, the night ruler to the second sign (these two to be reversed in a nocturnal horoscope), and the participating ruler to the third sign (irrespective of the horoscope being diurnal or nocturnal). Each sign is thus assigned only a single ruler at any one time. I shall refer to this as method B:

In Aries, the sun [is the ruler] by day, Jupiter by night; for Leo, the two are reversed; for Sagittarius, Saturn [is ruler] at all times. For Taurus, Venus by day, the moon at night; the reverse for Virgo; Mars rules Capricorn at all times. For Gemini, Saturn rules by day, Mercury at night; the reverse for Libra; Jupiter rules Aquarius at all times. For Cancer, Venus by day, Mars at night; the reverse for Scorpio; the moon rules Pisces at all times.\textsuperscript{50}

Of the five manuscripts of the Karmaprakāśa that I have seen, three include the single word yavanamāte “in the Yavana opinion” between the stanzas presenting methods A and B, leaving some ambiguity as to which is being referred to; one

\textsuperscript{48} Hāyanaratna 5.7: tatra trairāśikaśabdabena kim ucyata iti ced atrocyațe | meṣādvādaśarāśīṁ madhye meṣādicatuṣṭayaṃ prathamo rāśiḥ | simhādicatuṣṭayaṃ divīṭiyo rāśiḥ | dhanurādicatuṣṭayaṃ triṭiyo rāśiḥ | evam niṣpannās tayo rāṣṭras trairāśikāśabdavācyāḥ |

\textsuperscript{49} See Amarakośa 3.214c: dvau rāśi puṇjamesādaḥ.

\textsuperscript{50} Karmaprañāśa 1.22–23: aje divākro niśi vik-patis tau harer vilomau dhanusah sadārhikh | vṛṣa-saṇaḥ śukro ‘hni vidhur niśāyāṃ striyo ‘nyathārāḥ | satatan mṛgosah || yugmasya mando ‘hni niśi-śvaro jīo ‘nyathā tulāyāṃ ghaṭapah sadejaḥ || karkasya śukro ‘hni kajo niśāyāṃ aler vilomau jhaṣapah sadenduḥ ||
manuscript omits the word entirely; but the fifth has iti yavanamate traṅāśikāḥ, clearly referring to the former stanza (1.21).51 This last version agrees with the Daivāniḥatātūṣaṇī, which ends its commentary on 1.21 with the words yavanamata etat. It also happens to be historically accurate: method A is indeed the one employed by the “Yavanas,” whether we take that term to refer to Greek- or Arabic-language authors. The latter system (method B), the commentary says, is identical with the rulership scheme set out by “Romaka”.52

Balabhadra once more reverses matters: after quoting statements from Tejaḥsimha and “Maṇittha”53 that agree with method B and claiming that this model is the one ascribed to the Yavanas, he presents method A as the one preferred by Samarasiṃha himself. Although the work by Samarasiṃha referred to by Balabhadra is no longer available, the testimony of the Karmaprakāśa casts doubt on his account.

Why Samarasiṃha should have chosen to present two conflicting systems of triplicity rulers, one of which was presumably his own creation, is an open question. Perhaps he simply found the notion of multiple planets sharing a single dignity alien and unsatisfactory. Irrespective of how their rulerships are conceived, however, Samarasiṃha clearly distinguished triplicity from decans. The latter are briefly delineated in the Karmaprakāśa, with no suggestion of the two dignities being in any way conflated.54 Nevertheless, Balabhadra insists – on the

51 The manuscripts are listed below in “Works with Manuscripts Sources” (from p. 194). The printed edition confused matters further by inserting the word dṛkāṇapau “the two decan rulers” immediately before yavanamate, almost certainly by mistake.
52 Daivāniḥatātūṣaṇī ad Karmaprakāśa 1.22–23: […] ye samarasiṃhoktās trirāśipāḥ etva romakoktā ravir ity atra jñeyāḥ || For the authority “Romaka,” see Gansten 2012. I have not yet been able to identify this particular reference.
53 To “Maṇittha” is ascribed the popular Varsāphala or Varsacaryā (see note 75 below), but I have not been able to locate Balabhadra’s quotation in that text. Tejaḥsimha (fl. 1337; see Gansten 2017) is one of the earliest preserved Tājika authors. Although belonging to the same geographical area, hereditary community and social stratum as Samarasiṃha – on whose Tājikāśāstra he apparently wrote a commentary, now lost – Tejaḥsimha, separated from him by an approximately two generations, states explicitly towards the end of his Daivāniḥālankṛti that he studied Tājika astrology from books, without the assistance of a teacher. It thus seems possible that some misunderstandings of the earlier tradition originated with him.
54 Karmaprakāśa 1.20cd reads: patir avanisūta ca saṣṭhaṣāṣṭraḥ “and the rulers of the thirty-six [lit. ‘six squared’] decans beginning from Aries are every sixth [planet counted] from Mars.” The implicit order of planets here is once more that of the days of the week, which in turn is derived from the so-called Chaldean order (see above) applied to the 24 hours in a day and night (the ruler of the first hour of each day being assigned rulership over the day). Selecting every sixth planet in the Indian order, counting inclusively, will restore the Chaldean order. The same system of decan rulerships is followed by later Tājika authors.
authority of several Tājika authors, including his guru’s elder brother, the celebrated Nilakaṇṭha Daivajña – that in the general context of the five dignities, *trirāṣi* or *trairāśika* does indeed denote the decans. The wholly different *trairāśikas* expounded by Samarasimha according to methods A and B he explains as special varieties to be used only in a particular technical context – namely, that of selecting a planet as ruler of a given year of life. The reason behind this contrived argument appears to be a wish on the part of Balabhadra and his favoured authorities to retain the familiar decan as one of the five essential zodiacal dignities while leaving room for the last item on the list: the *musallaha*.

7. **MUSALLAHA MUDDLES**

The merging of triplicities with decans, while foreign to Samarasimha, began early in Tājika tradition, as is clear from the definitions of the five dignities given by Tejahsimha and Haribhaṭṭa in the former and latter half of the fourteenth century, respectively:

[A planet’s] own domicile, exaltation, *haddā*, decan (*dṛkāṇa*) and ninth-part are said to be its five dignities of strength. Its own domicile, own exaltation, then *haddā*, then third-part (*tribhāga*) and ninth-part, are claimed by the planets as [their] group of five separate [dignities].

These definitions further differ from those quoted above by substituting the ninth-part (*navāṃśa*) for the Arabic loanword *musallaha*. In this latter respect, however, they do seem true to the intentions of Samarasimha, who in fact alternates between the designations *musallaha* and *navāṃśa[ka]*. We may compare his statements above with the following:

-Domiciles, exaltations, *haddā* parts, ninth-parts (*navāṃśaka*) and triplicities are the group of five [dignities] of the planets.

-Of [planets] occupying their domiciles, exaltations, thirtieth-parts, triplicities or ninth-parts (*navāṃśaka*), [the one] in each foregoing place is stronger, and the one in the following place, less so.

