Samarasiṃha and the Early Transmission of Tājika Astrology

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Abstract

One of the earliest preserved Sanskrit works on Perso-Arabic (Tājika) astrology, the thirteenth-century *Karmaprakāśa* of Samarasiṃha (also known as the *Manuṣya-jātaka*, *Tājikatantrasāra* or *Gaṇakabhūṣaṇa*), is examined with particular attention to subgenre, distinctive content and likely Arabic-language sources. On the basis of a comparison of the extant text of the *Karmaprakāśa* with excerpts attributed to Samarasiṃha by later Tājika writers, conclusions are drawn with regard to other works, now lost or misattributed, by the same author.

Keywords

Samarasiṃha – astrology – Indian astrology – Tājika astrology – astral sciences

1 Introduction

Very little is known of the early history of Tājika or Perso-Arabic astrology in India. Due to the false dichotomy that still persists between the astrology of South Asia and so-called western astrology—a term commonly but counter-intuitively used to include not only ancient Mesopotamia and Egypt, but also Sasanian Persia and the Arabic-speaking world of the Islamic Golden Age—the comparatively few historians who devote themselves to studying the development of horoscopic astrology are typically familiar with sources in Greek, Latin and/or Arabic, but not with the vast body of relevant Sanskrit literature. In the twentieth century, the one major exception to this rule was the late David Pingree (1933–2005), whose outstanding contributions, particularly in

the realm of data collection, provide a solid ground for future scholarship. Even Pingree, however, published only some fifteen pages on Tājika astrology,¹ of which a mere three pages concern its earliest phase. Prior to Pingree, the only western scholar to have written on Tājika was Albrecht Weber, in a single article dating from the mid-nineteenth century and based on limited data.²

Broadly speaking, Tājika is a Sanskritized version of Arabic-language astrology, sharing a Hellenistic core with pre-Islamic Indian *jyotiṣa* but comprising a number of additional doctrines which either had never reached India before or else had not survived there. The Arabic tradition itself was, in fact, an amalgam of astrological teachings and procedures borrowed from cultural areas that had preserved and developed the Hellenistic heritage in slightly different forms—notably Persia, but also Byzantium, Syria, and indeed India. Even after being translated into Sanskrit and to some extent adapted to Indian conditions, this new type of astrology differed sharply enough from the established one to form a separate school rather than merging with it. Most noticeably, Tājika throughout its history has been, and remains today, largely synonymous with the casting of anniversary horoscopes, a prognostic technique known as *varṣaphala* or ‘results of the year’—often referred to in the European literature as annual revolutions or, more recently, as ‘solar returns’—and not previously known in India. On the interpretation of actual nativities or birth horoscopes, by contrast, Tājika literature as a whole has little to say, so that Pingree’s repeated designation of the tradition as a genethliological one must be considered somewhat misleading.³

The name Tājika (or Tājaka), generally understood to mean ‘Persian’, is derived from the Persian *tāzīg* meaning ‘Arab’, based in its turn on the Arabic tribal name Ṭayyī. Synonyms used in Tājika works include Yavana (properly ‘Greek’, ultimately derived from Ἰά[Ϝ]ωνες, but used in this period of any foreign culture from the northwest), Turuṣka (‘Turkish’), and Tārtiyika/Tārtiyaka, possibly meaning ‘Tataric’ in the generalized sense of ‘Muslim’. Although the area did not succumb to Muslim rule until the early fourteenth century, Sanskrit literature as well as inscriptions provide evidence for frequent contacts between Indians and Tājikas along the west coast of India (present-day Gujarat) in the period 700 to 1300 CE—including military engagements,

1 Pingree 1981a: 97–100; 1997: 79–90. There are also entries for individual Tājika authors in the five published volumes of Pingree’s *Census of the Exact Sciences in Sanskrit* (CESS, 1970–94), corrections to a few of which are found in Gansten 2017.

2 Weber 1853: 236–287.

3 Pingree 1981a: 97; 1997: 79 f., 85 (‘one of the most common systems of genethliology in use in the sub-continent’), 87. It is not clear how many systems of genethliology Pingree considered to exist in India.

but predominantly trade connections.⁴ The Indians most actively engaged in such exchanges would have been Jains, who dominated the areas of finance and coinage in the region, as well as members of Hindu mercantile or Baniyā communities. The Jains in particular often became, by extension, intermediaries between Perso-Arabic and Sanskritic traditions of knowledge.⁵

The fluidity seen in designations of ethno-linguistic groups also has a bearing on the question of the language in which the non-Indian source texts of Tājika were composed—a problem which Pingree, by his own admission, left unresolved.⁶ The question was at least partially answered some years after his demise by the identification of Sahl ibn Bishr (former half of the ninth century) as one of the most important sources of Tājika doctrine.⁷ Ethnically a Persian Jew, Sahl wrote in Arabic, as did the Persian ‘Umar ibn al-Farrukhān aṭ-Ṭabarī (fl. 762 to after 812) and the ‘philosopher of the Arabs’, Ya’qūb ibn Ishāq al-Kindī (d. after 862)—both of whom were later identified as probable contributing sources, alongside Sahl, for the Tājika work *Praśnatantra*.⁸ Although the latter is customarily attributed to the sixteenth-century Brahman author Nīlakaṇṭha Daivajña of Varanasi,⁹ closer examination of the extant text and of its early seventeenth-century commentary by Viśvanātha Daivajña has shown it to be little more than a collage (possibly but not necessarily put together by Nīlakaṇṭha), the central part of which was apparently a much earlier Sanskrit epitome of Arabic writings by the authors just named. The name of

4 See Pingree 1981b.

5 See Plofker 2010.

6 See Pingree 1997: 79 f.

7 See Gansten and Wikander 2011.

8 An anonymous reviewer of the present article expressed surprise at the idea of an Indian author reading and translating directly from Arabic, something the reviewer felt would indicate an ‘unusually capable polyglot’ because normally ‘Arabic texts make their way to the Sanskrit scientists via Persian or even via conversational renderings in Urdu’. Setting aside the question of how apt the designation ‘Urdu’ might be in the historical context discussed here, there seems to me little reason to suppose that a presumed native speaker of an Apabhraṃśa such as Old Gujarati would require markedly greater linguistic skills to master Arabic than Persian. It is also a historical fact that Arabic was the predominant language of Muslim scholarship during the period under consideration. Persian did indeed become the official language of the Delhi Sultanate and, later, the Mughal Empire, as well as a South Asian lingua franca; but the Sanskrit authors in question were still living under the Hindu rule of the Vāghelās. As remarked by Pingree (1997: 80), the fact of a few Sanskrit renderings of Arabic terminology conforming to Persian pronunciation may simply indicate ‘that the Indians learned how to read Arabic texts from speakers of Persian’.

9 The beginnings of this attribution are unknown, but it is conspicuous by its absence from the writings of Balabhadra, who studied under Nīlakaṇṭha’s younger brother Rāma and who quotes copiously from Nīlakaṇṭha’s *Samjñātāntra* and *Varṣātāntra* in his 1649 *Hāyanaratna*; cf. section 5 below. It was, however, accepted by Pingree (1970–94 A3: 180, 1981a: 113).

the epitomist—mentioned by Viśvanātha in passing, as a matter of common knowledge—was Samarasimha.¹⁰

The dependence of Tājika doctrine on these ninth-century Arabic-language writers gives us an approximate *terminus post quem* for the beginning of the Indian tradition. A provisional *terminus ante quem* is indicated by the estimated dates of the two earliest preserved Sanskrit works in the field. The *Trailokyaparakāśa* of the Jain scholar Hemaprabhasūri is claimed on uncertain grounds to have been authored around 1248, which could make it the very first; but the oldest dated manuscript of this text was copied more than two centuries later.¹¹ Of the author himself nothing definite is known except that his *guru*, named several times in the text, was one Devendrasūri. The suffix *sūri* in this context probably indicates leadership of a lineage (*gaccha*) within the Śvetāmbara sect; the benedictory invocation being addressed to the Jina Pārśvanātha could possibly suggest this to be the now defunct Upakeśagaccha, which was unique in tracing its origin to Pārśvanātha.¹²

The other potentially earliest preserved work on Tājika—dated by Pingree to any time between 1060 and 1365, with a possible date of 1274 based on a report of a single manuscript copied in 1293—was authored by Samarasimha, who traces his ancestry through the Prāgvāta clan (*anvaya*).¹³ This is a mixed Jain and Hindu kinship group, known today as Porwad or Porwal and generally considered to form part of the non-Brahman Baniyā or merchant caste. Despite the high social standing that Samarasimha claims for his family, it thus appears that, contrary to the assertions of later Tājika authors, he was not a

10 For details, see Gansten 2014 and sections 5–6 below.

11 Pingree 1981a: 112, stating only that Hemaprabhasūri ‘is generally alleged’ to have written the *Trailokyaparakāśa* in 1248. H. D. Velankar (1944: 165) likewise states that the work was ‘composed in Saṁ. 1305’ (≈ 1248 CE), with R. S. Sharma in his edition of the text (1946: xvi) vaguely suggesting that Velankar’s dating was based ‘perhaps on the authority of some manuscript’.

12 The *Ūkeśagacchacaritra* by Kakkasūri, apparently written in the fourteenth century but extant only in a single modern manuscript discovered by John Cort in 2008 (see Cort 2008; Qvarnström 2018), relates (vv. 354–385) an incident where the Jain *guru* Jambunāga, founder of a sublineage within the Upakeśagaccha, successfully matches his skills in annual prognostication (*varṣaphala*) against that of Brahman astrologers. I am indebted to Olle Qvarnström and Sven Ekelin for bringing this passage to my attention.

13 Pingree 1997: 81, qualifying the deceptively plain statement in Pingree 1981a: 97 that ‘[t]he earliest author on *tājika* in Sanskrit was Samarasimha of the Prāgvātakula, who wrote his *Gaṇakabhūṣaṇa* or *Tājikatantrasāra* or *Karmaprakāśikā* in Gujārāt in 1274’. We can, however, be certain that Samarasimha wrote at least some works, probably including the one discussed here, before the composition of Tejaḥsiṃha’s *Daivajñālaṃkṛti*, which is securely dated to 1337 (see section 3.5 below for details).

Brahman.¹⁴ About two generations after his presumed *floruit*, another Prāgvāṭa author on Tājika, Tejaḥsiṁha, even refers to himself as ‘the son of a Śūdra’, asking that readers not disregard his work on that account.¹⁵

Regardless of whose work was earlier, Samarasiṁha appears from the later literature to have been incomparably more influential. In fact, Samarasiṁha may have been the bottleneck through which most if not all of later Tājika tradition can be traced: his distinctive misreadings of Arabic source texts are copied over and over by later authors and never challenged;¹⁶ his definitions and examples are continually cited, alluded to, and imitated; and his authority is acknowledged both explicitly and implicitly. Balabhadra, in rather grander phrasing than I have used here, repeatedly refers to Samarasiṁha as ‘anointed to the rank of a sage (*ṛṣi*) among Tājika authors’¹⁷—an expression suggesting that he regards the later tradition as an exegesis of and elaboration on Samarasiṁha’s statements, just as the religio-philosophical systems of Mīmāṃsā and Vedānta constitute exegeses of the words of the Vedic *ṛṣis*. Similarly, in a gloss at the very beginning of the *Tājikanilakaṇṭhī*, Viśvanātha as a matter of course identifies Samarasiṁha as the authority on which that work rests, with the words: ‘Why? Because Samarasiṁha has said so.’¹⁸ On several later points of debate, he remarks: ‘There is no agreement [on this matter], as Samarasiṁha has said nothing [about it].’¹⁹ A careful study of Samarasiṁha and his literary output is thus a priority in the historiography of astrology in India. I propose in this article to make a beginning, in two stages: first, by a detailed analysis of the only work by Samarasiṁha preserved in what is believed to be its entirety; and second, by examining fragments from and information about other writings attributed to Samarasiṁha by later Tājika authors.

14 Cf. note 140. The identification of Samarasiṁha as a Brahman was mistakenly endorsed, on the authority of Balabhadra (1649), in Gansten 2012a.

15 For more details on Tejaḥsiṁha, see section 3.5 below and Gansten 2017: 118–123. It has been suggested to me that Tejaḥsiṁha’s self-designation *śūdra*- should properly read *kṣudra*- ‘lowly’, as the Prāgvāṭa community would be better regarded as Vaiśyas than Śūdras. Even if manuscript evidence could be found to support this conjecture, however, it would still corroborate the non-Brahman status of the Prāgvāṭas.

16 See section 3.1 below.

17 *Hāyanaratna* 1.6: *tājikakarṭṛṣu ṛṣisthānābhīṣikṭena samarasimhena*; 2.1: *ṛṣisthānābhīṣikṭa-samarasiṁhavirodhāt*; 4.2: *ṛṣisthānābhīṣikṭasamarasiṁhavākṛye*. Text and section numbers of the *Hāyanaratna* here and below refer to my forthcoming edition.

18 *Ad Saṁjñātantra* 1.2: *kutaḥ samarasimhenoktatvāt*.

19 *Ad Saṁjñātantra* 2.55, 58–60; 3.24: *saṁmatir nāsti samarasimhenānuktatvāt*.

2 The *Karmaparakāśa*: Scope and Outlook

The only work of Samarasimha's discussed in modern scholarship—which is to say, almost exclusively, by Pingree—is that provisionally dated to 1274, known under at least four different titles as the *Manuṣya-jātaka*, *Karmaparakāśa* (or *-prakāśikā*), *Tājikanantrasāra* or *Gaṇakabhūṣaṇa*. Although titles of Sanskrit works are often fluid, we may note the unusual absence of eponyms from this list.²⁰ The designation in most common use seems to be *Manuṣya-jātaka*, although Pingree preferred *Tājikanantrasāra*. This text is currently available to me in five manuscripts, three of them incomplete, and two printed editions, of which one is little more than a reprint of the other. The editions include the late commentary of Nārāyaṇa[bhaṭṭa] *Sāmudrika*, the *Daivajñasaṃtoṣaṇī* or *Karmaparakāśikāvṛtti*,²¹ which is further available to me in two separate manuscripts lacking Samarasimha's original text. The colophons found in several of these text witnesses use the titles *Tājikanantrasāra*, *Manuṣya-jātaka* and *Karmaparakāśa* synonymously, confirming that these refer to the same work.