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55 Hāyanaratna 2.5, citing Nilakaṇṭha’s Samjñātantra 1.61 in support.
56 Daivajñaalāṃkṛti 4.1ab: *sadmoccam haddā dṛkāṇo navāṃśah svāh proktā ya pañcavīryādhi-kārah |
57 Tājikasāra 63ab: *svakṣetram niyam uccakam ca parato haddā tribhāgas tato navāṃśas te iti khecaraṁ nigaditā caryāṁ prthak pañcvidhā |
58 Karmapraṇāsya 1.11ab: *grhoccahaddāṁsana-vāṁśakaś ca traināṣikāni grahapañcavargā |
59 Quoted in Hāyanaratna 4.6 (note also the implicit equation of the *haddā* or terms with the *trimśāṃśa*): *svagṛhoccatrimśāṁśatratraśi-navāṃśakagrāhānūm | pṛkprākṣitāne bhalavān ya-thottarakshāh ago hīnaḥ ||
The equation of the foreign *musallahaha* with the familiar *navāṃśa*, arguably both the most prominent and the most characteristic of the many zodiacal subdivisions found in pre-Islamic Indian astrology, thus began with Samarasiṃha himself.60 Exactly how it arose is, on the available evidence, difficult to say. *Muthallatha* being the standard Arabic word for “triplicity,” it would seem that the same concept has been included twice in the list of dignities – first as a Sanskrit calque (*tairāśika*), then as a loanword (*musallahaha*) – although it is, of course, possible that one of Samarasiṃha’s Arabic sources spawned the confusion by employing some additional synonym of *muthallatha*. It is also quite possible that one or more of these sources did use the ninth-parts (though without including them among the five dignities), as these had already been introduced into Arabic-language astrology through Persian intermediaries.61

Most Tājika authors follow Samarasiṃha in assigning planetary rulers to the *musallahahas* according to the classical Indian *navāṃśa* system. This is a form of “micro-zodiac,” the first ninth-part of the first sign Aries corresponding to Aries itself (and thus being ruled by Mars), the next to Taurus (ruled by Venus), and so forth. Over four zodiacal signs, this “micro-zodiac” thus repeats thrice (*4 × 9 = 3 × 12*), the sign Cancer ending with the ninth-part of the last sign, Pisces. The process then begins again from 0° Leo, and similarly from 0° Sagittarius.62

Some later Tājika works, however, give a different account of the *musallahaha* rulers. Balabhadra particularly identifies the *Tājikālamkāra* by Sūryasūri (or Sūryadāsa) and the *Tājikabhūṣaṇa* by Gaṇeśa of Pārthapura (the former’s first cousin once removed), both composed in the sixteenth century, and quotes the latter:

> The sun, Jupiter and Saturn; Venus, the moon and Mars; Saturn, Mercury and Jupiter; Venus, Mars and the moon: [these are] the rulers of

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60 The *navāṃśa*, which may be indigenous to India (as opined by Pingree 1978: II 211), is identical with the division of the 27 normalized asterisms (*nakṣatra*) into four quarters each (*9 × 12 = 4 × 27*). It divides the zodiac into 108 parts, a number of great importance in Indian religious speculation. Some scholars, however, have attempted to link the *navāṃśa* with the three *λειτουργοί* or *liturgi* in each decan mentioned in Firm. *Math.* II 4; see Tester 1987: 116 f., 164 f. Holden (1996: 70 f., 2011: 48 n.) states the connection as a fact. An earlier source for the *λειτουργοί* is discussed in Heilen 2010; cf. also Heilen 2015: 1344 ff.

61 The route of transmission is indicated by the Arabicized form *navubhra*, from Persian *nū bahram*; see Panaino 1993: 427. While Sahl does not mention ninth-parts, al-Kindi and Abū Maṣhar do, and either the Persian or the subsequent Arabic translator of Dorotheus’ *Pentateuch* interpolated them into that work (see Pingree 1976a: 110, 266 = V 5,26; Dykes 2017: 237 = V 6,29). Through Arabic sources, the concept of ninth-parts even reached Europe, although it remained an exotic and little-used astrological technique; see, e.g., *Liber astronomiae* IX 12 (*Liber astronomiae*: 395 f. English translation in Dykes 2007: 1406 f.).

62 Cf. note 47. For pre-Islamic Indian sources, see Pingree 1978: II 210 f.
the musallahas from Aries, from Leo, [and] from Sagittarius, by day, by night, and at both [times].\textsuperscript{63}

These, as Balabhadr\'a objects, are ‘the triplicity rulers described by Samarasiṃha for determining the ruler of the year’ – to be precise, according to method A above – although it is not entirely clear whether Gaṇeša meant to assign them to the ordinary signs of the zodiac or to the navāṃśa “micro-zodiac.” The former would imply a rejection of the identification of musallahas with navāṃśas, but Gaṇeša’s definition of the five dignities gives no clue either way.\textsuperscript{64} His contemporary Tuka Jyotirvid, on the other hand, is explicit:\textsuperscript{65}

Those [planets] that have here been declared rulers of the triplicities (trairāśika) are the musallaha rulers from the [zodiacal] sign of the ninth-part. Those who say that the [ordinary] rulers of the ninth-parts are rulers of the musallahas are not versed in the doctrine of Khindaka.\textsuperscript{66}

Tuka thus identifies the musallahas with the ninth-parts but assigns rulerships to them according to the triplicity system (rather than according to domicile rulerships, as in classical Indian astrology), presumably in an attempt to harmonize Samarasiṃha’s doctrine with a knowledge of the original meaning of the Arabic muthallatha. Balabhadr\'a, in what must be called a rather underhand attempt to justify his own position, quotes only the latter half of this stanza, and with one important, if syntactically awkward, alteration:

[Those] who say that the rulers of the ninth-parts are rulers of the musallahas are versed in the doctrine of Khindaka according to [his] school.\textsuperscript{67}
In a final twist, one manuscript of Balabhadra’s Hāyanaratna, dated saṃvat 1890 (1833–1834 ce), consistently equates a musallaha not with 3°20′ (the ninth-part or navāṃśa), but with 2°30′ (the twelfth-part or dvādaśāṃśa).\(^68\) While such an identification is not currently known from any other Tājika work, the doctrine of twelfth-parts (δωδεκατημόρια) – the original “micro-zodiac” – is an ancient one, going back to Babylonian times and present in both Greek and Arabic sources. The identification could represent an attempt to incorporate this division in the five-dignity scheme.

8. THE TWELVE DIVISIONS OF A SIGN

Most Tājika authors thus understand the “five dignities” (pañcavargī) to comprise domiciles, exaltations, terms (haddā, occasionally called triṃśāṃśa), decans (drkāna, though these are sometimes referred to as “triplicities,” traśrika) and ninth-parts (designated either as navāṃśa or as musallaha), the last three of which constitute divisions of a zodiacal sign into smaller segments. Such subdivisions were already familiar to Indian astrologers: to the terms, decans and twelfth-parts originally taken over from Hellenistic tradition, the classical Indian system had at an early stage added both the ninth-part discussed above and the horā, half a zodiacal sign (from Greek ōra, “hour,” the average rising time of half a sign) – making, together with the whole-sign unit, the “group of six [dignities]” (sadvarga).\(^69\) Including the sexagesimally awkward division of a sign into seven equal parts, the saptāṃśa, made this a “group of seven” (saptavarga).\(^70\) Later sources added equal divisions by ten, sixteen and sixty to form the daśavarga or “group of ten,” and eventually by four, twenty, twenty-four, twenty-seven, forty and forty-five to make a total of sixteen divisions, the sāodasavarga.\(^71\)

It was probably this Indian tradition of numerous subdivisions that prompted later Tājika astrologers to develop a parallel system of twelve dignities (dvādaśavargī), independent of the pañcavargī. The dvādaśavargī seems to have been associated with the Tājika author Vāmana, and may have originated with

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\(^68\) The identification is not a copying error confusing the figures 2 and 3, but occurs in the context of mathematical calculations of planetary strengths (Hāyanaratna 2.6.1), with repeated operations demonstrating that half a musallaha is equated with 1°15′ of longitude (rather than the 1°40′ of most text witnesses).

\(^69\) See, e.g., Brhatajātaka 1.9.

\(^70\) See, e.g., Sārāvalī 3.9–16. A unique version of saptāṃśas is found in Sphujidhvaja’s Yavanajātaka (1.40); see Pingree 1978: II 210.

\(^71\) For the daśavarga, see, e.g., Jātakapārījāta 1.30 (with further details in vv. 31–46) and Phaladīpikā 3.1–10. The notes in Sastri 1932: 18 ff. give several additional sources. For the sāodasavarga, see Brhatpārīsharhorā 6.
him in the fifteenth century. This simple and streamlined system, dividing the 30° of longitude in a zodiacal sign equally by every integer from 1 to 12, has a decidedly Indian flavour: rulerships of half-signs (horā), decans, fourth-parts, seventh-parts, ninth-parts and twelfth-parts – all present in pre-Islamic Indian astrology – are identical with those found in classical Sanskrit sources, and the fifth-parts, while equal in size, are likewise modelled on the Indian trimśāṃśas rather than on the Tājika haddās. The newly invented sixth-, eighth- and eleventh-parts are all arranged as “micro-zodiacs” similar to the Indian navāṃśa, each series commencing at 0° Aries with a segment equated with Aries (and thus ruled by Mars) and ending at 30° Pisces with one equated with Pisces (ruled by Jupiter). The same is true of the tenth-parts (daśāṃśa), the only one of the “twelve dignities” found in classical Indian astrology but still assigned rulers on a different principle, perhaps by oversight.

From Balabhadra’s phrasing, it seems that his interest in defending the dvādaśavargi doctrine lay in the fact that it was upheld by Nīlakaṇṭha Daivajña, to whom he owed a family allegiance. Without stating his source, Balabhadra reproduces and refutes an objection apparently taken from the Tājikamuktāvaliṭippaṇi:

Because the twelve dignities of the planets set forth by Vāmana have not been described by the teachers of old, they are declared to be artificial.

This, says Balabhadra, is an invalid criticism, as the twelve dignities are described by “the most ancient teacher Maṇittha” (pseudo-Manetho) in Varsaphala 51–60. In reality, this text was probably composed in the fifteenth century; Pingree dates the earliest manuscript known to him to 1475. Balabhadra, accepting the attribution at face value, did not have to justify the epithet “most ancient” to his readers: Maṇittha was well-known as an authority cited even by early Sanskrit authors on astrology such as Varāhamihira.

As this investigation draws to a close, it is clear that Pingree’s outline of zodiacal dignities in the Tājika tradition needs correcting in several respects:

72 Pingree (1981:98) dates Vāmana’s Tājikasāroddhāra to “before 1559,” but Pingree 1970–1994: A5 616a lists a single older manuscript dated 1517. If Vāmana did indeed invent the dvādaśavargi system, he must have written before “Maṇittha” in the latter half of the fifteenth century; see below.
73 Tājikamuktāvaliṭippaṇi 1.2, quoted in Häyanaratna 2.8 (no source given): vāma-...
Similarly, the traditional [= pre-Tājika] jātaka saṭdvargas of the planets, involving the ucca (exaltation), house (gṛha), term (trimśāṃśa), ninth (navāṃśa), twelfth (dvādaśāṃśa), and decan (dṛṣṭāna), are replaced by the Arab/Persian paṇcavargī – the house, the exaltation (tājika retains the traditional Indian longitudes of the paramoccas rather than adopting the slightly differing longitudes given in the Arab/Persian tradition), the terms (here, as the Arabic terms derived from Dorotheus of Sidon are used, the technical term employed is hadda corresponding to Arabic ḥadd), the decan, and the triplicity, called mušallahā from Arabic mutallatha (pronounced musallasat in Persian). The lords of these triplicities are those given first by Dorotheus, which then became standard in Arabic and Persian astrological texts.76

First, the classical ṣaḍvargas have been given incorrectly, with exaltations usurping the place of horās. Second, these as well as more elaborate schemes of zodiacal subdivisions correspond more closely to the Tājika dvādaśavargī than to the paṇcavargī. Third (a minor quibble), the terms or haddās are nearly, but not exactly, identical with the “Egyptian” terms given by Dorotheus. Fourth, and far more important, mušallahā is understood in Tājika tradition to refer not to triplicities but to ninth-parts, which are thus not “replaced” at all (and the designation actually used for triplicities, tairāśika, is mostly conflated with the dṛkāṇa or decan). And fifth, the rulership scheme for the triplicities in the original sense (chiefly employed for finding the ruler of the year) does not typically follow Dorotheus but rather the innovative model introduced by Samarasiṃha.

9. SOLAR PHASES AND SECT

Though prominent, the occupation of particular zodiacal zones is not the only kind of planetary dignity. Balabhadra somewhat artificially applies the classical Indian notion of “six strengths” (ṣaḍbala) to the dignities discussed by Samarasiṃha and other Tājika authors: strength by zodiacal position (sthānabala), direction (digbala), time (kālabala), nature (nisargabala), motion (ceṣṭābala) and aspect (drāgabala).77 For understanding the Tājika reception of dignities foreign to

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76 Pingree 1997: 88.  
77 Hāyanaratna 2.6. For a systematic exposition of saḍbala according to classical Indian astrology, see, e.g., Jātukakarmapaddhati 3.
the earlier Sanskrit tradition, however, it will be more helpful to focus on two conceptual complexes: the cycles of the planets proper (and the moon) with the sun and the notion of sect.

From a terrestrial point of observation, the “superior” planets – Mars, Jupiter and Saturn, whose orbits around the sun lie outside our own – form a continual series of phases in relation to the sun: following the conjunction, during which they are too close to the sun to be seen, they make their first visual appearance above the eastern horizon at a time shortly before sunrise (heliacal rising), then progress through the zodiac for some months until they gradually appear to slow down, station, and retrace part of their course in retrograde motion. During this retrograde period they form an exact opposition with the sun in the zodiac, rising at the eastern horizon as the sun sets in the west (acronychal rising). Eventually they station for a second time and resume direct motion until they once again “enter the rays of the sun” and approach a conjunction, having last been visible in the west shortly after sunset (heliacal setting). The “inferior” planets Mercury and Venus, whose orbits lie between us and the sun and which therefore never appear far from the sun in the zodiac, form somewhat different cycles: they make their heliacal risings in the west (vespertine, or as evening stars) and heliacal settings in the east (matutine, or as morning stars) and never rise acronychally, but rather reach their maximum elongation from the sun and then approach a second conjunction by retrograde motion. The moon is never retrograde, but like the inferior planets makes its first appearance in the west and its last in the east.