A close reading of the introductory and concluding sections of this work reveals several suggestive points. The text opens with the following three stanzas:

Bowing to Vāc, Gaṇapati, the foremost among the planets, that witness of actions whose attributes are imperceptible, and my teacher, I light a small lamp [called] *Light on Actions* from the *Great Lamp* [*Illuminating*] the *Tājika Teaching* composed by Śrī Khindika.²²

20 Comparable instances include Vāmana's *Vāmanatājika*, also known as *Tājikasāroddhāra* and *Varṣatantra*, and Keśava's *Tājikapaddhati*, also known as *Varṣapaddhati*, *Varṣaphalapaddhati*, *Keśavapaddhati* and *Tājikeśavī*, both probably dating to the fifteenth century. The absence of a simple eponym such as **Samarasimhatājika* for the present work may conceivably be due to the existence of a previous composition already known under such a title, and may in turn have contributed to the authorship of this later work falling into partial oblivion; cf. section 6 below.

21 Pingree (1970–94 A3: 166b, 1981a: 97) gives the author's *floruit* as ca. 1725. I am not aware of the existence of any earlier commentary on the *Karmaparakāśa*.

22 natvā giram gaṇapatiṃ grahavargamukhyaṃ
taṃ karmasākṣiṇam alakṣyaguṇaṃ gurum ca |
śrīkhindikoktagurutājikanantradīpāt
karmaparakāśam anudīpakam uddharāmi ||

This and other verses quoted below from the *Karmaparakāśa* refer to the 1886–87 edition unless otherwise stated. The orthography has been tacitly normalized, and variant readings are given only when they substantially affect the meaning. For *grahavargamukhyaṃ*, Pingree (1997: 80) reads *grhakarmamukhyaṃ*, which is almost certainly a corruption (possibly present in the 1866 Meraṭha edition referred to in Pingree 1981a: 97, which I have not

Extracting the best from that ocean of astrology which is the entire doctrine established by Śrī Garga and other sages and celebrated by Satya and other [Brahmans], made into the Tājika doctrine by Romaka and other ancient Yavanas, and bowing to the lotus feet of my teacher, I shall explain that which is always astounding to embodied beings, the flavours of food and so forth.²³

Homage to that powerful something which all learned men call action (*karman*) [and which] spiritual men [call] unfathomable [but] certain and of most manifest result; homage, moreover, to those great ones who

seen), and translates that phrase surprisingly as ‘the foremost householder (Agni)’. The *Daivajñasaṃtoṣaṇī* confirms the reading used here, glossing: *grahavargamukhyaṃ sūryaṃ natvā*. Perhaps misunderstanding this, Pingree further equates ‘that witness of acts’ with Sūrya. In reading *alakṣyaḡaṇaṃ* with *guruṃ*, Pingree—unlike myself—does follow the commentator; but the identification of ‘the teacher whose qualities cannot be qualified’ with the deity Bṛhaspati is his own. Pingree’s translation thus gives this stanza a Vedic slant not present in the original. In the present context, it seems to me more likely that Samarasiṃha is saluting a human teacher (possibly even a Persian; cf. note 8) with whom he has studied Arabic astrological texts than the *guru* as a transcendent or metaphysical principle. A more literal translation of the last phrase would be ‘I extract (*uddhr-*) a small lamp [...] from the *Great Lamp*’. The same verb recurs twice in the concluding verses of the work and, like the synonymous *udas-* of the following stanza, emphasizes Samarasiṃha’s understanding of his role as an epitomist of Tājika tradition.

- 23 *śrīgargādimunipraṇītaṃ akhilaṃ satyādibhiḥ kīrtitaṃ*
śāstraṃ tājakaśāstraṃ ādyayavanair yad romakādyaiḥ kṛtaṃ |
taddhorājaladher udasya paramaṃ natvā padābjaṃ guror
vakṣye bhogarasāditaṃ tanubhṛtāṃ nityaṃ camatkārikam ||

For *tājakaśāstraṃ*, MS N and the editions read *jātakasāstraṃ* (a common metathesis), while Pingree 1997: 80 reads *jātakasāram*, probably a mistaken emendation of the latter variant. MSS A and K₂ lack the verse, and the *Daivajñasaṃtoṣaṇī* offers no guidance. Pingree’s reading would give the meaning: ‘the entire doctrine [...] the essence of which is nativities and which was authored by Romaka and other ancient Yavanas’. My translation of the latter phrase again differs from that of Pingree, who interprets *ādyayavanair* [...] *romakādyaiḥ* as ‘by the ancient Greeks (Yavanas) and Romans’. *Romakādyaiḥ* being a *bahuvrīhi* compound, the phrase by this understanding of the two terms would in fact give the unlikely meaning ‘by the Roman(s) and other ancient Greeks’ (cf. Gaṇeśa Daivajña’s reworking of this stanza, note 119). Pingree further translates *bhogarasāditaṃ* as ‘for the enjoyment and savoring’, but the suffix *-tas* does not express purpose, nor is *rasa* an action noun. Prediction (or ‘postdiction’) of the details of meals, including the flavours of the dishes served, is in fact a recurring feature of both Arabic and Tājika astrological works, though not one found in the extant text of the *Karmaprakāśa*; cf. the discussion in section 4 below. The 1886–87 edition reads *moga* for *bhoga*, wrongly emended to *moda* in the 1915–16 edition.

have set down the canons in which expert astrologers behold it as clearly as people [behold] their image in a spotless mirror!²⁴

The first conclusion that can be drawn from this introduction is that *Karmaprakāśa* or *Light on Actions* is the original title of Samarasimha's work. We may note, indeed, the repeated emphasis on *karman* in these verses, which also serve as a *maṅgalācaraṇa* or benedictory invocation. In addition to his choice of title, Samarasimha pays homage to an abstract 'witness of actions' (*karmasākṣin*)—a rather unusual phrase in such a context, and one that strikes a personal note in comparison with the more standard salutations addressed to the goddess of speech, the remover of obstacles, the planetary deities (represented here by the foremost celestial body, the sun), and the *guru*. The ineffable force of *karman* and its power to mould men's destinies is again the subject of the third verse. Although a belief in *karman* is a central tenet of all the major Indic religions, the paramount significance accorded it here may suggest a Jain influence on the author of the *Karmaprakāśa*—not surprisingly, given the probable time and place of its composition.²⁵ The absence of any reference to Jain *tīrthaṃkaras*, however, makes it unlikely that Samarasimha himself identified as a Jain.

Among the other common designations of the *Karmaprakāśa*, the one most often encountered is *Manuṣyajāta* or *Human Nativities*. Although this title is not found in the text proper but only in its colophons, the *Karmaprakāśa*, unlike most later Tājika works, does fall squarely in the *jātaka* or genethialogy genre, as we shall see below—a fact emphasized by Samarasimha in its closing verses.²⁶ In 20.8–9, just before the *Karmaprakāśa* ends with a brief account of Samarasimha's family tree, he offers this conclusion:

- 24 *yat karmety abhidhīyate 'kḥilabudhair durbodham ādhyātmikair
atyāsannaphalaṃ dhruvaṃ balavate kasmaicid asmai namaḥ |
yad vā yadvihitāgameṣu gaṇakaśreṣṭhaiḥ sphuṭaṃ drśyate
rūpaṃ nirmaladarpaṇeṣv iva janaiḥ tebhyo mahadbhyo namaḥ ||*

Some text witnesses read *kila* for '*kḥila*–; the *Daivajñasaṃtoṣaṇī* appears to make allowance for both variants: *akhilaiḥ budhaiḥ yat karma iti abhidhīyate kila iti niścayena*.

- 25 A slightly more speculative possibility, not incompatible with that of Jain influence, is that the 'witness of actions whose attributes are imperceptible' refer to the Islamic conceptions of Allāh as essentially unknowable and as the judge of all human actions on the Last Day. A deity thus conceived may have seemed relevant to Samarasimha particularly if he had studied with a Muslim teacher (cf. note 22), and we may note that the phrase occurs in immediate proximity to *guruṃ*.
- 26 This circumstance lends some indirect support to the reading *jātakasāram* in verse 1.2 (cf. note 23), though perhaps not enough to convince.

Born from the oyster of my words that was nourished by a drop of the water of meaning from the large cluster of lotus flowers that is the *Great Teaching* composed by Śrī Khindika, these very pearls of the results of men's nativities will by their merits [*or*: strands] become a necklace gracing the breast of connoisseurs.²⁷

Learned men! If you seek to know the results of nativities, like a treasure to increase your fame, that fixed and unchanging [fate] should be understood to have been extracted from the Tājika teaching.²⁸

Aside from the somewhat unusual imagery (giving credence to the hypothesis that the text was composed in the vicinity of the Gulf of Kutch, long known for its pearl fishing),²⁹ the identification of the *Karmaprakāśa* as a *jātaka* work is

- 27 *śrīkhindikoktagurutantramahābjavṛndād*
 arthodabindum upajīvyā madukṭiśuktyā |
 jātaṃ nṛjanmaphalamauktikam etad eva
 labdhā guṇaiḥ sahṛdayorasi hāralilām ||

This stanza has been imperfectly preserved in the available text witnesses, perhaps because its intricate imagery was not fully understood. The reading *tantramahābjā* is my emendation: the editions and two of the MSS (K₁, K₂) read *tantram ihābjā*; the third MS containing the stanza (N), *tantram ihābdhi*. Alternative emendations would be *tantramahābhra* or *tantramahābda*, transforming the metaphor from 'cluster of lotus flowers' to 'mass of clouds'; cf. note 29. The MSS likewise read *arthoḍu* for *arthoda*; K₂ and N read *yuktyā* for *śuktyā*. K₁ and K₂ read *vāṇtaṃ* 'ejected' for *jātaṃ* 'born', perhaps equally acceptable, and *etad etal* for *etad eva*; all the MSS read *guṇaṃ* for *guṇaiḥ*; and the editions read *labdhvā* for *labdhā* (the latter to be understood here as the periphrastic future). As no commentary is available for this verse, Nārāyaṇabhaṭṭa's preferred readings are unknown.

- 28 *jijñāsatha janmaphalaṃ nidhim iva yadi kīrtivṛddhaye vibudhāḥ |*
 tan niyatanirvikalpaṃ tājikatantrodhṛtaṃ kalpyam ||

Here, the editions read *jijñāsyē* for *jijñāsatha*; MS N reads *jijñāsur atra*. *Kalpyam* is my emendation for the *kalpaṃ* of all available witnesses.

- 29 The trope of pearls forming from drops of (rain)water trapped inside an oyster is, however, itself an established one in Indian poetry. Warder (1972–2011 V: 202, 692) instances two stanzas, taken from the Jain author Śilāṅka and from Acalasimha, respectively (the latter translation modified):

vastūpāśrayasaundaryād apūrvaguṇam āpnuyāt |
 svacchaṃ mauktikatām eti śuktimadhyagataṃ jalam ||

'Extraordinary qualities may be obtained from the beauty of recourse to a subject; pure water becomes a pearl when inside an oyster.' (This stanza in turn recalls Kālidāsa's *Mālavikāgnimitra* 1.6, which speaks explicitly of water from a cloud; I am indebted to Andrew Ollett for this observation.)

janaḥ punyair yāyāj jaladhijalabhāvaṃ jalamucaṃ
 tathāvasthaṃ caṇaṃ vidadhāti śubhaiḥ śuktvādane |

particularly noteworthy because, as noted above, Tājika has for many centuries been chiefly associated not with *jātaka* but rather with annual prognostication (*varṣaphala*, which is derived from and subordinate to the nativity) and interrogations (*praśna*). Indeed, Balabhadra quotes a stanza, attributed to Samarasimha himself, that explicitly contrasts Tājika with *jātaka*:

In general, [true] understanding does not shine forth for men in [considering] the results of genethliology (*jātaka*), which are applied to long times. Therefore, the annual results proclaimed by Tājika are elucidated here.³⁰

A pastiche of this stanza also occurs in what has, since the seventeenth century, been the most popular Tājika textbook of all: the *Tājikanīlakaṇṭhī* completed by Nilakaṇṭha Daivajña in 1587.³¹ This work illustrates what has just been said: the former of its two volumes (*Samjñātāntra*) deals with basic principles and terminology, the latter (*Varṣātāntra*) with annual prognostication. As already noted, a third volume spuriously attributed to Nilakaṇṭha, the *Praśnatāntra*, is wholly dedicated to interrogations, but there is no volume on natal horoscopy.³² We shall return below to the stanza just quoted and to the possible significance of Samarasimha's repeated emphasis on nativities in the closing verses of the *Karmaprakāśa*.

Of the two remaining alternative titles of this work, *Tājikanāstrasāra* or *The Essence of Tājika Teachings* seems to reflect Samarasimha's claim of having extracted the choicest part of the writings of his Tājika predecessors (1.1–2), while *Gaṇakabhūṣaṇa* or *The Astrologer's Ornament* may possibly allude to the image of the pearl necklace (20.8). These two passages—enclosing, as it were,

*tatas tām śreyobhiḥ pariṇatim asau vindati yayā
rucim tanvan pīnastanihṛdi tavāyaṃ vilasati ||*

'A person through merits may become water in the ocean; in this state he is transformed through good deeds into a cloud; then in the mouth of an oyster he finds through better ones that maturity through which, [as a pearl necklace] spreading lustre, he sports here on your heart which has full breasts.'

³⁰ Quoted in *Hāyanaratna* 1.2. See quotation 'a', p. 121 below, for the Sanskrit text.

³¹ *Varṣātāntra* 1.1; cf. quotation 'b', p. 121 below. References to the *Tājikanīlakaṇṭhī* (*Samjñātāntra* and *Varṣātāntra*), as well as the received text of the *Praśnatāntra*, follow the Jośi (2008) edition. The term pastiche is used here and below not in a pejorative sense, but to signify an imitation comprising both content and style (by verbatim borrowing and/or use of closely synonymous phraseology).

³² For the textual history and antecedents of the *Praśnatāntra*, already touched upon above, see Gansten 2014 and sections 5–6 below.