In pre-Islamic Indian astrology, the astrological significance of these solar phases is relatively simple: proximity to the sun is bad, distance from it is good. For a planet to be heliacally set (asta) is its weakest condition, while a retrograde (vakra) planet is strongest of all, with other deviations from the mean motion falling between the two. These views contrast with the more intricate doctrines of both Greek and Arabic authors, according to which a planet is generally weak when heliacally set but powerful when synodic or in the heart of the sun (within a degree); strong when direct in motion, swift and visible – particularly before its first station, when the superior planets are oriental (appearing in the east) – but weakened when slow and retrograde.

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78 See, e.g., Brhajjātaka 2.20; Jātakakarmapad-dhati 3.16–18.
79 See, e.g., Paul. Al. 14–16 and Sahl’s Introduction (translated in Dykes 2018), particularly the so-called fifty precepts. For additional sources, see also Brennan 2017: 206 f.; Dykes 2010: 93–108. While the condition of being “in the heart” of the sun (ἐγκάρδιος, kaśmiṃ) is first found in Rhet. (CCAG 1: 145), which states that none of the ancients had explained its power, the concept of being synodic (συνοδικός) or conjunct the sun is considerably earlier. The definition in Porph. Isag. 2 (CCAG 5.4: 187–228), apparently derived from Antiochus of Athens.
Relation to the sun | Sect | Gender
---|---|---
**Superior:** Mars, Jupiter, Saturn | **Diurnal:** Sun, Jupiter, Saturn | **Masculine:** Sun, Mars, Jupiter, Saturn
**Inferior:** Moon, Mercury, Venus | **Nocturnal:** Moon, Venus, Mars | **Feminine:** Moon, Venus

Table 6: Classifications of the planets.

Sect (αἵρεσις) is a different concept, fundamental to Hellenistic astrology and still of great importance in the medieval Arabic tradition, but not found in classical Indian astrology and only partly understood by the Tājikas, who lack a technical term for it. Unlike the solar cycles, which are phenomena of observational astronomy, sect is largely symbolic: a division of the planets into two contrasting groups—the solar or diurnal sect comprising the sun, Jupiter and Saturn, and the lunar or nocturnal sect comprising the moon, Venus and Mars—with changeable Mercury sitting on the fence. Either sect thus consists of one luminary, one benefic and one malefic planet. A third and much less symmetrical classification is that by gender: only the moon and Venus are generally considered feminine, with Mercury once more being ambivalent and the remaining planets, masculine. See Table 6.

(first century CE?) and repeated almost verbatim in Paul. Al. 14, states that planets become synodic when, occupying the same sign, “they happen to be of like degree with the sun, not being distant from it by more or less than 59 minutes” (ἰσόμοιροι τῷ Ἡλίῳ μὴ ἀπέχοντες αὐτοῦ πλέον ἢ ἔλασσον λεπτῶν νθ΄). The idea seems to be that a conjunction is formed the moment that the longitudinal distance between the sun and the planet in question falls short of 60' (one full degree, regarded as a unit of distance). In almost every case, this will entail the sun and the planet being in different discrete degree units (e.g., the sun at 14°43' and a superior planet at 15°42' in the same sign). Only if either body is at the very beginning of a discrete degree (e.g., 14°00') can the other be 59' distant and still occupy the same discrete degree (14°59'). This will be a rare occurrence, on average perhaps present once in sixty cycles of the sun with a given planet, rather than once every cycle. The phrase “not being distant from it by more or less than 59 minutes” must therefore be understood as an exegesis of the expression “of like degree” and not as an additional condition. This is implicitly confirmed by Rhet.: ἰσομοίρως τῷ ἡλίῳ ἢ περὶ μοίρας ἢ παρὰ μοίρας “of like degree with the sun, either to the degree or adjacent to the degree.” I am not aware of Sahl or any Tājika author explicitly addressing this distinction between degrees as discrete or continuous units. For an English rendering of Porph. Isag., see Holden 2009a; for Paul. Al., see Greenbaum 2001; Holden 2012; for Rhet., Holden 2009b. Holden, however, seems to have struggled with the phrase “not [...] more or less than 59 minutes,” which he mis-translates in two opposite ways: “not [...] by more than 59 minutes” (Holden 2009a: 6,
These three ways of grouping the planets – by their relation to the sun, sect, and gender – are easily confused, not least due to the overlap found in the cases of Jupiter and Saturn on the one hand, and of the moon and Venus on the other. Such confusion is reflected in Sahl’s definition of the eleven types of “strength,” *quwwa* (emphasis added): 80

And as for the explanation of the strength of the planets, such that they do not have a deficiency at the time of judging the sought thing, when they accept [the management] and make a promise, that is in eleven ways: Of them, the first is that a planet is in an excellent place from the Ascendant: that is, in the angles or what follows them, of the places which aspect the Ascendant. The second is that a planet is in something of its own share: that is, in its domicile or its exaltation, triplicity, term, face, or joy. The third is that it is direct in course. The fourth is that there is not an infortune with it in its sign, connecting with it, or aspecting it from a square or opposition. The fifth is that it is not connecting with a star that is cadent from the Ascendant, or with a star in its fall, or [that] it is itself in its own fall. The sixth is that it is advancing. The seventh is that a masculine planet (and they are Saturn and Jupiter (and Mars)) is eastern, arising at dawn. 81 The eighth is that the planets are in their own light: that is, a masculine planet in the day, and a feminine planet in the night. 82 The ninth is that a planet is in fixed signs. The tenth is that the planets are in the heart of the Sun (that is, when they are with him in one degree): for indeed at that time the fortunes increase good fortune, and the infortunes decrease their evil. The eleventh is that, of the quarters of the circle, the masculine ones are in the masculine quarters of the Ascendant (and they are from simply omitting the “less”) and “not [… by more than approximately 59 minutes” (Holden 2012:22f. here “approximately” corresponds to the Greek phrase “more or less,” so that Holden’s additional “more” has no basis in the Greek text).

80 Translation based on Dykes 2018. To facilitate comparison, the technical vocabulary has been modified so as to agree with the traditional English terminology employed in this article. The eleven conditions have further been collected in a single paragraph rather than forming separate paragraphs, and Dykes’s numbering of the sentences (77–88) removed.

81 Mars is missing from the text, and there is no mention of the feminine planets. As noted by Dykes, Sahl does give a more complete account of the oriental/occidental distinction somewhat later in the text, where he makes a distinction based on sect rather than gender. Both are, however, wrong: the pertinent classification here is that of superior/inferior. As will be shown below, Mars is likewise missing from the Sanskrit epitomes of Sahl.

82 Again as noted by Dykes, this is another mistake: the relevant distinction here is one of sect, not gender.
the Midheaven to the Ascendant, and from the fourth to the seventh), and the feminine planets are in a feminine quarter (and they are from the seventh to the Midheaven, and from the Ascendant to the fourth), and the masculine planets are in masculine signs, and the feminine planets in feminine signs.