Samarasiṁha's work between them—are also significant in that they reiterate the fact of the dependence of the *Karmaprakāśa* on one particular source: the *Gurutājikantradīpa* or *Great Lamp* [Illuminating] the *Tājika Teaching* (or, in the shorter version of the name, the *Gurutantra* or *Great Teaching*) of Khindika. Neither this work nor its author has been clearly identified; and while Samarasiṁha, writing in Sanskrit, gives it a Sanskrit title, we do not know with certainty in what language the text itself was written. Pingree believed it to have been a work translated from Arabic or Persian into Sanskrit some decades before Samarasiṁha composed his digest of it and claimed, unfortunately without giving details, that quotations from the [*Guru*]tājikantradīpa occur in later Tājika texts.³³ On the other hand, Balabhadra—admittedly some four centuries after the presumed date of the *Karmaprakāśa*—was unaware of any earlier Sanskrit sources and believed Samarasiṁha to have translated a Tājika work directly from 'the Persian language' (which he seems not to distinguish from Arabic) into Sanskrit.³⁴

The possible identity of Khindi[ka] (the suffix appears to have been added here for purely metrical reasons) or Khindhi, who is mentioned as an authority by several later Tājika authors, has been discussed elsewhere. Briefly, *pace* Pingree, there seems to be no reason to believe this name to be derived from a Persian or Arabic (al)-Hindī, and in fact the linguistic evidence of the preserved corpus of Sanskritized Tājika terminology militates against the supposed sound change *h* > *kh* and rather supports Albrecht Weber's original

33 Pingree 1997: 81 (omitting *Guru-* from the title). In my relatively extensive researches into Tājika literature, I have not so far come across any quotations attributed to the *Gurutājikantradīpa*, *Tājikantradīpa*, or *Gurutantra*. References to, if not quotations from, 'Khindika' do occur; but a simple point that nevertheless deserves to be made here is that Tājika writings, like many branches of Sanskrit literature, are often pseudepigraphic. Such references need therefore no more be genuine than those to supposedly ancient, but in fact wholly fictitious, authorities such as Hillāja (cf. Gansten 2012a and note 134 below).

34 *Hāyanaratna* 1.2; for the full quotation, see note 140 below. Unlike Samarasiṁha, Balabhadra, whose patron was Shāh Shujā', lived and worked in the Persian-speaking milieu of the Mughal court. Although his writings make use of more than two dozen technical Tājika terms derived from Arabic, he never mentions that language by name but rather refers explicitly to all Tājika terminology as 'Persian', instancing the word *ikkavāla* (Arabic *iqbāl*). Minkowski (2014: 117) similarly speaks of Tājika as 'Persianate astrology in Sanskrit, including "exotic" Persian technical terms for features not found in *siddhāntic* astrology'. Persian does, of course, contain many Arabic loanwords, but only two Tājika technical terms known to me are of actual Persian origin (those, too, transmitted via Arabic sources): *hillāja* and *khattakhutta*, both of which were soon mistaken for personal names (cf. note 134).

identification, not mentioned by Pingree, of Khindi with the Ya'qūb ibn Ishāq al-Kindī mentioned above.³⁵

In addition to 'Khindika', Samarasimha in his opening stanzas refers to three authorities by name, two Indian and one Yavana. The former are the ancient and semi-mythical Garga and Satya, presumably mentioned separately as representing the categories of sages (*muni*) and ordinary (Brahman) authors, respectively.³⁶ Romaka or 'the Roman', likewise considered ancient (*ādya*), may—if accepted as a historical person—refer either to a Hellenistic author whose works were preserved in Arabic or to a Byzantine author.³⁷ The tendency towards hybridization that has been noted in later Tājika authors is thus present to some extent even in the *Karmaparakāśa*.³⁸ Nevertheless, a close examination of the *Karmaparakāśa* reveals that Pingree's view of Tājika as essentially Indian astrology, with Perso-Arabic elements added to it, is incorrect.³⁹ The actual situation, as we shall see below, is the reverse: Perso-Arabic material comprises the bulk both of the *Karmaparakāśa* and of the Indian tradition of Tājika generally, while indigenous astrological sources and concepts are employed only sparingly.

3 Sources, Structure and Content

Despite Samarasimha's repeated statements about his primary source, all sections of the *Karmaparakāśa* that I have so far been able to trace are in fact derived from authors other than 'Khindika'. The importance for the Tājika tradition of Sahl ibn Bishr, whose name to my knowledge is never mentioned

35 See Gansten 2012a for the full argument. For Pingree's views, see Pingree 1970–94 A2: 80a; 1981a: 97; and 1997: 80, where the certainty of the earlier statements has been softened with a 'probably'. For Weber's views, see Weber 1853: 249. Pingree's belief that 'Khindika' had composed a work in Sanskrit naturally rests on his identification of this author as an otherwise unknown 'Indian' (al-Hindī) rather than as the Arab al-Kindī.

36 For Garga and Satya, see Pingree 1978 and 1981 *passim*.

37 The self-identification of the Byzantines as Romans (ῥωμαῖοι) was carried over into Arabic as *ar-rūm*. The Byzantine astrologer of greatest importance for the Arabic tradition was Theophilus the Philosopher (695–785), known in Arabic as Thūfil ibn Thūmā, from Edessa in present-day Turkey (near Ḥarrān, known for its enduring tradition of Greek science and philosophy, Hermeticism and astral religion). See Pingree 2001: 13–20; Dykes and Gramaglia 2017.

38 For hybrids of classical (pre-Islamic) Indian and Tājika astrology, cf. Gansten 2014.

39 Pingree 1997: 81, also echoed by Minkowski (2004: 330), who states that Tājika is 'a Persianized version of Indian astrology [...] Sanskrit Jyotiṣ [sic] astrology with some distinctive, imported features'.

by any Sanskrit author, has been demonstrated before; as we shall see, Sahl is also one of the sources of the *Karmaparakāśa*. To account for the apparent Tājika misattributions of Sahl's works, I have previously hypothesized the existence of a medieval compendium of astrological texts containing excerpts from Sahl, al-Kindī, and possibly other Arabic-language authors, and mistakenly credited to al-Kindī alone.⁴⁰ A variation on this scenario would be a compendium actually compiled by al-Kindī from earlier sources, including Sahl. Such a compendium could be the text referred to by Samarasiṁha as the *Gurutantra* or *Gurutājikantrādīpa*, which would explain his apparently contradictory identification of his sources both as this one particular work by 'Khindika' and as the entire 'ocean of astrology' authored by 'ancient Yavanas'. If this hypothesis is correct, the *Guru-* of the title (somewhat unusual, though not unprecedented, in the sense 'great') likely translates *al-kabīr*, commonly occurring in titles of Arabic astrological works.⁴¹

The *Karmaparakāśa* consists of twenty chapters comprising nearly 400 stanzas in a profusion of metres, the number of stanzas in a chapter varying from 6 to 54.⁴² The structure of the text appears to be a truncated version of a pattern common to many Arabic-language textbooks, being loosely based on the twelve astrological places or houses. It should be noted in this regard that while the *topics* of such textbooks are often demarcated according to the significations of the twelve places, the sequential *arrangement* of those places is occasionally adjusted so as to group related topics together (for example, social eminence and wealth), or to make chronological sense in the context of a life reading (for example, by considering marriage before children, or by deferring the consideration of death to the end).

The text is thus divisible into five main sections. Chapters 1–4 deal with introductory matters and definitions; chapters 5–13 concern various aspects of the body, its health and life, relating to the first house of the horoscope (but including material on illness and death, which might more properly have been assigned to the sixth and eighth houses, respectively); chapters 14–16 discuss matters of livelihood, wealth and poverty, relating to the second house (but including material on occupation and status that might have been assigned to the tenth); and chapters 17 and 18 concern siblings and parents, relating to the third and fourth house, respectively. Finally, and somewhat abruptly, chapters

40 Gansten 2012a.

41 See Sezgin 1979 *passim*.

42 Although the metres used are chiefly syllabic, including *śloka*, *pañcacāmara*, *upajāti*, *śālinī*, *svāgatā*, *mālabhāriṇī*, *jaladharamālā*, *toṭaka*, *drutavilambita*, *puṣpitāgrā*, *praharṣiṇī*, *vasantatilakā*, *mālinī*, *mandākrāntā*, *śikharīṇī*, *śārdūlavikrīḍita* and *sragdharā*, a limited number of stanzas in varieties of the moraic *āryā* metre are also present.

19 and 20 contain a discussion of female nativities and ‘miscellaneous’. There are no chapters relating to the topics of the remaining horoscopic places, including marriage (the seventh house), children (fifth), travels and religion (ninth), friends (eleventh) and enemies (twelfth). A closer examination of each of the five sections of the *Karmaparakāśa* will be helpful in determining the sources employed by Samarasiṃha. For the sake of convenience, I shall use the printed editions (identically numbered) to refer to chapters and verses, although their readings will sometimes be corrected on the basis of manuscript evidence.

3.1 *Introductory Matters (Chapters 1–4)*

From the order in which it is arranged, chapter 1—*Rāśyadhikāra* ‘On the zodiacal signs’⁴³—appears to be based largely on Sahl ibn Bishr’s popular introduction to astrology,⁴⁴ although it is a highly condensed rendering. Indeed, as will be discussed further below, the introductory material found in the first four chapters of the *Karmaparakāśa* may be twice abridged. Among the distinguishing Graeco-Arabic doctrines related, particular mention may be made of the imperfectly transmitted characterizations of the signs as hot, cold, moist and dry (1.8); the *via combusta* (1.9); the system of five zodiacal dignities (*pañcavargī*), complete with a model of point values (1.11–23); the so-called blind degrees (1.25–28); and the four kinds of planetary rejoicing (1.30). The zodiacal melothesia immediately following the *maṅgalācaraṇa* (1.4), not from Sahl’s *Introduction*, is too brief for its source to be identified.

The discussion of the five dignities, which in the Arabic sources are invariably domicile, exaltation, triplicity, term and decan (or ‘face’), appears to derive from a source that also included the use of the Indian *navāṃśa* or ninth-part. This zodiacal division—presumably introduced into the Arabic astrological synthesis through the Persian tradition rather than directly from Indian astrologers, given the designation *nawbahra* (from Middle Persian **nō bahr*) used in Arabic⁴⁵—is found, for instance, in the writings of al-Kindī and Abū Ma’shar (787–886), but not in Sahl. The *Karmaparakāśa* (1.11) has replaced decans (generally known in Indian astrology as *ḍṛkāṇa* or *dreṣkāṇa*, with variants) with the *navāṃśa* in its list of dignities; but in 1.20 the *ḍṛkāṇa* is

43 Chapter titles vary slightly between text witnesses; I have used those of the printed editions.

44 Sahl’s work is known under several Arabic titles, including *K. al-aḥkām ‘alā n-niṣba al-falakīya*: see Ullmann 1972: 309ff.; Sezgin 1979: 125 ff. I shall refer to it below simply as the *Introduction*; references to particular passages will follow the forthcoming translation by Dykes.

45 See Panaino 1993: 427.

nevertheless introduced and briefly explained. The passage 1.20–23 displays the beginnings of the confusion surrounding triplicities, decans and *navāṁśas* that characterizes later Tājika literature, and includes two slightly different rulership schemes for the triplicities.⁴⁶

Chapter 2, *Grahādhikāra* ‘On the planets’, seems partly to depend on Indian sources, with mention of the four Hindu social classes (*varṇa*) and the three humours (*doṣa*) of Āyurveda (2.1–5, 9). These verses are arranged topically; but in 2.6–8 they are complemented by descriptions clearly of Perso-Arabic origin, arranged by planet in the so-called Chaldean order from Saturn to the moon, rather than the order employed in classical Indian texts (based on the days of the week), and again including the fourfold qualities of hot, cold, moist and dry—alien to Āyurveda but used in Graeco-Arabic (Yūnānī) medicine. Although the brevity and generic nature of the passage make identification of the source text difficult, Sahl’s *Introduction* can be ruled out. The latter part of the chapter, dealing with planetary aspects, does appear to be a mix of material from Sahl’s work (2.10–14) and another, as yet unidentified Arabic source (2.15–16).⁴⁷

Chapter 3, *Ṣoḍaśayogādhikāra* ‘On the sixteen configurations’, is the earliest extant description in Sanskrit of this important Tājika doctrine, derived from Sahl, and largely agrees with the later versions of it discussed at length elsewhere.⁴⁸ Although a detailed comparison may bring to light other features of interest, the most important point to note here is that the list of configurations in the *Karmaprakāśa*, like later Tājika sources, includes the spurious *tambīra-yoga* (from Ar. *ṭabīʿa*)⁴⁹ in the fourteenth place and ends with *duraḥpha* (Ar.

46 For a detailed discussion of this topic, see Gansten 2018.

47 For a comprehensive discussion of Tājika aspect doctrine, particularly as found in Samarasiṁha, and its antecedents, see Gansten 2018.

48 Gansten and Wikander 2011. Two minor terminological differences may deserve mention. First, *mutthāśīla* (Ar. *muttaṣīl*), which in later Tājika tradition is used synonymously with *itthāśāla* (Ar. *ittiṣāl*) to refer to any applying aspect—that is, one approaching completion—is reserved by *Karmaprakāśa* 3.4 for such an aspect when partite (occurring within one degree). Second, while supporting the later Tājika reinterpretation of *kambūla* (Ar. *qabūl*) as an applying aspect involving the moon and two other planets (3.9), the *Karmaprakāśa* also (9.17; 20.3) employs the form *makabūla* (Ar. *maqbul*) from the same root, in what may or may not be the original sense of ‘reception’—that is, of one planet applying to another while occupying the latter’s sign of domicile or other zodiacal dignity.

49 The Sanskritized forms of this and other Arabic-derived terms vary even within the *Karmaprakāśa*, often for metrical reasons. *Tambīra-yoga* arose as a ‘creative misunderstanding’ from the mistaken splitting of Sahl’s single phrase *duḥṭa t-tadbīr wa-ṭ-ṭabīʿa* ‘committing disposition and nature’; for the full argument, see Gansten and Wikander 2011: 533 ff.

duḥ ‘weakness’),⁵⁰ thus excluding Sahl’s sixteenth heading *aḥwāl al-qamar* ‘conditions of the moon’. On the one hand, the presence of this distinctive error strongly suggests that later Tājika accounts of the *ṣoḍaśayogas* all ultimately depend on Samarasiṃha. On the other hand, the *Karmaparakāśa* omits the illustrative examples of certain configurations or conditions which are found both in Sahl’s ninth-century original and in Tājika works of the sixteenth and seventeenth centuries. One such example—the only one, to my present knowledge, of which Samarasiṃha’s version is preserved—has been discussed in some detail elsewhere;⁵¹ another may be adduced here by way of illustration:⁵²

Sahl

An example of that is a question about the Sultan: and the Ascendant was Libra, and Venus (who was the lord of the Ascendant and the indicator for the one asking) was in 10° of Aries, and the Moon (who was the lord of the Midheaven and the indicator for the Sultan) in 12° of Taurus, so they were not looking at each other; and Jupiter was in 15° of Cancer, in the angle of the Midheaven, and the Moon and Venus connecting with him. So Jupiter was collecting their light in the angle, in the place of the sought thing: it indicated victory based on the assistance of a sage or man entering between them: they will come to terms through him.⁵³

⁵⁰ The term is given as *durapha* in *Karmaparakāśa* 3.2, *durahṣpha* or *durāpha* in 3.16.

⁵¹ See Gansten and Wikander 2011: 536 f., Gansten 2014: 104 ff. This example, dealing with *naql* or *nakta-yoga*, is found in Sahl’s *Introduction* 3.25–27; *Praśnatantra* 4.58–60 (Samarasiṃha’s version); *Sanjñātāntra* 2.26–27 (Nilakaṇṭha’s version); and Gaṇeśa’s *Tājikabhūṣaṇa* 4.12. The latter two sources are roughly contemporaneous, and an influence either way is unlikely. While the *Tājikayogasudhānidhi* of Yādavasūri (for whom see Gansten 2017: 125–128) may be somewhat later, it gives no sign of being influenced by either Gaṇeśa or Nilakaṇṭha. As noted in Gansten 2014 (n. 16), this work offers a slightly different example of *nakta-yoga* (6.15, quoted in *Hāyanaratna* 3.5), though still involving the same topic of marriage and the same three planets. A subsequent examination of MSS of the *Tājikayogasudhānidhi* reveals, however, that Sahl’s original version is in fact added briefly as a variant in the next verse (6.16). The major differences between Sahl’s version and those of the Tājika writers concern the degrees of longitude assigned to the planets involved and the sign occupied by the moon. The reason for this appears to be that Samarasiṃha simplified his examples by excluding such data, leaving later authors the options of doing the same (Gaṇeśa’s choice) or of inventing their own degree and sign positions (Nilakaṇṭha’s and Yādavasūri’s choice).

⁵² This example was omitted, presumably by oversight, from the edition and translation of Sahl’s text in Stegemann 1942, as well as from the translation in Dykes 2008 (though it is present in the Latin text; see Zahel 123v). As a consequence, Gansten and Wikander (2011: 537), briefly alluding to it, mistakenly state that it does not derive from Sahl.

⁵³ *Introduction* 3.29–30, translation taken from Dykes (forthcoming), slightly modified.

Nilakaṇṭha	Gaṇeśa	Yādavasuṛi
If Venus, ruling the Libra ascendant in a question on attaining kingship, is in Aries with sixteen degrees, and the moon, ruler of [the place of] kingship, is in Taurus with six degrees, there is no aspect between them. But [if] Jupiter, slow[er than both and] placed in Cancer with ten degrees, aspecting both within its orb, gave the light of the faster moon to Venus, one should consider and predict that [the querent] will attain his position through a counsellor. ^a	Venus, ruling the Libra ascendant in [a question on] attaining kingship, was in Aries; the moon, ruler of [the place of] kingship, was in Taurus: there was no aspect between them. Jupiter, slow[er than both and] placed in the middle, aspecting [them] within its orb and taking the light from the faster moon, gave it to Venus: before long [the querent] attains a lofty position by the agreement of a good counsellor. ^b	The ascendant was Libra; Venus was placed in Aries with twenty [degrees], and the moon in Taurus with four: there was no aspect between them. Jupiter in Cancer at twelve [degrees], taking the light from the moon, gave it [to Venus]: [the querent] attains royal authority through a counsellor. ^c

a *Samjñātāntra* 2.29–30:

*rājyāptipṛcchātulalagnanātho meṣe sitas tv aṣṭilavair vṛṣasthaḥ |
candro rasāṁśair yadi rājanātho dṛṣṭis tayor nāsti gurus tu mandaḥ ||
digaṁśakaiḥ karkagatas tu paśyann ubhau maho diptalavaiḥ sa cāndram |
dadau sitāyeti padasya lābho 'mātyena bhāvīti vimṛśya vācyam ||*

b *Tājikabhūṣaṇa* 4.14:

*rājyapṛāptitūlāvilagnapabhrgur meṣe vṛṣe candramā
rājyeśas tv anayor na dṛṣṭir amarācāryo 'ntarasthaḥ sthirah |
paśyan diptadṛśā carāmr̥takarāt tejaḥ pragrhyārpayac
chukrāyorupadopalabdhir acirāt sanmantriṇo 'ṅgikṛteḥ ||*

c *Tājikayogasudhānidhi* 6.18:

*lagnaṁ tulā bhrgusuto jagato 'bhrapakṣaiś
candro vṛṣe tu nigamair anayor na dṛṣṭiḥ |
karke gurū ravimito himagor grhītvā
tejo 'dadāc ca sacivena nṛpāspadāptiḥ ||*

The three Sanskrit versions are strikingly similar; but while there can be no doubt that the Mughal-era authors all ultimately depend for their example on Sahl, there are sufficient differences between the Arabic and Sanskrit versions to assume that the latter derive from a common, intermediate version rather

than directly from the *Introduction*.⁵⁴ For Samarasimha to constitute this crucial link between Sahl and the later Tājika tradition, we have to posit another, perhaps fuller work authored by him, containing both the erroneous division of the *yogas* and the examples lacking from the *Karmaparakāśa*. We shall return to this scenario below.

Chapter 4, *Dvātriṃśatsahamādhikāra* ‘On the thirty-two *sahas*’, is a list of so-called lots (Ar. *sahm*, translating κλῆρος), derived by measuring the longitudinal distance between two predefined points in a horoscope (typically two planets) and projecting it from a third point (typically the ascendant degree). The lots constitute a method of assigning concrete meanings to different areas of the zodiac, and may have begun as an alternative to the twelve-house system;⁵⁵ as the number of lots increased during the medieval period, their significations often grew more specific. The exact list of lots given in this chapter is not, to my present knowledge, found in any single Arabic author, a circumstance strengthening the hypothesis that Samarasimha’s source text was a compendium of astrological works. The great majority of the lots listed in the *Karmaparakāśa* are, however, found in several Arabic-language sources of the eighth and ninth centuries—either in wholly identical form or slightly corrupt or simplified (for instance by omitting variants, including but not limited to variations between a diurnal and a nocturnal formula), but still clearly recognizable. The Arabic authors whose lists of lots display the closest parallels to the *Karmaparakāśa* are Abū Ma’shar and ‘Imrān ibn Aḥmad.⁵⁶

54 One such difference is the mistaken notion, common to all three Tājika authors, that the slowest-moving planet in the *jāmi’a/yamayā* configuration should occupy an *intermediate* degree with regard to the other two planets involved (within their respective zodiacal signs). This mistake may have arisen either from an analogy with the fastest-moving planet in the previous configuration (*naql/nakta*) or from an over-literal reading of Sahl’s description of the outcome (‘a sage or man *entering between them*’ [my emphasis]). As seen from Sahl’s original, both the faster-moving planets in a *jāmi’a* must in fact occupy earlier degrees in order to form applying aspects (approaching the ideal angular distance) with the planet ‘collecting their light’.

55 See the discussion in Brennan 2017: 511–534.

56 This ‘Imrān, who may or may not be identical with ‘Alī ibn Aḥmad al-‘Imrānī (d. 955), is the otherwise unknown author of a *K. fihi aḥkām majmū’a min kutub al-ḥukamā’* (*Book of Judgements According to a Selection of Books by the Wise*). References below to lots in this work (henceforth, ‘Imrān) and to Abū Ma’shar’s *K. al-Mudkhal [al-kabīr] ilā ‘ilm aḥkām an-nujūm* (*Mudkhal*) are based on manuscript sources. In the case of ‘Imrān, whose lots are given in tabulated form, references are to page, column and row; for *Mudkhal*, the last figure refers to the number of the lot listed, rather than to the line or paragraph. Additional references will be made to Abū Ma’shar’s own abridged version, *Mukhtaṣar al-mudkhal* or *K. al-Mudkhal aṣ-ṣaghīr* (*Mukhtaṣar*).

Even disregarding slight variations between the initial list (4.1) and the subsequent delineation of formulae (4.2–6), the lots in the *Karmaparakāśa* appear somewhat disarranged, though not so much so as to obscure the underlying structure entirely:

1. Fortune	2. Knowledge	3. Love	4. Valour
5. Renown	6. Wealth	7. Bondage	8. Father
9. Mother	10. Brothers	11. Expansion	12. Wife
13. Death	14. Journeys	15. Desire	16. King
17. Enemies	18. Sons	19. Daughters	20. Work
21. Forbearance	22. Dignity	23. Life	24. Illness
25. Friends	26. Marriage	27. Learning	28. Faith
29. Strength	30. Body	31. Business	32. Work of the hands

Items 1–5 and 7 constitute the so-called planetary lots, of which I have translated the Sanskrit names of the first and most important one (*punya*, *sukṛta*) rather freely as ‘fortune’ to agree with its well-known designation in other languages (κλήρος τῆς τύχης, *sahm as-sa’āda*, *pars fortunae*); the sense of the Sanskrit is undoubtedly that of merit accumulated in previous lifetimes, manifesting as good fortune in the present. This lot appears from the earliest times to have been associated with the moon. The following one, correspondingly identified with the sun, is known in Greek as κλήρος τοῦ δαίμονος, rendered in Arabic as *sahm al-ghayb*—probably in the sense of ‘the unseen’, understood in its turn by the Indian translator as ‘[spiritual] knowledge’. From these two lots were derived two others, those of love and necessity, forming a tetrad found in several Hellenistic and early Arabic sources.⁵⁷ The latter pair, of which only the lot of love is found in the *Karmaparakāśa*, was eventually associated with Venus and Mercury, respectively, and alternative formulae for them

57 See, e.g., *Carm. astr.* fragment II E 3; Vett. Val. II 16, IV 11; *Lib. Arist.* III xii 1–2. (*Carm. astr.* is preserved in an interpolated Arabic translation via Middle Persian in addition to fragments of the original Greek; an improved English translation was recently published as Dykes 2017. The Arabic original of *Lib. Arist.* was probably authored by Māshā’allāh ibn Atharī, d. ca. 815; an English translation from the Latin is found in Dykes 2009.) Additionally, the group of four lots is mentioned in Macr. *Sat.* I 19,17 (transl. Kaster 2011: 267 ff.): ‘The Egyptians also use the caduceus’ significance to explain people’s horoscope (“genesis” it’s called), saying that four gods attend a human being as it’s born, Deity [*Daimôn*], Chance [*Tykhê*], Love [*Erôs*], and Necessity [*Anangkê*] [...]’ For a detailed study of these lots, see Greenbaum 2016: 279–388. Burnett and Pingree (*Lib. Arist.* loc. cit.) note that Sahl associates these four lots, along with a fifth of friendship (different from the one in the *Karmaparakāśa*), with the Persian astrologer known as al-Andarzaghār.

were devised that involved these two planets. Similar formulae were then devised for the remaining planets, producing the lots here called valour (Mars), bondage (Saturn), and—with some variation—renown (Jupiter).⁵⁸ The presence of the original calculation of the lot of love indicates a fairly early source for at least some of the lots in the *Karmaprakāśa*.

Next follows a series of lots which may be assumed originally to have been arranged in order of the horoscopic houses to which their significations may be said to correspond (a common schema): wealth relates to the second house, brothers to the third, father and mother to the fourth; the lot of ‘expansion’ (*vibhūti*) is properly that of offspring (*sahm al-wuld*, seemingly misunderstood: the Arabic root *wld* ‘bring forth’ overlaps to some extent in meaning with Sanskrit *vi-√bhū*), belonging to the fifth house; wife and desire relate to the seventh house,⁵⁹ death to the eighth, journeys to the ninth, the king (or, perhaps more relevant in a nativity, kingship)⁶⁰ to the tenth, and enemies to the twelfth. While the ‘planetary’ lots are often assigned to the first house, the sixth and eleventh houses are not represented in this list.

The remaining lots—including those of illness (sixth house) and friends (eleventh house)—appear to have been added more or less haphazardly to this list, perhaps from several sources. The lots of sons, daughters, work, life, and marriage are again standard lots found in several Arabic-language sources. The lot of business appears to be a mere variant on that of work, while the lot of illness is surely a corrupt version of the lot of the destroying planet

58 These alternative and additional formulae are found in Paul of Alexandria, who claims to cite them from the lost work *Panaretus*; see Paul. Al. 23 (transl. Greenbaum 2001: 41–44; Holden 2012: 41–46). Although they are not, to my present knowledge, found in the Tājika tradition, Nilakaṇṭha (*Samjñātāntara* 3.7) states—unlike the *Karmaprakāśa*, and possibly as a result of misunderstanding—that the lot of love, which he calls that of friends (*mitra*), should be projected from Venus rather than from the ascendant. The Jupiter lot was originally derived from the lot of the daimon or *sahm al-ghayb* and commonly called the lot of victory (κλῆρος τῆς νίκης, *sahm az-ẓafar*), but the *Karmaprakāśa* derives it from the lot of fortune and calls the result ‘renown’ (*yaśas*). Some Arabic sources do in fact include this second variety in addition to the first—notably Abū Ma’shar (*Mudkhal* VIII 6,77), who calls it the lot of success (*sahm an-nujh*).

59 The lot called ‘wife’ in this list and ‘others’ wives’ (*anyadāra*) by Nilakaṇṭha (*Samjñātāntara* 3.16), taken from Saturn to Venus, is known in Arabic as *sahm at-tazwīj* [*ar-rijāl*] ‘the lot of marriage [for men]’. Although the lot here called ‘desire’ (*āśā*), taken from Venus to Saturn, is commonly known in Arabic sources as the lot of marriage for women (*sahm at-tazwīj an-nisā*), *Lib. Arist.* III vii 1,6 gives it the more sexualized designation *pars incestus et fornicationis*. The source of the *Karmaprakāśa* may have shared this tradition.

60 This lot is commonly known in Arabic sources as *sahm ash-sharaf* ‘the lot of nobility’. Nilakaṇṭha (*Samjñātāntara* 3.22, 10) calls it *gurutā* ‘dignity’, using the synonym *gaurava* for the lot called *gurutā* (no. 22) in the *Karmaprakāśa*.