I have quoted this passage in extenso in order to demonstrate the dependence of Samarasimha – and, through him, of the entire Tājika tradition – on Sahl’s definitions, including the confusion of the three categories just discussed. Samarasimha’s account is available to us in two versions: firstly, as quoted piecemeal by Balabhadra from the now lost Tājikaśāstra in the context of constructing a Tājika doctrine of “sixfold strength,” and secondly, in a brief summary in the Karmapratikāśa. The relevant quotations given by Balabhadra – not necessarily in their original order – are as follows:

A planet is strong in its domicile, triplicity, haddā, exaltation or musallahā.83

[The planet] that, [placed] in the ascendant or an angle, or in [a house] approaching them, aspects the ascendant; male [planets in the interval] from the tenth house to the third, and female [planets from the fourth house] up to the ninth; male planets in male signs, and female planets in female signs, are strong; or for all of them, male or female, they are strong in a fixed sign.84

If Jupiter and Saturn rise [heliacally] at the end of night, and Venus, the moon and Mars in the evening, then they are strong; also [strong are] male planets in the day, and the others, at night.85

[A planet] slow in motion, not swift in motion, not retrograde, free from malefic aspects, not joined to malefics, joined to [or] aspected by benefics, having risen [heliacally], is strong; also, in one degree with the sun [...].86

83 Quoted in Hāyanaratna 2.6.1 (cf. note 42 above), where the stanza is explicitly said to occur in the context of “the kuttha configuration” (that is, quwwa).

84 Quoted in Hāyanaratna 2.6.1: yo lagne kendre vaṭṭha viṃakti lagnam | puruṣā gaganaūd ēkhati ṭṛtiyaḥbhavane strīyo yi navamāntam | punkhetāḥ punṭhānāḥ strīrāśau strīgrahā balināḥ | sarveṣāṃ strīpuṃsāṃ sthirāśau vā bhaṭvantī te balināḥ ||

85 Quoted in Hāyanaratna 2.6.3: gurumandau yadi paschimātтраu sukrendhabhūtah sāyam | udayanti tadā balino nanagrahāś cāhni naktaṃ apare ca ||

86 Quoted in Hāyanaratna 2.6.5: mandagatir aśīghragatiḥ cāvakraḥ krūrāyuktaḥ | śūryasya caika bhāge [...]. | Balabhadra’s quotation breaks off after the first pāda of the
The *Karmaprakāśa* version, while more concise, covers a greater number of considerations and also presents them in an order closer to that of Sahl’s original list:

[A planet] occupying its domicile, exaltation and so on, forming an *ikkavāla*, free from the sun and from retrogression, is strong; [also one] not joined to or aspected by a malefic, nor having a *mutthaśīla* with a fallen planet; Saturn and Jupiter [heliacally] risen in the latter part of the night; Venus, Mercury and the moon, earlier; a male [planet] in a male [sign and] by day, a female [planet] in a female sign [and] at night, has strength; [likewise] in a fixed [sign] and in the same degree as the sun; male [planets] are strong from the tenth house up to the third, the others from the fourth house up to the ninth: this determination of strength is known as *kuttha*.

Of Sahl’s eleven types of strength, ten are included here in greater or lesser detail. The one missing appears to be the sixth, though perhaps it would be more correct to say that types one and six may have been conflated. Both lists also

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**Note:**

87 That is, occupying an angular or succedent place (from the Arabic term *iqbāl* “advancing”).

88 That is, application: approaching an exact conjunction or aspect (from Arabic *mutthašīla* “connecting”).

89 *Karmaprakāśa* 3.15–16ab: svarkṣoccādiṣa ikkavālagā inād vakrāc ca bhūya bali nāpi krūrāyuteṣīto mutthaśīli no ničakheṭena ca | mande-jyāvo aparatra naktam uditau prāk śukrasaumyekādavoh puṃsaḥ puṃsi divā sthira yuvatibhe rātrau balaṃ ca sthine || tādṛśaṃ balaṃ kuttham uditaṃ hy evaṃ balasthānam |

90 Intriguingly, while the *Karmaprakāśa* itself does not arrange the types of strength by number, the *Daivajñasaṃtosanī* commentary on the same passage does. The resemblance of its introductory sentence to that of Sahl (quoted above) is too great to be dismissed as a coincidence: *atha kutthavicāraiḥ | tatra kuttham nāma yasmin vidyamāno grahaḥ kāryam kartum kṣamā bharati tādṛśaṃ balam kuttham | atha tasya vicāra ekādaśaprakāraiḥ “Now, the consideration of *kuttha*; and *kuttha* is that [state] being found in which a planet is capable of effecting its result: such strength is [called] *kuttha*. Now, its consideration is in eleven ways.” Despite this resemblance, however, the commentator’s numbering differs significantly from that of Sahl.

91 According to Dykes (2018), the Arabic text under the sixth heading reads *muqbil* “advancing” (previously defined by Sahl as occupying an angular or succedent place, cf. note 84) rather than *muqbal* “received.” While Dykes perceives a subtle technical difference between this criterion and the first, it is easy to see why the Indian epitomist may not have done so. The possible conflation thus indirectly supports Dykes’s current
simplify Sahl’s last type – intentionally or not – so that the horoscope is divided into a masculine and a feminine half, rather than alternating quarters. The most conspicuous discrepancies concern the solar phases of the planets.

Both lists reproduce Sahl’s error in omitting Mars from the list of planets making their heliacal rising in the east towards the end of night; but while the stanza quoted by Balabhadrā requires Mars to rise heliacally in the west like the moon and Venus – an astronomical impossibility – the Karmaprakāśa substitutes Mercury for Mars. It would thus appear that Samarasiṃha, in the interval between authoring the two works, realized and rectified his mistake, although later Tājika tradition has perpetuated it. Both variants are additions to Sahl’s text as we have it, which mentions only Jupiter and Saturn; it is not clear whether these additions were made by Samarasiṃha himself or by some intermediate source.

Other additions concern planetary motion. Where Sahl has simply “direct in motion,” Balabhadrā quotes the somewhat redundant phrase “slow in motion, only to launch into an ad hoc argument for interpreting this as maximum elongation in the case of Venus, which can never rise acronychally. The former interpretation seems needlessly restrictive; the latter, inadmissibly loose.

The compound śukrasaumyendavaḥ (cf. note 89) might be suspected of being a corrupt reading for *śukrabhaumendavaḥ “Venus, Mars and the moon;” but all examined text witnesses of the Karmaprakāśa do agree on the former, astronomically more agreeable reading, and omit Mars altogether.