(κλήρος αναίρετου, *sahm al-kawkab al-qattāl*).⁶¹ The lot of forbearance is given in other Tājika sources as a double lot—that of quarrel and that of forbearance or forgiveness—which seems to confirm its identity with the Arabic lot of disputes and opponents (*sahm al-khuṣūmāt wa-l-mukhāṣimīn*).⁶² The lot of learning is less common: it is found only in the works of Abū Maʿshar (and possibly, in corrupt form, in that of ʿImrān).⁶³ The same authors give a ‘lot of authority and of what the native does’, immediately followed by a ‘lot of manual workers and trades’.⁶⁴ These two lots seem to have been conflated in the *Karmaparakāśa*, where the name of the last lot corresponds to the latter, but the formula used to the former. It thus seems likely that Samarasiṁha’s source text depended on one of these authors (the more well-known of which was certainly Abū Maʿshar) for at least part of its list of lots. The remaining five lots of the *Karmaparakāśa*—those of dignity, faith, friends, strength, and body (the last three of which share their formula with the lot of renown)—have no parallels in any Arabic source known to me.⁶⁵

Of these 32 lots, all but two are present in what has become the most widespread list of Tājika *sahas*, compiled some three centuries later by Nīlakaṇṭha and comprising 50 items.⁶⁶ The two *Karmaparakāśa* lots absent from Nīlakaṇṭha’s list are what may be called duplicates, sharing a formula for calculation with one or more other lots of different name and signification; of Nīlakaṇṭha’s remaining 20 lots, four are likewise duplicates. But what most concerns us here is the fact that Balabhadra, relaying Nīlakaṇṭha’s list in his *Hāyanaratna*, quotes Samarasiṁha on the formulae of two lots that are absent

61 This lot is properly taken from the *ruler* of the ascendant to the moon by day, the reverse by night, whereas the *Karmaparakāśa* counts from the moon to the ascendant itself, day and night. See Rhet. v 77 (CCAG VIII 4: 199; an English translation is available as Holden 2009a); *Mudkhal* VIII 6,51; *Mukhtaṣar* 6,37.

62 See *Mudkhal* VIII 6,49; *Samjñātāntra* 3.13.

63 See *Mudkhal* VIII 6,59; ʿImrān 184 A 8. This lot, taken from Saturn to Jupiter by day and reversed at night, is unusual in that it is projected from Mercury rather than from the ascendant.

64 For the former lot (*sahm as-sultān wa-ayy ʿamal yaʿmalu al-mawlūd*), see *Mudkhal* VIII 6,69; *Mukhtaṣar* 6,49; ʿImrān 183 B 11; for the latter (*sahm al-ʿummāl bi-yadayhim wa-t-tijārāt*), *Mudkhal* VIII 6,70; ʿImrān 183 B 12.

65 The lot of dignity (*gurutā*) is taken by day from the moon to Jupiter and projected from the sun; by night, from the sun to Jupiter and projected from the moon. The lot of faith (*śraddhā*), also called that of mental impressions (*vāsanā*), is taken from Venus to Mars, apparently both day and night. The planets involved suggest that the lot may originally have been associated with marital fidelity rather than religious faith; I am indebted to Konrad Klawikowski, MA, for this observation.

66 *Samjñātāntra* 3.5–24 (though differing from the *Karmaparakāśa* in 4 cases out of 30 on whether or not a given formula should be reversed in a nocturnal nativity).

from the *Karmaparakāśa*.⁶⁷ Other such lots, not mentioned by Balabhadra, may of course exist. In the light of this finding, it seems advisable to treat with some caution Pingree's assumption that the seeming 'growth in the number of lots indicates that new Arab/Persian sources were constantly being tapped by the Indian *tājikīs* [*sic*]'.⁶⁸

3.2 *Body, Health and Life (Chapters 5–13)*

Following this introductory section, chapter 5, *Niṣekādhikāra* 'On impregnation', sets out the doctrine generally known in western literature as the trutine of Hermes,⁶⁹ positing an astrological correlation between the times of conception and birth—the ascendant degree in one being the ecliptical longitude of the moon in the other, and vice versa. This in turn makes it possible to adjust an approximate ascendant and its concomitant time of birth. The average duration of a normal pregnancy is assumed to be 273 days or exactly ten sidereal months, with a maximum deviation of a fortnight either way.⁷⁰ The antecedents of this doctrine, ascribed by Hellenistic writers to Petosiris, are quite

67 The two quotations, found in *Hāyanaratna* 4.3, concern the lots of ability (*sāmarthyā*) and of affliction (*saṃtāpa*), numbering 8 and 34, respectively, in Nilakaṇṭha's list. The partial stanzas are both in *āryā* metre:

sāmarthyasahamam ahni ca lagnapater bhūsutaṃ niśi vilomam |
 [...] *saṃtāpa-* |
sahamam aharniśam indor mandāntaṃ saṣṭhataḥ pātaḥ ||

That these stanzas do not belong to a variant text of the *Karmaparakāśa* but to a different work by Samarasiṃha is strongly suggested by a third partial quotation in the same section of the *Hāyanaratna*, dealing with a lot that does occur in the *Karmaparakāśa*. This is the lot of wealth, a definition of which (also in *āryā* metre) is quoted by Balabhadra:

[...] *arthasahamam dvitīyādhipāt |*
dvitīyaṃ ca dinarātram [...]

The corresponding definition in *Karmaparakāśa* 4.2, while identical in content, is in *śārdūlavikrīḍita* metre and very differently phrased:

[...] *dhanam sveśād dhanāntaṃ sadā ||*

68 Pingree 1997: 89. The superficially regular derivation **tājikin* is not attested in any sources but was invented by Pingree. Like many Sanskrit *vṛddhi*-derivatives (e.g., *jaina*, *bauddha*, *sāmkhya*), the noun *tājika* is consistently used of both doctrine and practitioner, the distinction to be determined by grammatical gender and, above all, context.

69 Latin *trutina* (from τρυτήνη) 'balance, pair of scales'. In the research literature the trutine is sometimes referred to as the 'rule of Petosiris'.

70 In this context, 'conception' does not, of course, refer to fertilization of the ovum (conception in the modern medical sense), but rather to the time of seminal ejection. It is the interval between this moment and birth that is estimated at an average of 273 days, or 39 weeks.

ancient: the average value of $273\frac{1}{3}$ days for the gestational period is known from Babylonian astrological sources.⁷¹

The distinctive form in which the calculations are presented in the *Karmaprakāśa*, including the conversion of twelve-degree segments into twenty-four half-degrees to facilitate the reckoning of hours in a nychthemeron, is almost certainly derived from Abū Bakr al-Ḥasan ibn al-Khaṣīb's late ninth-century *Kitāb al-mawālīd*, thus providing us with our second identifiable Arabic source text. In the absence of an Arabic edition of the *K. al-mawālīd*, I have based my comments here and below on its early thirteenth-century Latin translation *De nativitatibus*.⁷² While a careful comparison between the extant manuscripts of the Arabic text and those of the *Karmaprakāśa* might bring further details to light, such an exercise is beyond the scope of the present article; and as the instances below will show, the Sanskrit and Latin texts are generally so similar as to leave their common origin in little doubt.

Verse 5.7 appears to be a somewhat garbled version of the related doctrine known in Arabic as *an-namūdār* (from the Persian; generally Latinized as *animodar*), too brief for the immediate source to be identified.⁷³ Chapters 6 and 7—*Ariṣṭādhikāra* 'On fatality' and *Ariṣṭabhaṅgādhikāra* 'On cancellation of fatality' (alternatively called *Jīvananirṇayādhikāra* 'On the determination of life')—are also closely based on Abū Bakr, with some of the material arranged slightly differently than in the Latin version.⁷⁴ These chapters describe the division of nativities into four categories: those who are born dead or die immediately after birth; those who die in childhood; those who die young; and those who attain a full span of life—each with its own astrological criteria. This discussion is followed by material on the specific kinds and times of childhood illnesses according to the decans of the zodiacal signs, on the examination of the moon's position on certain days following birth, and on the nativities of children abandoned by their parents. The *Karmaprakāśa* section on decans (6.16–23) is garbled and disorganized; interestingly, the same is true of the Latin versions of Abū Bakr's work, suggesting corruptions occurring very early in the

71 The opinion of Petosiris is reported in Antiochus 21, on which all surviving sources are based; see Porph. *Isag.* 38 (CCAG V 4: 210; an English translation is found in Holden 2009b) and Heph. II 1,2; III 10,5. For the Babylonian material, see Rochberg 1998: 73–76; for a full treatment of the ancient doctrine, Frommhold 2004: 70–172; for the figures of Nechepso(s) and Petosiris, Heilen 2015: 539–562 and Brennan 2017: 72–77.

72 Albubather, 1501 edition (translation dating to ca. 1218). The section relevant for the trutine of Hermes is chapter 3; an English rendering of the Latin is found in Dykes 2010: 91–93.

73 The Persian meaning of *namūdār* is 'proof, model'. For the origin of the *animodar* doctrine, see Ptol. *Tetr.* III 3.

74 See Albubather 9–10; Dykes 2010: 113–124.

manuscript tradition, prior to the east-west diffusion.⁷⁵ Chapter 7 invokes the authority of a certain 'Durvīṭṭhasa'; as confirmed by *De nativitatibus*, the name refers to Dorotheus of Sidon.⁷⁶

The brief chapter 8, *Śarīrādhikāra* 'On the body', details the physical characteristics of a native on the basis of the ruler of the (ascending?) decan. While the descriptions of the seven planets (largely a reiteration of 2.6–8) are too general for their source to be positively identified, the material is not based on the works of Sahl or Abū Bakr already discussed. The text (8.1) states that it is taken from 'Yavana' or possibly 'the Yavanas'; the order in which the planets are presented, from Saturn to the moon, confirms an extra-Indian origin.

Chapter 9, *Āyurdāyādhikāra* 'On the length of life', is a faithful if condensed rendering of Abū Bakr's version of longevity procedures based on the ἀφ᾽έτης or, to use the term most common in western literature since medieval times, the hyleg.⁷⁷ These are similar to but not identical with procedures presented by other medieval Arabic-language authors, all largely resting on Persian astrological tradition and constituting varying syntheses of the doctrines of Ptolemy, Dorotheus and Vettius Valens.⁷⁸ As in Abū Bakr, while the selection of the chief significator of life or *hillāja* (Ar. *hīlāj*, from Persian *hīlāg*),⁷⁹ is explained in some detail in the *Karmaparakāśa*, there is no mathematical elucidation on calculating its directed motion (ἄφ᾽εσις) to the killing points. This is presumably why the technical Arabic term for such motion—*tasyūr*, met with in some later Tājika texts as *tāsīra*—is not found in the *Karmaparakāśa*. We do, however, find the important term *khattakhutta* (via Ar. *kadkhudāh* from Middle Persian, translating οἰκοδεσπότης), designating the planet having authority over the *hillāja* and determining the approximate years of life allotted to the native.⁸⁰

75 See Albubather 9; Dykes 2010: 122 f. *Karmaparakāśa* 6.23 explicitly notes that the results for Virgo and Pisces have been omitted in their entirety (*noktāni kanyājhaṣayoḥ phalāni*), which is true of the Latin editions as well.

76 Albubather 12 (6r): *Dixit Dorochius*. Later Tājika sources—including a passage from Nilakaṇṭha's *jyotiṣa* section of the *Toḍarānanda* (1572), quoted by Balabhadra in *Hāyanaratna* 1.2; cf. note 134 below—mention an otherwise unknown authority called Durmukha ('Ugly-faced' or 'Foul-mouthed'); this unflattering epithet could possibly represent a corruption of the foreign name, perhaps through scribal attempts at correction.

77 Albubather 12–13; Dykes 2010: 125–134.

78 For a discussion of the ἀφ᾽έτης doctrine, see Gansten 2012b. The relevant ancient sources are Ptol. *Tetr.* III 11, Vett. Val. III 3, and *Carm. astr.* III.

79 The Middle Persian form is *hīlāg*, Arabized as *hīlāj*—not, as consistently assumed by Pingree (1976: 235–245; 1981a: 83, 97 f.; 1997: 83, 90; etc.), *haylāj*: as noted by Kunitzsch (1977: 49), medieval European transcriptions (*hylech*, *alhileg*, etc.), like the Sanskrit, all reflect a pronunciation with *ī* rather than *ay*.

80 *Al-kadkhudāh* was commonly rendered in medieval Latin as *alcochoden*, with many variants.

The list of greater, middle and lesser years given by the seven planets when they fulfil this office (9.20) deviates slightly from the standard figures according to all available text witnesses; but the figure of $39\frac{1}{2}$ for the middle years of the sun and moon does agree with Abū Bakr's text.⁸¹

Chapter 10, *Daśānayanādhikāra* 'On the calculation of periods', begins (10.1–3) as a summary of the next section of the *Kitāb al-mawālīd*, on the directed motion of the ascendant through the terms (*hadda*, from Ar. *ḥadd*) and the aspects of the planets.⁸² These verses include Abū Bakr's example of the ascendant being directed through the terms of Mercury, once using the technical designation *kisimā* (from Ar. *qisma* 'division') for such a period, but otherwise the generic Sanskrit word *daśā*. For the rest of the chapter, however, the *daśās* described are not based on directions (*tasyīr*, ἄφεσις), but rather on the so-called *fardārāt*, a mathematically far less demanding system probably of medieval Persian origin.⁸³ No variant of the word *fardār* occurs in the Sanskrit text, nor is there any indication that the transition from one prognostic method to the other is at all intentional; the impression given is rather that of a misunderstanding. The *fardārāt* are not described by Abū Bakr, so that the passage discussing them must have been excerpted from some other, as yet unidentified Perso-Arabic source.⁸⁴ The order in which the results of each planet's period are described is the classical Indian one (following the days of the week),

81 The middle years of a planet are typically half the sum of its greater and lesser years (which in the case of the sun are 120 and 19, respectively, and for the moon, 108 and 25), but Abū Bakr uses a different formula for the sun and moon, adding *half* the greater years to the lesser and then dividing the sum by two. Abū Ma'shar's *Mudkhal* (11 8) and the Latin translation of his *Mukhtaṣar* (111 6, Burnett et al. 1994: 80 ff.) agree with the resulting figure of $39\frac{1}{2}$ years for both the luminaries, while Kūshyār ibn Labbān's tenth-century *K. al-mudkhal fī ṣinā'at aḥkām an-nujūm* (111 6, Yano 1997: 178 f.) accepts it for the sun but keeps the standard figure $66\frac{1}{2}$ for the moon. The *Karmaprakāśa* further assigns Jupiter $43\frac{1}{2}$ years like Saturn, rather than the standard $45\frac{1}{2}$, and rounds the $40\frac{1}{2}$ years of Mars to 40.

82 Albubather 14; Dykes 2010: 135–138. For the terms in Tājika tradition, see Gansten 2018.

83 The *fardārāt* or *firdārāt*, with variants, are planetary periods of fixed lengths forming cycles of varying magnitudes, the least of which—totalling 75 years—is used for nativities, while greater cycles are applied to world events (mundane astrology). Both the etymology and the origin of the technique itself are unclear; see Kunitzsch 1979: 48 f. (justifiably characterizing the common derivation of the word from περίοδος—still upheld in Pingree 1997: 74, albeit with a softening 'apparently'—as 'pure conjecture'). Cf. also Burnett and al-Hamdi 1991/92, especially 299–302 on the transmission from Persian to early Arabic sources.