The Latin translation includes Mars among the “higher, masculine planets” and gives Venus, Mercury and the moon as the “feminine” ones, while the Byzantine translation mentions “higher” and “lower” planets without specifying either. See Stegemann 1942: 52 f.; for an English rendering of the Latin, Dykes 2008: 41.
not swift in motion, not retrograde” from Samarasiṃha. It is not clear what the motivation behind this reformulation may have been, except perhaps a desire for compromise between the opposed views on planetary velocity and retrogression found in the classical Indian and Graeco-Arabic traditions, respectively. Once more, the innovation appears to have influenced later Tājika authors. It is, however, missing from the Karmaprakāśa, which instead adds freedom from “the sun” – that is, from heliacal setting – as an element of strength. Harmonizing this with the strength arising from occupying the same degree as the sun (that is, being synodic) poses a challenge for some Tājika authors. Balabhadra, giving no reason, chooses to interpret bhāga as “ninth-part” rather than “degree” and does not appear to perceive any conflict of ideas. But his senior contemporary Viśvanātha – a fellow resident of Varanasi, whose commentary on the Tājikanilakaṇṭhi (authored by the elder brother of Balabhadra’s teacher), written two decades before the Hāyanaratna, was almost certainly known to Balabhadra – is more explicit, advocating a different reading of both Nilakaṇṭha’s and Samarasiṃha’s texts:

Likewise, not placed in one part (bhāga) with Ina, [that is], the sun. If planets happen not to be in the sign and ninth-part where the sun is, then too they are strong. Therefore, others at night; or not placed in one part with Ina is the better reading. There is also the reading others at night; likewise, placed in one part with Ina. And Samarasiṃha says: not [placed] in one part with the sun, or [if placed] in a fixed sign, then too they are strong. Here, [some] uphold the reading and [placed] in one part with the sun and explain in one part as in one sign and ninth-part; [but] not so, as [the planet] would then also be [heliacally] set, and in no book is a [planet that is heliacally] set said to be strong. On the contrary, in this very book it is said to be weak. Therefore, not [placed] in one part with the sun is the correct reading.

97 Cf. note 79.
98 See, e.g., Samjñātantra 2.67d: balī graho madhyagatis tv aśīghraḥ “A planet of mean motion, not swift, is strong.”
99 But the topic of velocity is reintroduced by Daivajñaśamitsañi ad Karmaprakāśa 3.15–16: vārdhakāstabālyavakravarjitatve sati śīghrakalagativarjitatvam “[one type of strength is], in the absence of senility, [heliacal] setting, infancy, and retrogression, being free from swift motion and from stationing.” Senility and infancy may perhaps refer in this instance to phases immediately preceding heliacal setting and following heliacal rising, respectively.
100 See Pingree 1970–1994: Aṣ 669a, 681b, 1981:125.
101 Prakāśikā ad Samjñātantra 2.69: tathā ina-sya sūryasya naikabhāgasthitāḥ | sūryo yadrāśi-nāṃśe yadi grahā na syus tādāpi balīno bhavanti | tasmād anye niśīnasya na vaikabhāge sthitā iti pāṭhā saḍīśyān | anye niśīnasya tathāka-bhāga ity api pāṭhā | uktām ca samarasāṁthena |
While two opinions clearly existed, I am not aware of any Tājika source attempting systematically to explain the doctrine of planets being “in the heart of the sun;” and from his silence on the matter, it would appear that neither was Balabhadra. The same is true of the concept of sect: the distinction between day and night is fundamental in determining triplicity rulerships, as we have seen, and likewise for the so-called lots (sahama, from the Arabic sahm, translating κλῆρος) to which most Tājika works devote a separate chapter; but nowhere is it clearly stated that the planets are divided into two opposite and complementary groups, one diurnal, the other nocturnal.

10. CONCLUSION

From a number of textual similarities, including some distinctive misunderstandings, it appears that Tājika teachings on both aspects and planetary dignities derive at least partly from Sahl ibn Bishr’s popular ninth-century introduction to astrology, possibly in the form of abbreviated or paraphrased excerpts. The earliest available Sanskrit sources for these doctrines are Samarasimha’s Tājikaśāstra (preserved only in fragments quoted by later authors, particularly in Balabhadra’s Hāyanaratna) and Karmaprakāśa, most likely composed in the thirteenth century.

While Tājika tradition faithfully preserves the Graeco-Arabic categories of aspects, along with Sahl’s two versions of the limits of ecliptical longitude within which they are considered effective, Sahl’s geometric definitions of the aspect angles were misunderstood as fractional values of “aspect strength” similar to those found in pre-Tājika Indian astrology and were eventually adjusted to match the preexisting system more closely. The distinction between dexter and sinister aspects was similarly misinterpreted as referring to the parts of the zodiac below and above the horizon, respectively, possibly as a result of a hypothetical example with an aspecting planet located in the rising degree.

Aspect strength forms part of a system of “six strengths” (ṣaḍbala), recognized by classical Indian astrology, which Balabhadra attempts to impose on the Tājika tradition. The most complex of these is strength by zodiacal placement, present in two varieties: the five dignities (pañcavargī) of the earliest Tājika sources and the additional twelve dignities (dvādaśavargī) of later authors. The latter system, strongly influenced by pre-Islamic Indian astrology, consists of
subdivisions of each zodiacal sign, while the former is based on the five Graeco-
Arabic dignities of domicile, exaltation, terms, triplicities and decans, the last
two of which have given rise to much confusion and “creative misunderstanding” among Tājika authors.

Samarasimha presents two different systems of triplicity (trairāśika) ruler-
ships, one of which is more or less that of the Graeco-Arabic tradition (although
misunderstood by Balabhadra). The other system, presumably introduced as an
innovation by Samarasimha himself, has gained greater influence among later
Tājika authors, but is applied chiefly to the procedure of selecting a single planet
as “ruler of the year.” For other purposes, the later Tājika tradition conflates
triplicities with the decans, to which planetary rulers are assigned by the Graeco-
Arabic method. This conflation leaves room for the Indian navāṃśa or ninth-part,
often referred to as musallaha (from Arabic muthallatha, properly “triplicity”), as
the last of the five dignities. Tājika authors differ on whether ruling planets
should be assigned to these ninth-parts according to the classical Indian “micro-
zodiac” model or follow the order of triplicity rulerships.

With regard to non-zodiacal dignities, Tājika authors beginning with Samara-
simha reproduce two mistakes found in Sahl’s account, confusing the genders as-
signed to the planets with, on the one hand, their status as superior and inferior,
and on the other, their classification as diurnal or nocturnal (sect). To these mis-
understandings they add changes of their own, simplifying the division of the
horoscope into masculine and feminine sectors and resisting the Graeco-Arabic
interpretation of swift motion as a dignity. Some Tājika authors likewise ques-
tion the concept of partile conjunction with the sun as a dignity.

ACKNOWLEDGEMENTS

The author wishes to thank Riksbankens Jubileumsfond for generously fund-
ing the research on which this article is based.
## Works with Manuscript Sources

| Manuscript               | Details                                                                 | Location                                | Title                                      |
|--------------------------|------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------|
| Daivajñālaṃkṛti          | Trivandrum. University of Kerala 7758 (1728) (copied in 1525 CE).    | Trivandrum                              | Manusyaṅajātaka                           |
| Karmaprakāśa             | Calcutta. Asiatic Society G267 (date unknown). Only first half available. | Calcutta                                | Manuṣyajātaka                             |
| Karmaprakāśa             | Koba. Gyan Tirth 19884 (date unknown). Title given as Manusyaṅajātaka. | Kathmandu                               | Manuṣyajātaka                             |
| Karmaprakāśa             | Koba. Gyan Tirth 22801 (date unknown).                                 | Kathmandu                               | Manuṣyajātaka                             |
| Karmaprakāśa             | Kathmandu. Nepalese-German Manuscript Preservation Project microfilm A419/25 (2 October 1840 CE). Title given as Manuṣyajātaka. | Kathmandu                               | Manuṣyajātaka                             |
| Karmaprakāśa             | Rewa (?). Provenance uncertain; displayed online (date unknown).      | Rewa                                    | Manuṣyajātaka                             |
| Tājikamuktāvaliṭippani    | Kathmandu. Nepalese-German Manuscript Preservation Project, microfilm A413/13 (date unknown). | Kathmandu                               | Manuṣyajātaka                             |
| Tājikayogasudhānīdhī     | Koba. Gyan Tirth 16650 (Copied 26 July, 1804 CE, in Kāśī).            | Kathmandu                               | Manuṣyajātaka                             |
| Varṣaphala               | London. Wellcome Library Indic β 2 (Dated Māgha (January–February), 1636 CE). | London                                  | Manuṣyajātaka                             |

## Text Editions

| Text Edition             | Details                                                                 | Location                                | Title                                      |
|--------------------------|------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------|
| Amarakośa                | N. G. Sardesai and D. G. Padhye, eds. (1940). Śrīmad-amarasinnhaṁvaracitaṁ Nāmalingānusāsanam = Amara’s Nāmalingānusāsanam (Text) A Sanskrit Dictionary in Thṛē Chapters. Poona: Oriental Book Agency. | Poona                                   | Amara’s Nāmalingānusāsanam (Text) A Sanskrit Dictionary in Thṛē Chapters. |
| Bṛhatpārāśarahorā        | Rangachari Santhanam, ed. (1984). Brihat Parasara Hora Sastra. With English Translation. New Delhi:   | Kathmandu                               | Brihat Parasara Hora Sastra. With English Translation. |
Ranjan Publications. url: https://archive.org/details/BPHSEnglish (on 13 Aug. 2018).

CCAG
Franz Cumont et al., eds. (1898–1936). Catalogus codicum astrologorum graecorum. Bruxelles: In aedibus Henrici Lamertin.

Daivajñasamtoṣaṇī (N.d.). See Karmaprákāṣa.

Firm. Math.
Wilhelm Kroll, Franz Skutsch, and Konrat Ziegler, eds. (1897–1913). Iulii Firmici Materni Matheseos libri VIII. Leibzig: Teubner.

Hāyanaratna
Martin Gansten, ed. (2019). Balabhadra’s Hāyanaratna: The Jewel of Annual Astrology, with English Translation. Leiden: Brill. Forthcoming.

Hāyanaratna
Khemarāja Śrīkṛṣṇadāsa, ed. (1905). Hāyanaratnam. Mumbayyāṃ: Khemarāja Śrīkṛṣṇadāsa.

Jātakakarmapaddhati
V. Subrahmanyā Saudri, ed. (1932). Sripatipaddhati. Śrīpatipaddhatiḥ. Translated into English with Notes and a Sample Horoscope Worked Out. Bangalore: V. B. Soobiah & Sons. url: https://archive.org/details/SripatiPaddhati.

Karmaprákāṣa
Śrīdharā Jaṭāśaṅkara Śaṃrāṇa, ed. (1886–1887). Satīkāṃ sodāharāṇaṃ Manusyajātakam. Mumbayyāṃ: Śrīdharā Jaṭāśaṅkara Śaṃrāṇa. Includes the commentary Daivajñasamtoṣaṇī.

Liber astronomiae
Bonatti (1491). Decem tractatus astronomie. Veneciis: Erhard Ratdolt.

Paul. Al.
Emilie Boer, ed. (1958). Παύλου Αλεξανδρέως Εἰσαγωγικά = Pauli Alexandrini Elementa Apotelesmatica. Leipzig: Teubner.

Phaladīpikā
V. Subrahmanyā Saudri, ed. (1937). Phaladīpikā. Mantravāri’s Phaladeepika (Adhyayas I–XXVIII) with an English Translation. Bangalore: V. B. Soobiah & Sons. url: https://archive.org/details/in.ernet.dli.2015.406048 (on 13 Aug. 2018).

Porph. Isag.
(1898–1936). See CCAG.

Prakāśikā
(2008). See Samājātantra.

Ptol. Tetr.
Wolfgang Hübner, ed. (1998). Claudii Ptolemaei opera quae exstant omnia 3.1: Ἀποτελεσματικά. Leipzig: Teubner. isbn: 9783519017462.

Rhet.
(1898–1936). See CCAG.

Samājātantra
Kedāradatta Jośi, ed. (2008). Śrīnīlakanthadaiava-

jiaviracitā Tājikanilakanṭhī Śrīvīśvanāthadaitavāj

jiaviracitāyā
Origins of the Tājika System of Astrological Aspects and Dignities

Saravali

V. Subrahmanya Sastri, ed. (1907). Saravali Śrīmatkalyāṇavarmaviracitā = Saravali by Kalyanavarman. Mumbayyām: Tukārāma Jávājī. url: https://archive.org/details/SaravaliNSP (on 13 Aug. 2018).

Tājikabhūṣaṇa

Sitārāma Śāstrin, ed. (2005). Tājikabhūṣaṇa Vidvadvaramśadaivajñaviracita. Bambaī: Khemarāja Śrīkṛṣṇa-dāsa.

Tājikasāra

Raghuvamsa Śarma Śāstrin, ed. (1898–1899). Atha Harihara-bhaṭṭaviracitam Tājikasāram Harṣaganiveiracitayā Kārikākhayā vyākhyayā samalankṛtam. Mumbayyām: Bhagīrathātmaja Hariprasāda. url: https://archive.org/details/in.ernet.dli.2015.405998 (on 13 Aug. 2018).

Vṛddhayavanajātaka

David Edwin Pingree, ed. (1976b). The Vṛddhayavanajātaka of Mīnarāja. 2 vols. Baroda: Oriental Institute. url: https://archive.org/details/PingreeVYJ (on 12 Aug. 2018).

Yavanajātaka

The Yavanajātaka of Sphujidhvaja (1978). See Pingree 1978.

SECONDARY SOURCES AND TRANSLATIONS

Barton, Tamsyn (1994). Ancient Astrology. Sciences of Antiquity. London & New York: Routledge. isbn: 9780415110297.

Beck, Roger (2006). A Brief History of Ancient Astrology. Oxford: John Wiley & Sons. isbn: 1405110740.

Bonatti (1491). Decem tractatus astronomie. Venecius: Erhard Ratdolt.

Bouché-Leclercq, Auguste (1899). L’astrologie grecque. Paris: Ernest Leroux.

Brennan, Chris (Feb. 10, 2017). Hellenistic Astrology. Amor Fati Publications. 698 pp. isbn: 0998588903.

Dykes, Benjamin (2007). The Book Of Astronomy by Guido Bonatti. Golden Valley, MN: The Cazimi Press. isbn: 9781934586006.

— ed. (2008). Works of Sahl & Māshā’allah. Golden Valley, MN: The Cazimi Press. isbn: 1934586021.

— (Nov. 1, 2010). Introductions to Traditional Astrology: Abu Ma’shar and Al-Qabisi. Golden Valley, MN: The Cazimi Press. 442 pp. isbn: 1934586153.

HISTORY OF SCIENCE IN SOUTH ASIA 6 (2018) 162–199
— (2017). Carmen Astrologicum: The 'Umar Al-Tabarî Translation. Golden Valley, MN: The Cazimi Press. isbn: 1934586447.
— (2018). Astrological Works of Sahl b. Bishr. Vol. 1. Golden Valley, MN: The Cazimi Press. Forthcoming.