84 The planetary periods for a daytime nativity are given in a non-standard order (the north and south nodes of the moon intervening between Mercury and the moon itself); but thus far I have been unable to find a corresponding deviation in any Arabic source. It seems most likely to be an error originating with Samarasiṃha.

suggesting that this passage was reworked by Samarasimha rather than taken directly from a source text. We may further note the use of the technical term *dalīla* (Ar. *dalīl*) in the sense of ‘signification’ or ‘significator’, introduced here (10.8) and occurring frequently in following chapters.

Chapter 11, *Nidhanādhikāra* ‘On the end [of life]’, makes a return to the topic of the *hillāja* and discusses how to establish the precise time of death using Indian calendric parameters, though still without explaining the mathematical procedures properly underlying the method of direction. It also describes how to predict the cause of death, or of a brush with death (*apamṛtyu*)—‘by illness or by iron’—from the planet afflicting the *hillāja*. While this method appears to be derived from Ptolemy, the intermediary Perso-Arabic source is as yet unidentified.⁸⁵ The text attributes the doctrine simply to ‘Yavana’; like the similarly attributed chapter 8 above, it is also very short—with its six verses in fact the shortest chapter of the *Karmaprakāśa*.

By contrast, chapter 12, *Doṣādhikāra* ‘On defects’, is the longest chapter of the work, and is clearly based on Abū Bakr’s extensive list of astrological correlatives for various illnesses.⁸⁶ Despite its length, the *Karmaprakāśa* chapter is only a partial summary of the material in the *K. al-mawālīd*, but the sequence of the material is largely the same, dealing in order with illnesses of the eyes, ears and tongue (including speech defects); hunchbacks; leprosy and other skin ailments; madness and idiocy; epilepsy and sharp pains (*śūla*, possibly a misunderstanding: the Latin version has paralysis); ailments of the heart, belly and spleen; bilious disease; impotence, genital deformity, sexual misconduct and excessive lust; hemorrhoids and boils; dwarfishness; baldness; bad breath; bodily weakness; broken limbs; injuries to hands and legs; and general methods for determining the parts of the body vulnerable to illness as well as the time of its onset. Particular note may be made of the concept of ‘black bile’ (*kṛṣṇapitta*, 12.30), not found in pre-Islamic Indian medicine.

The first few verses of chapter 13, *Prakṛtyadhikāra* ‘On [the native’s] nature’, bring us back to the topic of directions through the terms begun in chapter 10. Based on the same section of Abū Bakr’s work, they clearly demonstrate Samarasimha’s lack of understanding of the mechanics of direction (*taṣyīr*). Abū Bakr’s example nativity has 1° Gemini (expressed in ordinal numbers as the ‘second degree’) on the ascendant, with 5° of the terms of Mercury therefore yet to rise; he converts these 5° of ecliptical longitude into 4°40’

85 Cf. Ptol. *Tetr.* IV 9. For an overview of astrological prognostication of the length of life in classical antiquity, see Heilen 2015: 984–1021.

86 Alubather 53–89; Dykes 2010: 234–259.

of oblique ascension, which he equates with four years and eight months.⁸⁷ Samarasiṁha's version has no ascensional degrees but simply puts the longitude of the ascendant at 4°40' Gemini and equates this with four years and eight months elapsed (not remaining) of Mercury's period.

The remainder of the chapter is based on the immediately following section of the *K. al-mawālīd*, treating the moral character of the native.⁸⁸ Some parts of this section found in the available Latin editions of *De nativitatibus* are missing in the *Karmaparakāśa*; interestingly, most of these are also absent from a manuscript of *De nativitatibus* dated 1458–59 (now in the Biblioteka Jagiellońska, Krakow), referenced by Dykes.⁸⁹ As it stands, the *Karmaparakāśa* (13.5–26) lists, in order, planetary configurations for courage, cowardice, irascibility, forbearance, shamelessness, bashfulness, eloquence, compassion, deceit and mendacity; further, for becoming a jester or entertainer, robber, thief, adulterer or adulteress, or a faithful husband; and finally, for generosity and greed.

3.3 *Livelihood, Wealth and Poverty (Chapters 14–16)*

The *Karmaparakāśa*'s main source of material on psycho-physical constitution, life and health is thus Abū Bakr, just as the main source of its introductory matters is Sahl ibn Bishr. The sources of the next section are less clear-cut. Chapters 14 and 15 both cover matters of wealth and occupation, the latter in greater detail, but still with some overlap, as reflected in the similar headings: chapter 14 is labelled *Upajīvikādhikāra* 'On subsistence' or *Karmapratyayādhikāra* 'On the understanding of work'; chapter 15, *Ājīvikādhikāra* 'On livelihood' or *Hastakarmādhikāra* 'On the work of the hands'. The latter is in fact based on Abū Bakr, setting out methods for determining the general nature of a native's work and his level of professional success as well as particular configurations for a variety of occupations: vendors of musk and perfumes, dyes, fruit and

87 The Latin edition actually has 4 degrees 4 minutes, using Arabic numerals; but as noted by Dykes 2010: 136 (n. 639), the correct figure has to be 4°40' to agree with the conversion into 4 years and 8 months. *Karmaparakāśa* 13.2 confirms both the number of degrees and minutes and the corresponding measure of time:

[...] *haddabhāgā vedā yutāḥ khaśrutibhiḥ kalābhiḥ* |
tatsaṁkhyakābdāni sahāṣṭamāsaiś catvāri [...]

Assuming a tropical zodiac, the figure 4°40' would be correct for a geographical latitude around 28° N, such as southern Iran (Abū Bakr was a Persian), whereas 4°04' would require a latitude around 45° N.

88 Albubather 15–52; Dykes 2010: 139–163.

89 MS BJ 793 III; see Dykes 2010: xx. The chapters not found in this Latin MS are numbered 24–30 in Albubather (1501); the material omitted from the *Karmaparakāśa* corresponds to chapters 23–31.

bark; farmers; merchants in various types of coarse or fine cloth including silk, wool and camel hair, or in lentils and grains such as barley, wheat, sesame and rice; those who deal in leather goods or in camels, donkeys, cows, horses, goats and other quadrupeds; sellers of, or workers in, pearls and gold; and craftsmen or labourers such as weavers, makers of woollen goods, carpenters and metalworkers, shoemakers, dyers, diggers, sailors, makers of tools and weapons, entertainers, physicians, hunters, fishermen and fowlers—all variously subdivided.⁹⁰

For Chapters 14 and 16 (the latter entitled *Dāridryādhikāra* ‘On poverty’) I have thus far been unable to find any clear parallel texts, though the content as such is fairly detailed and conforms to standard patterns of medieval Perso-Arabic astrological discourse—prominently featuring term and triplicity rulers, sect factors, syzygies, orientality and occidentality, and the lots of fortune and wealth. Given the underlying textual confusion suggested by the available Latin versions, the question of whether these chapters are based on authentic sections of Abū Bakr’s text, subsequently lost in the western transmission, must, for the present, remain open.

The opening stanza of chapter 14 as given by the available text witnesses is, in its former half, almost certainly corrupt:

Wealth is the foundation here [in the world]: prior to that is the work undertaken. To elucidate that, he explained an opinion. There is a description (*varṇanā*). If the moon, coming out from under the sun, [forms] a *muthaśila* with the ruler of the terms of the previous last phase (*tithi*), that [ruler] indicates the work.⁹¹

However, Nārāyaṇabhaṭṭa’s commentary implies a somewhat different reading. Text witnesses of the *Daivajñasaṃtoṣaṇī* (14.1) give two variant paraphrases, one fuller, the other seemingly abridged or incomplete:

90 Albubather 90–128; Dykes 2010: 294–324.

91 *Karmaprakāśa* 14.1 (found in MSS K₁, K₂ and N, besides the editions):

*artho hi mūlam iha tasya purāṭṭakarma
tadyaktaye matam abhāṣata varṇanāsti |
candro gatāntatithihaddabhujā dīneśān
nirgatya cen muthaśilaḥ sa hi karmadarśi ||*

The ‘previous last phase’ is the full or new moon (the last *tithi* of the bright or dark half of the month, respectively) most nearly preceding the nativity; a *muthaśila* is an applying aspect.

Here, indeed, wealth is the foundation of a man. The cause of that wealth is the work previously undertaken, [that is], acquired. To elucidate, that is, clarify that, the preceptor Varṇana stated [his] opinion.⁹²

Property is the foundation of a man. To elucidate that, he stated the opinion of the preceptor Varṇana.⁹³

This meaning, which implies the reading *varṇanasya* for *varṇanāsti*—understanding Varṇana as a proper name—seems preferable to that of the received text. Even with this emendation, however, the half-stanza does give the impression of being rather awkwardly based on a non-Sanskrit original.

No author with a name approximating Varṇana is known from either Indian or Arabic sources, although the name could conceivably be a corruption of an Arabicized form of ‘Hermes’.⁹⁴ The doctrine of the moon’s first application following the prenatal syzygy indicating the native’s work is found in several sources, though without mention of the ruler of the terms.⁹⁵ In any case, the phrase ‘he explained’, used not only by the commentator but in the text itself, was most likely taken over directly from an Arabic original: Indian astrological works very rarely attribute doctrines to particular authors (with the exception of deities or semi-divine sages).

3.4 *Siblings and Parents (Chapters 17–18)*

The next two chapters relate to one astrological place each: chapter 17 is named *Sahajādhikāra* ‘On siblings’ (belonging to the third place) and chapter 18, *Pitrorariṣṭādhikāra* ‘On the fatality of the parents’, although it does in fact treat the matter of parents (belonging to the fourth place) somewhat more broadly. Both chapters are, once more, based on Abū Bakr.⁹⁶ Apart from consistently reinterpreting Abū Bakr’s use of triplicities as referring to

92 MS B: *iha puruṣasya artha eva mūlam | tasya arthasya purātta[m] arjitaṃ karma nimittaṃ tadvyaktaye nāma prakāṭaye varṇanācāryaḥ mataṃ abhāṣata* | Omitting the dubious *visarga* would give the meaning ‘[...] he stated the opinion of the preceptor Varṇana’.

93 Śrīdhara Jaṭṭasāṅkara Śarman 1886–87, 1915–16: *puruṣamūlaṃ dravyaṃ tadvyaktaye varṇanācāryamatam abhāṣata*. MS W largely agrees: *puruṣasya mūlaṃ dravyaṃ tadvyaktatase drarṇanācāryamatam abhāṣata*. Above the initial character of the penultimate word, but probably intended as a correction of the preceding character, is a superscript *yeh*.

94 A conjecture perhaps indirectly supported by the variation in the name found in MS W (cf. the previous note), which could suggest Varṇana to be a pseudo-etymologization (making use of the Sanskrit root *varṇ* ‘depict, describe, proclaim’). For the varying Arabic and other Semitic representations of the name Hermes, see van Bladel 2009: 26.

95 Cf. Rhet. V 82 (CCAG VIII 4: 207 f.); Albohali 33; *Lib. Arist.* III x 3.

96 Alubather 149–152 and 153–162, respectively; Dykes 2010: 196–222.

the *navāṃśa*, chapter 17 is of interest chiefly for including a reference that is also present in the Krakow manuscript of *De nativitatibus* but omitted from the printed edition.⁹⁷ The last verse of the chapter refers to an otherwise unknown authority by the name Kuttha- or Kucchasena, called Albucate in Salio's translation.⁹⁸

In chapter 18 we encounter the first instances of the word *musallaha* or *muśallaha*, derived from the Arabic *muthallatha* 'triangle, triplicity'; 18.7 uses *musallaha* and *navāṃśa* in parallel, confirming that they are to be understood as synonyms. The same stanza includes two unusual expressions (*vajraha*, *saravilagna*) for which I cannot provide satisfactory etymologies but which are taken by Nārāyaṇabhaṭṭa to refer to *dvādaśāṃśas* or twelfth-parts (δωδεκατημόρια)—an ancient zodiacal division, though not among those enumerated in the opening chapter of the *Karmaprakāśa*.⁹⁹ Although the stanza appears to draw together a number of separate indications discussed by Abū Bakr in the chapters relating to parents, these do include, in the Latin translation, the twelfth-parts (*duodenaria*).

While this tendency to summarize and abbreviate sometimes obscures the relation of the Sanskrit text to its sources, parts of chapter 18 may derive from material preserved in the Krakow manuscript but absent from the Latin edition. The chapter ends with a verse summarizing in the form of a universal rule what in Abū Bakr's text is a particular anecdote about the astrologer Abū l-'Anbas aṣ-Ṣaimarī (Latinized as Alanbes) meant to illustrate

97 Dykes (2010: 201) hesitatingly paraphrases the Biblioteka Jagiellońska MS as saying that 'the brothers will do the bad works of kings?'. *Karmaprakāśa* 17.12 states that the native's brothers will be *nṛpakṣepakāḥ* 'overthrowers (or, possibly, revilers) of kings'.

98 K₁ and K₂ give *kuchasenaḥ*; N and the editions, *kutthasenaḥ*. (*Kuccha-* or *kuttha-* is required by the metre; *ch* for *th* is a common error in manuscripts.) The Sanskritized and Latinized versions could possibly refer to different parts of the Arabic name, *Albu-* rendering *abū* and indicating a hyonymic (similar to Albubather for Abū Bakr, or Albumasar for Abū Ma'shar) and 'Kutthasena' being a Sanskrit rendering of the personal name (*ism*). But the similarity between *kuttha* and *cate* suggests another possible, if more speculative, scenario involving a double textual corruption: in Arabic, *ibn* for *abū*, transforming the hyonymic into a patronymic; and in Sanskrit, *sena* ('army', a common last component in princely Sanskrit names) for *sūnu* 'son', translating that patronymic. The exact name that would correspond to *kuttha* or *cate* in such a scenario is uncertain; elsewhere in the *Karmaprakāśa* (3.2, 13, 16), *kuttha* is used to render Ar. *quwwa* (f.) 'strength'.

99 For *vajraha*, K₂ and N read *vajjasa* and *vajjaha*, respectively. For the roles of the *musallaha/navāṃśa*, *dvādaśāṃśa* and other zodiacal subdivisions in Samarasiṃha and later Tājika tradition, see Gansten 2018.

the broader principle of using directions or *tasyīr* to find the parents' time of death,¹⁰⁰ though neither Abū l-'Anbas nor directions are mentioned in the Sanskrit text.