Gansten, Martin (2012). “Some Early Authorities Cited by Tājika Authors”. In: Indo-Iranian Journal 55.4, pp. 307–19. doi: 10.1163/001972412x620385.
— (2014). “The Sanskrit and Arabic Sources of the Praśnatantra Attributed to Nilakanṭha”. In: History of Science in South Asia 2.1, p. 101. doi: 10.18732/H2794C.
— (2017). “Notes on Some Sanskrit Astrological Authors”. In: History of Science in South Asia 5.1, pp. 117–33. doi: https://doi.org/10.18732/H2794C.
— (2018). “Samarasimha and the Early Transmission of Tājika Astrology”. Submitted.
— ed. (2019). Balabhadra’s Ḥāyanaratna: The Jewel of Annual Astrology, with English Translation. Leiden: Brill. Forthcoming.

Gansten, Martin and Ola Wikander (2011). “Sahl and the Tājika Yogas: Indian Transformations of Arabic Astrology”. In: Annals of Science 68.4, pp. 531–46. doi: 10.1080/00033790.2010.533349.

Greenbaum, Dorian G. (2001). Late Classical Astrology: Paulus Alexandrinus and Olympiodorus with the Scholia from Later Commentators. Reston, VA: ARHAT.
Greenbaum, Dorian G. and Alexander Jones (2017). “P.Berl. 9825: An Elaborate Horoscope for 319 CE and Its Significance for Greek Astronomical and Astrological Practice”. In: ISAW Papers 12. doi: 2333.1/brv15m2n. url: http://dlib.nyu.edu/awdl/isaw/isaw-papers/12/ (on 12 Aug. 2018).
Greenbaum, Dorian G. and Micah T. Ross (2010). “The Role of Egypt in the Development of the Horoscope”. In: Egypt in Transition: Social and Religious Development of Egypt in the First Millennium BCE. Ed. by Ladislav Bareš, Filip Coppens, and Květa Smoláriková. Prague: Czech Institute of Egyptology, Charles University, pp. 146–82. url: https://www.academia.edu/7370462/ (on 12 Aug. 2018).

Gundel, Wilhelm (1933). “Die Symbole der Planeten und der Tierkeiszeichen”. In: Die Sterne 13.4/5, pp. 92–99.

Heilen, Stephan (2010). “Anubio Reconsidered”. In: Aestimatio 7, pp. 127–92. url: http://www.ircps.org/aestimatio/7/127-192 (on 12 Aug. 2018).
— (2015). Hadriani genitura – die astrologischen Fragmente des Antigonos von Nikata. Edition, Übersetzung und Kommentar. 2 vols. Texte und Kommentare 43. Berlin: De Gruyter. isbn: 9783110288476.

Holden, James H. (1996). History of Horoscopic Astrology. 1st ed. Tempe, AZ: American Federation of Astrologers. isbn: 9780866904636.
Holden, James H. (2009a). *Porphyry the Philosopher: Introduction to the Tetrabiblos and Serapio of Alexandria: Astrological Definitions*. Tempe, AZ: American Federation of Astrologers. isbn: 0866906029.

—— (2009b). *Rhetorius the Egyptian: Astrological Compendium Containing His Explanation and Narration of the Whole Art of Astrology*. Tempe, AZ: American Federation of Astrologers. isbn: 0866905901.

—— (2011). *Julius Firmicus Maternus: Mathesis*. Tempe, AZ: American Federation of Astrologers. isbn: 0866906193.

—— (2012). *Paul of Alexandria: Introduction to Astrology*. American Federation of Astrologers. isbn: 0866906339.

Jones, Alexander and John M. Steele (2011). “A New Discovery of a Component of Greek Astrology in Babylonian Tablets: The “Terms””. In: *ISAW Papers*. url: [http://dlib.nyu.edu/awdl/isaw/isaw-papers/1/](http://dlib.nyu.edu/awdl/isaw/isaw-papers/1/) (on 12 Aug. 2018).

Lopilato, Robert (1998). “The Apotelesmatika of Manetho”. PhD thesis. Providence, RI: Brown University.

Panaino, Antonio (1993). “Considerazioni sul lessico astronomico-astrologico medio-persiano”. In: *Lingue e culture in contatto nel mondo antico e altomedievale: atti dell’VIII Convegno internazionale di linguisti, tenuto a Milano nei giorni 10–12 settembre 1992*. Ed. by R.B. Finazzi and P. Tornaghi. Brescia: Paideia, pp. 417–33. isbn: 8839405011.

Pingree, David Edwin (1970–1994). *A Census of the Exact Sciences in Sanskrit*. Vol. 5. Philadelphia: American Philosophical Society. isbn: 9780871692139. url: [https://archive.org/details/PingreeCESS](https://archive.org/details/PingreeCESS) (on 9 Mar. 2018).

—— ed. (1976a). *Dorothei Sidonii Carmen astrologicum. Interpretationem Arabicam in Linguam Anglicam versam una cum Dorothei Fragmentis et Graecis et Latinis*. Leipzig: Teubner. isbn: 9783110298864. url: [https://archive.org/details/PingreeDS1976](https://archive.org/details/PingreeDS1976) (on 14 Aug. 2018).

—— ed. (1978). *The Yavanajātaka of Sphujidhvaja*. 2 vols. Harvard Oriental Series. Cambridge, MA: Harvard University Press. isbn: 9780674963733. url: [https://archive.org/details/PingreeYJ](https://archive.org/details/PingreeYJ) (on 12 Aug. 2018).

—— (1981). *Jyotisāstra: Astral and mathematical literature (A History of Indian literature)*. Wiesbaden: Harrassowitz. isbn: 9783447021654.

—— (1997). *From Astral Omens to Astrology: From Babylon to Bīkāner*. Serie Orientale Roma 78. Rome: Istituto Italiano per L’Africa e L’Orient. url: [https://archive.org/details/Pingree1997](https://archive.org/details/Pingree1997) (on 11 Aug. 2018).

—— (2004). *Catalogue of Jyotis Manuscripts in the Wellcome Library. Sanskrit Astral and Mathematical Literature*. Vol. 2. Sir Henry Wellcome Asian Series. Leiden: Brill. 476 pp. isbn: 9789004131521.

Salio, Girolamo, ed. (1493). *Liber Quadripartiti Ptholomei*. Venetys: Bonetus Locatellus. url: [https://gallica.bnf.fr/ark:/12148/bpt6k596584](https://gallica.bnf.fr/ark:/12148/bpt6k596584) (on 11 Aug. 2018).
Sezgin, Fuat, ed. (1979). *Geschichte des arabischen Schrifttums. Band 7: Astrologie, Meteorologie und Verwandtes bis ca. 430 H.* Leiden: Brill. ISBN: 9004061592.

Stegemann, Viktor (1942). *Dorotheos von Sidon und das sogenannte Introductorium des Sahl ibn Bišr.* Prag/Praha: Orientalisches Institut/Orientální ústav.

Subrahmanya Sastri, V. (1932–1933). *Jataka Parijata.* 2 vols. Bangalore: V. B. Soodbiah & Sons. URL: https://archive.org/details/JatakaParijata1932 (on 12 Aug. 2018).

Tester, S. J. (1987). *A History of Western Astrology.* Woodbridge: Boydell. ISBN: 0851154468.
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