3.5 *Female Nativities and 'Miscellaneous' (Chapters 19–20)*

At this point in the *Karmaprakāśa*, the connection to Abū Bakr's *K. al-mawālīd* breaks off, and the last two chapters do not relate to particular horoscopic houses. Instead, chapter 19 is entitled *Strījātakādhikāra* 'On female nativities'. Although this is a more common topic in classical Indian astrological works (where it is often assigned separate chapters) than in Greek or Perso-Arabic ones, the *Karmaprakāśa* explicitly relies on non-Indian, as yet unidentified sources.¹⁰¹ Verse 19.1 states that while the principles outlined for men with regard to length of life and similar topics apply equally to the nativities of women, Yavana or the Yavanas have laid down five topics peculiar to women: the husband's position and affection for his wife, children, virtue, and happiness. The remaining stanzas confirm by repeated use of lots and triplicity rulers that Samarasiṁha's immediate source is an Arabic one.

Despite its name, chapter 20, *Miśraprakīrṇādhikāra* 'On diverse and miscellaneous matters', is in fact largely homogenous. Up to the last four verses, which eulogize the work itself (20.8–9) and outline Samarasiṁha's paternal ancestry (20.10–11), it presents a succinct classification of nativities into four groups with respect to wealth and social standing: those who are fortunate or unfortunate, respectively, throughout life, and those who go from misfortune to fortune or vice versa. According to the text (20.7), this basic model of stratification was included to resolve the confusion of methods presented by previous authors in connection with occupations. The earliest Arabic work in which it is found is 'Umar ibn al-Farrukhān aṭ-Ṭabarī's (d. ca. 815) own *Kitāb al-mawālīd*—likewise preserved in Latin translation under the generic title *De nativitatibus*—which thus becomes our last identifiable Arabic source text.¹⁰²

100 Alubather 161 (misprinted as 191); Dykes 2010: 215–216. The Latinized word used for 'direction' is *athazir* (from Ar. *at-tasyīr*).

101 For 'female nativities' (*strījātaka*) in early Indian astrology, see Pingree 1978: I 27–37; for examples from classical texts, cf. Varāhamihira's *Bṛhajjātaka* 24; Kalyāṇavarman's *Sāravālī* 46; Vaidyanātha's *Jātakapārījāta* 16; etc. Sezgin (1979: 145) mentions a single Arabic work of possible relevance to this topic, though I have not seen it: Abū Ma'shar's *K. mawālīd ar-rījāl wa-n-nisā'* (*Book on the Nativities of Men and Women*).

102 For the relevant passage in Latin translation, see Omar III 1; for an English rendering of the Latin, Dykes 2010: 47 f. 'Umar himself attributes his fourfold stratification to 'the philosopher' in a hitherto unidentified *Book of Allegories*; as noted by Dykes (loc. cit. n. 224), it bears a certain resemblance to the model of the so-called *Liber Aristotilis*.

Samarasiṃha's account of his family lineage—from the royal minister Caṇḍasiṃha through Śobhanadeva and Sāmanta to Kumārasīṃha—is remarkable chiefly for omitting both his own name (at least in full) and his date. As noted above, Samarasiṃha is dated by Pingree to any time between 1060 and 1365, an estimate based on his great-great-grandfather serving a king of the Caulukya dynasty. This argument clearly rests on the reading *caulukyakṣitipāla* at *Karmaparakāśa* 20.10, which is almost certainly correct, although the printed editions and two of three manuscripts available to me give the variant reading *trailokyakṣitipāla* 'king of the three worlds'—tritely grandiose but worthless from the point of view of historical information.¹⁰³ Tejaḥsiṃha, whose precise relationship (if any) to Samarasiṃha is unknown but who belonged to the same Prāgvāṭa community, likewise claimed a family connection with the Caulukyas in a ministerial capacity.¹⁰⁴ As Tejaḥsiṃha is not only known to have written a commentary on a work by Samarasiṃha, but also borrows from the latter in his *Daivajñālaṃkṛti*, authored in 1337, we can safely assume that Samarasiṃha wrote no later than the early fourteenth century, and very possibly earlier.¹⁰⁵ The 1274 date suggested for the *Karmaparakāśa* by one of Pingree's sources is thus quite plausible.

Although Samarasiṃha's name is not explicitly given in the *Karmaparakāśa*, the very last verse (20.11) does contain a punning allusion to it, referring to the author as Smara, the god of love, extracting the perfume from the pericarp of the lotus flower of Tājika for the pleasure of astrologer bees.¹⁰⁶ While there is

103 The reading *caulukyakṣitipāla* is supported by MS N, *trailokyakṣitipāla* by K₁ and K₂. The remaining MSS (or the parts of them available to me) do not contain the stanza in question.

104 For Tejaḥsiṃha, see Gansten 2017: 118–123, correcting the information provided by Pingree (1970–94 A3: 89; 1981a: 99; 1997: 82).

105 Tejaḥsiṃha's role as commentator on Samarasiṃha, not mentioned in any of Pingree's publications, is referred to in passing by Balabhadra (*Hāyanaratna* 5.1: *āha samarasiṃhaḥ* [...] *tattīkākṛt tejaḥsiṃho 'pi*). For an instance of Tejaḥsiṃha borrowing from Samarasiṃha, see the comment on quotation 'b', p. 121 below. It also seems pertinent to note that *Daivajñālaṃkṛti* is synonymous with *Gaṇakabhūṣaṇa* (one of the alternative titles of the *Karmaparakāśa*), both meaning *The Astrologer's Ornament*.

106 *Karmaparakāśa* 20.11cd:

*tatsūnunā gaṇakabhṛṅgamude smareṇa
gandho 'bhyudadhriyata tājikapadmakośāt ||*

Traditional imagery of Smara or Kāma includes both flowers and bees, forming the arrows and string, respectively, of the deity's bow. *Tājikapadmakośa* is also the name of a non-theoretical work predicting the outcomes of the placements of the planets in the twelve horoscopic houses in an annual revolution figure, authored by the Brahman Govardhana, probably in the sixteenth century; very possibly the choice of title reflects the author's acquaintance with the *Karmaparakāśa*.

no doubt that his actual name was Samarasiṁha ('a lion in battle'), the difference in pronunciation between this and Smarasiṁha ('a lion in love[making]') would have been minimal, and the latter variant is occasionally met with in Tājika literature.¹⁰⁷

4 An Incomplete Text?

Although Samarasiṁha is unambiguous in naming the *Gurutājikantradīpa* or *Gurutantra* (*Great Teaching*) by 'Khindika' as his source, we can thus discern at least five actual main sources for the *Karmaprakāśa*: Sahl ibn Bishr (chapters 1 and 3); Abū Ma'shar or, less likely, 'Imrān ibn Aḥmad (chapter 4); Abū Bakr (chapters 5–7, 9–10, 12–13, 15 and 17–18); 'Umar aṭ-Ṭabarī (chapter 20); and one or more Arabic authors so far unidentified (chapters 8, 11, 14, 16 and 19). In addition, occasional verses in several chapters have unknown Arabic sources, and chapter 2 depends largely on Indian material, also unidentified. The combination of several Arabic source texts supports the hypothesis that the *Great Teaching* was an Arabic compendium of astrology compiled by or attributed to al-Kindī. All identified authors whose dates are known belong to the ninth century, indicating that such a compendium may have been created not much later. Chapters 8, 11 and 19, all based on unidentified Arabic material, invoke the authority of 'Yavana', and while the Sanskrit word was by this time used indiscriminately to refer to any western foreigner—including Persians and Arabs—the possibility that it is employed here in the original sense of 'Greek', perhaps to render the Arabic *yūnān* with the same origin and meaning, is certainly worth considering, particularly as one of these chapters describes a distinctively Ptolemaic doctrine not discussed by most medieval Arabic sources.¹⁰⁸

As already noted, the list of topics covered by the *Karmaprakāśa* appears to be incomplete. The order of the material based on Abū Bakr largely agrees with the Latin edition of *De nativitatibus*, swelling the section relating to the

107 Such readings are secure for metrical reasons. The *Tājikamuktāvali* (v. 41) of Tuka Jyotirvid (fl. 1549–50) and its probable autocommentary *Tājikamuktāvaliṭippaṇī* (3.39), both quoted by Balabhadra without distinction (*Hāyanaratna* 7.2, 2.3), use the form *smarasiṁha*. (For these works and their author, not discussed by Pingree, see Gansten 2017: 123–125.)

108 For Arabic translations and reception of the works of Ptolemy, see Sezgin 1979: 41–48. A commentary on Ptol. *Tetr.*, no longer extant, is attributed to 'Umar aṭ-Ṭabarī, who, as already seen, is one of the likely sources of the *Karmaprakāśa*. It would thus be quite possible for Ptolemaic ideas to have found their way into a compendium used by Samarasiṁha.

first horoscopic house with discussions of illnesses and occupations—otherwise belonging to the sixth and tenth houses, respectively—immediately prior to the section on wealth (second house).¹⁰⁹ These sections are followed in the *Karmaparakāśa* by chapters on the third and fourth houses, as seen above; but the remaining six houses are conspicuously absent. The chapters in *De nativitatibus* corresponding to those houses cover the topics of children, marriage and sexual relations, circumstances of death, journeys, friends, and enemies, none of which is discussed in the *Karmaparakāśa*.¹¹⁰ That Samarasiṃha should have considered such topics—several of which have been mainstays of astrological consultations since antiquity—of insufficient interest to merit inclusion in his text is almost inconceivable, and we are thus left with two alternatives: either Samarasiṃha lacked access to material (from Abū Bakr or any other Arabic-language source) dealing with the house topics in question, or else the version of the *Karmaparakāśa* that has come down to us is incomplete, with a number of chapters missing between what are now chapters 18 and 19. For such a loss of text to leave no trace in the form of variant readings in the extant witnesses, it would have had to occur very early in the transmission history.

At present we have no way of determining with certainty which is the more likely alternative; but we may note a further omission, which could indicate that the text we have is not the complete *Karmaparakāśa*. As described above, Samarasiṃha states in the opening verses of the work that he will explain astounding things, including ‘[the prediction of] the flavours of food’. Discussions on food or meals—with headings like *bhojyavicāra* or *bhojanacintā*—are common in later Tājika texts, though they typically occur in the context either of interrogations or of day-to-day predictions within an annual prognosis.¹¹¹ These sections are always found near the end of the respective works; the same is true of the treatment of meals in Sahl’s *Kitāb fi l-masā’il wa-l-aḥkām*, on which the Tājika material is partly based.¹¹² If the *Karmaparakāśa* did originally contain a section on food, it very possibly followed the same pattern

109 This agreement between the *Karmaparakāśa* and *De nativitatibus* demonstrates that the sequential arrangement of topics dates back to an Arabic source common to both eastern and western transmissions, and possibly to Abū Bakr himself. While retaining this arrangement, the Latin edition carries separate headings for the sixth and tenth places—chiefly, it seems, for the sake of formal completeness, as very little material is actually included under these headings.

110 The circumstances of death are briefly touched upon, as noted above, but not in relation to the eighth place of the horoscope, and the material does not derive from Abū Bakr.

111 For examples, see *Praśnatantra* 3.130–143; *Tājikasāra* 4.92–94; Nilakaṇṭha’s *Varṣatantra* 18.36–47; *Tājikabhūṣaṇa* 8.25; *Praśnavaiṣṇava* 14.1–11; *Hāyanaratna* 8.12.

112 See chapter 18 in the translation included in Dykes (forthcoming).

(though this does not help us to understand the relevance of a discussion of food in a treatise on genethliology). Pingree, while stating that the topic 'evidently did not have much attraction for the older Greek astrologers', gives a valuable list of Hellenistic, classical Indian and Byzantine sources, some of the latter based largely on Arabic works;¹¹³ but in the absence of an actual treatment of the topic by Samarasiṁha, speculation on his possible sources is pointless.

5 Samarasiṁha's Authorship Reflected in Later Sources

Following its initial chapters on general principles, the *Karmaparakāśa* is thus exclusively concerned with genethliology or natal astrology. There is no trace of the annual prognostication (*varṣaphala*) with which later Tājika tradition is more or less synonymous, nor of its other chief topic, interrogations (*praśna*). This difference in content between the *Karmaparakāśa* and subsequent Tājika literature is particularly striking in view of the authority that Samarasiṁha's name commands among later generations of authors; and when we examine the actual references to Samarasiṁha found in the works of these authors, what we find is, with very few exceptions, passages that do not belong to the *Karmaparakāśa* at all. One such instance has already been noted above.¹¹⁴

I have previously demonstrated that the popular *Praśnatantra*, commonly but mistakenly attributed to Nīlakaṇṭha, has for its core some 170 stanzas in *āryā* metre comprising a Sanskrit epitome chiefly of Sahl ibn Bishr's work on interrogations (*K. fi l-masā'il wa-l-aḥkām*), with some additions from his *Introduction* and from one or two other Arabic-language sources.¹¹⁵ This Sanskrit epitome is attributed by the commentator Viśvanātha to Samarasiṁha, an attribution indirectly supported by Viśvanātha's junior contemporary Balabhadra, who in his *Hāyanaratna* quotes several of the same stanzas from 'Samarasiṁha', without mentioning the title of the work. Not one of these 170 stanzas forms part of the *Karmaparakāśa* as we have it, nor are they limited to the topics noted above as missing from that text (such as marriage or children). More decisively, the *Praśnatantra* material attributable to Samarasiṁha is metrically uniform and

113 Pingree 1978: 383 f.

114 See note 67.

115 See Gansten 2014.

refers repeatedly to astrological interrogations,¹¹⁶ whereas the *Karmaparakāśa* is metrically highly varied and concerns itself only with genethliology.¹¹⁷ We are thus left to conclude that the original version of the *Praśnatantra* was a separate work on interrogations authored in Sanskrit by Samarasiṃha on the basis of Arabic source texts. The extant text of the *Praśnatantra*—with additions from both Tājika and non-Tājika works, some as late as the sixteenth century—is widely published; Samarasiṃha's original text may or may not have included stanzas no longer present.¹¹⁸

Apart from the *Praśnatantra*, the two main sources of quotations from Samarasiṃha are, to my present knowledge, Balabhadra's *Hāyanaratna* on annual prognostication and Viśvanātha's *Prakāśikā* commentary on Nilakaṇṭha's *Tājikanīlakaṇṭhi*.¹¹⁹ All three sources raise important questions, particularly when examined together. The stanzas quoted from Samarasiṃha by Balabhadra fall into two categories: those addressing fundamental concepts and definitions applicable to all branches of Tājika astrology, and those dealing specifically with annual prognostication or *varṣaphala*. Both types of quotation are also found in Viśvanātha's commentary. Intriguingly, although Balabhadra quotes no verses explicitly on the subject of interrogations or *praśna*, several of the verses he does quote also appear, with minor variations, in the *Praśnatantra*, which is concerned almost exclusively with *praśna*. In one such instance, the received text of the *Praśnatantra* does in fact read rather

116 All stanzas attributed to Samarasiṃha by Viśvanātha are in *āryā* metre. Similarly, out of 138 full or partial stanzas attributed to Samarasiṃha (with no title mentioned) in Balabhadra's *Hāyanaratna*, 137 are in *āryā* and a single stanza (in section 5.2) in *śloka* metre. This one exception seems highly likely to be a misattribution, of which there are other instances in the *Hāyanaratna*. Both authors also quote from the *Karmaparakāśa*, giving the title as *Manuṣyajāta*; see section 6 below.

117 For the metres used in the *Karmaparakāśa*, see note 42.

118 The portions of the extant *Praśnatantra* attributable to Samarasiṃha comprise verses 1.7–10, 52–55; 2.1–8, 13–29, 31–36, 39–131; 3.1–5, 87–114, 130–132; and 4.49–61. See Gansten 2014 for details.

119 The *Tājikabhūṣaṇa*, while not quoting Samarasiṃha directly, displays a familiarity with his work by including (in 1.3) a pastiche of *Karmaparakāśa* 1.2 (for which cf. note 23 above):
gargādyair yavanaiś ca romakamukhaiḥ satyādibhiḥ kīrtitaṃ
śāstraṃ tājikasamjñakaṃ niravadhiṃ tadvāridhiṃ dustaram |
etat tājikabhūṣaṇaṃ navatārā tartuṃ samarthā tarir
vyaktārthaṃ vimaloktvākyavilasatkaṃānukīrṇaṃ bhṛśam ||
 'The doctrine known as Tājika is celebrated by Garga and other [sages], by the Yavanas headed by Romaka, and by Satya and other [Brahmans]. This *Ornament of Tājika*, of clear meaning and filling the ears entirely with the delight of splendid words and expressions, is a new vessel capable of crossing its boundless and insurmountable ocean.'

like a passage on annual predictions, with the word ‘year’ occurring three times in two verses:¹²⁰

‘Samarasin̐ha’

Praśnatantra

‘Will I have progeny in this year?’ If [a client asks thus and] the rulers of the ascendant and the fifth [house] partake of an *itthaśāla*, it will certainly happen in that very year. Or if they should both occupy each other’s domicile, then too progeny should be predicted in that year—from a benefic configuration, not otherwise.^a

‘Will there be progeny in this year?’ If [a client asks thus and] the rulers of the ascendant and the fifth [house] partake of an *itthaśāla*, it will certainly happen in that very year. Or if they should both occupy each other’s domicile, then too progeny should be predicted in that year—from a benefic configuration, not otherwise.^b

a Quoted in *Hāyanaratna* 6.6:

*asmin varṣe ’patyaṃ mama bhavitā lagnapañcamādhiśau |
bhajato yaditthaśālaṃ tatraivābde bhaven nūnam ||
yadi vā mitho grhagatau syātāṃ cet saṃtatis tad api |
vācyā tasmin varṣe śubhayogād anyathā na punaḥ ||*

b *Praśnatantra* 2.41–42:

*asmin varṣe ’patyaṃ bhavitā vilagnapañcamādhiśau |
bhajato yaditthaśālaṃ tatraivābde bhaven nūnam ||
yadi vā mitho grhagatau syātāṃ etau ca saṃtatis tad api |
vācyā tasmin varṣe śubhayogād anyathā na punaḥ ||*

(Available editions and MSS all agree on the metrically deficient reading of 41b.)

Here the two versions are virtually identical; but the following example concerns two passages which, while composed in the same metre and more or less interchangeable with regard to meaning—being clearly based on the same source text—are so different in phrasing that we cannot plausibly blame textual corruptions, but must conclude that one constitutes a deliberate reworking of the other:¹²¹

120 The Arabic source of this passage is probably Sahl’s *K. fi l-masā’il* (5,2 in the forthcoming Dykes translation, the numbering of which will be followed below), which, however, does not include any mention of the current year; cf. note 124.

121 The Arabic source of this passage is Sahl’s *K. fi l-masā’il* 11,2–9.

'Samarasiṃha'

Prašnatantra

'Will I receive honour from the king?' [If a client asks thus], by a friendly aspect between the rulers of the ascendant and the eleventh house, it will happen quickly; by an inimical aspect, only after many days. If the ruler of the eleventh house occupies an angle, joined to or aspected by the moon, the result is full; in a fixed sign it will be complete, little in a movable one, and half in a mixed one. If Jupiter occupies an angle in its exaltation and so on, the results of the king's goodwill are complete, [but] if afflicted by malefic planets, it will come to a swift end.^a

In a question saying: 'Will I receive the honour and so forth that I desire from the king or not?', if there is a *muthaśila* by friendly aspect between the rulers of the eleventh place and the ascendant it will happen soon; by an inimical aspect, after many days. And if the ruler of the eleventh place and the moon have a *kambūla* in an angle, it should be predicted that [the client's] desire is fulfilled. If it occupies a [sign that is] movable, fixed or of dual nature, the result is [according to] its own designation. If the slow[er planet] is afflicted by malefics, the desire, having been realized, is quickly destroyed [again]; if it is not joined by malefics but by benefics, the desire will be attained by means of a dignity.^b

a Quoted in *Hāyanaratna* 6.12:

nṛpater gauravalābho me syād iti lagnalābhapatyoś ca |
snehadrśā śighraṃ syād ripudṛṣṭyā bahudinair eva ||
āyeśe kendrasthe śaṣiyutadrṣṭe ca pūrṇaphalam asti |
sthīrārāśau paripūrṇaṃ care 'lpam ardhaṃ bhaven miśre ||
devagurau kendraḡate svocādigate ca nṛpaśubhāśā |
pūrṇaphalā krūrāgrahanipīḍite śighranāśaḥ syāt ||

b *Prašnatantra* 2.123–125:

nṛpater gauravalābhāśādi mama syān na veti ca praśne |
āyeśalagnapatyoh snehadrśā muthaśile drutaṃ bhavati ||
ripudṛṣṭyā bahudivasaiḥ kendre cāyeśakambūle |
vācyā pūrṇaivāśā carasthīradvisvabhāvage svanāmaphalam ||
mande krūropahate bhūtvāśāsu praṇāśam upayāti |
krūrāyukte ca śubhayujy adhikāraśena labdhyaśā ||

The metrical variant of 124cd, with eight feet (*gaṇa*) consisting of four morae (*mātrā*) each except for the penultimate, which has five, recurs in several quotations from *Samarasiṃha* found in the *Hāyanaratna*. The *ca* in 125c, however, seems spurious and has been eliminated in translation.

While neither version refers to the current year, it is surely significant that the word *praśne* ('in a question') is absent from the variant quoted by Balabhadra.¹²²

A possible explanation of these textual peculiarities would be that Samarasiṁha authored at least two independent or semi-independent works in addition to the *Karmaparakāśa*: one—the original *Praśnatantra*, based on Sahl—dealing with interrogations or *praśna*, the other with annual revolutions or *varṣaphala*; and that he included in the latter a certain amount of reworked material imported from the former.¹²³ Balabhadra's *Hāyanaratna*, being chiefly concerned with *varṣaphala*, would naturally favour the latter variants.¹²⁴

In this connection it will be useful to examine some of Viśvanātha's statements about Samarasiṁha's works in the *Prakāśikā* commentary. The most substantial section of the *Praśnatantra* derived from Sahl through Samarasiṁha is introduced (2.1) with the words: 'Now follows the investigation of questions pertaining to the individual places [of the horoscope, as found] in the *Praśnatantra* related in the *Tājikaśāstra*.'¹²⁵ If we assume that *Tājikaśāstra* is to be taken as the designation of an actual text, then this suggests that, to Viśvanātha's mind at least, the original *Praśnatantra* did form part of a larger work. His commentary on Nīlakaṇṭha's *Samjñātānta* 2.52 gives us a further piece of the puzzle as he remarks, before quoting a verse on inauspicious configurations: 'For that reason the plain meaning of this is clearly stated in the *Samjñātānta* [of the] *Tājika* authored by Samarasiṁha.'¹²⁶ Another section of the *Praśnatantra* is introduced (3.1) with the simple phrase *tājike samarasimhe*.

122 Of the text witnesses used for the forthcoming edition of the *Hāyanaratna*, a single, fairly late MS (Koba Gyan Tirth 19-187, dated 1833–34 CE) does actually give a reading much closer to the *Praśnatantra* version, but with the crucial word *praśne* replaced with *varṣe* 'in the year'.

123 It is, of course, also possible that Samarasiṁha had access to a work on annual revolutions composed by Sahl (or to excerpts from it), in addition to the *K. fi l-masā'il*, and that it was Sahl himself who incorporated material from one work in the other. Ibn an-Nadīm attributes a *K. taḥwīl sinī l-mawālīd* (*Book of Revolutions of the Years of Nativities*) to Sahl, but no MS of this text apparently survives. See Ullmann 1972: 311; Sezgin 1979: 128.

124 As noted above (see note 120), *Praśnatantra* 2.41–42 on children has the appearance of dealing with annual predictions rather than interrogations and may have been included in this text by mistake. As remarked in Gansten 2014: 116, these two stanzas are very close to *Praśnatantra* 2.25cd–27ab with regard to technical content, and both may ultimately derive from the same passage in Sahl's *K. fi l-masā'il* (5.2). Another example of material migrating from different parts of Samarasiṁha's writings into the received text of the *Praśnatantra* is discussed below (cf. notes 131 and 137).

125 *atha pratyekabhāvapraśnanirūpaṇaṁ tājikaśāstroktapraśnatantre*.

126 *yataḥ kāraṇāt tatra samarasimhakṛtatājikasamjñātantre sphuṭaṁ prakatārtham uktam asti*.

It thus seems reasonable to assume that Samarasiṃha wrote, in addition to the *Karmaparakāśa*, a set of works known collectively by generic titles such as *Tājika*[śāstra] or *Samarasiṃha*[tājika] and comprising a *Samjñātāntra* on fundamentals of Tājika astrology, a *Praśnatāntra* on interrogations, and a work on annual revolutions, probably called **Varṣatāntra*. Stanzas on these three topics attributed to Samarasiṃha but not found in the *Karmaparakāśa* are in the same *āryā* metre, accentuating the underlying unity of the texts.

6 The *Karmaparakāśa* and the *Tājikaśāstra*

Although familiar with the *Karmaparakāśa*, Viśvanātha appears to have been ignorant of the identity of its author. This is not so strange as it may seem: as discussed above, the text of the *Karmaparakāśa* proper does not actually mention Samarasiṃha's name. Nevertheless, we can be fairly certain that Samarasiṃha did author the *Karmaparakāśa*, for three reasons. First, as evinced by the colophons of many (but not all) manuscripts and corroborated by Balabhadra,¹²⁷ there is a tradition to that effect, even if Viśvanātha was unaware of it. Second, as was also previously mentioned, the last verse of the *Karmaparakāśa* does contain a pun on the author's name; and third, stanzas on fundamental Tājika doctrines quoted by other authors from what we may now tentatively call Samarasiṃha's *Tājikaśāstra* have very marked similarities—often word for word, though in different metres—with corresponding passages in the *Karmaparakāśa*, though the latter are occasionally more concise. Two brief examples will suffice for the present:

'Samarasiṃha' (<i>Tājikaśāstra</i>)	<i>Karmaparakāśa</i>
Red, white, green, pink, grey, whitish, many-coloured, black, golden, yellow, variegated, and brown are the colours of [the twelve signs] beginning with Aries. ^a	Red, white, parrot-coloured, pink-hued, grey, whitish, variegated, black, golden, yellow, variegated, and brown: these are the colours of the bodies of [the twelve signs] beginning with Aries. ^b

¹²⁷ See note 134.

(cont.)

'Samarasiṁha' (Tājikaśāstra)	Karmaprakāśa
In the daytime and in the former [bright] fortnight, in a nativity or a question, Saturn placed in a male sign does little harm, but much harm if the opposite. Mars at night, in the latter fortnight, and placed in a female sign, does little harm in a nativity or a question, but much if the opposite. ^c	When Saturn in the former [bright] fortnight is placed in a male [sign, or] Mars in the other [fortnight] in a female one, it is of little harm. ^d

- a Quoted in *Hāyanaratna* 1.4:

aruṇasitaharitaṭpāṭaladhūsaravipāṇḍurā vicitraḥ |
śītihemadyutipīṅgāḥ karburababhrū hy ajādivarṇāḥ syuḥ ||

- b *Karmaprakāśa* 1.7:

raktaḥ śvetaḥ kīraruk pāṭalābho dhūmraḥ pāṇḍuḥ karburaḥ śyāmalaś ca |
hemah piṅgaḥ karburo babhrur ete meṣādīnāṃ dehavarṇāḥ krameṇa ||

While the *Tājikaśāstra* quotation is in the *udgīti* variant of the moraic *āryā* metre, the present stanza is in the syllabic metre *śālīnī*. The two stanzas agree wholly in content ('parrot-coloured' being a synonym of 'green'), with half the colour terms being identical or near-identical. The present stanza is arguably slightly less skilfully composed, making use of the word *karbura* twice.

- c Quoted in *Hāyanaratna* 3.16:

divase tu pūrvapakṣe prcchāyāṃ jātate ca ravisūnuḥ |
nararāśigo 'lpadoṣaṃ bahudoṣaṃ vyatyayāt kurute ||
bhaumo rātrāv apare pakṣe strīrāśisaṃgataḥ svalpam |
doṣaṃ kurute praśne janmani ca vyatyayāt pracuram ||

- d *Karmaprakāśa* 3.18ab:

pūrvē pakṣe puṃgate bhānuput্রে bhaume 'nyasmin strīgate cālpadoṣaḥ |

The metre is again *śālīnī* rather than *āryā*. While the present half-stanza is quite terse, the phrasing is very similar to that of the previous quotation: the fortnight in question is called 'former' rather than 'bright' (an idiom inherited from Sahl, whose presentation in the *Introduction* [3,117–118] is based on the Islamic calendar); Saturn is referred to by the epithet 'son of the sun' (*ravisūnu*; *bhānuputra*) and Mars as *bhauma* 'son of the earth'; and both stanzas speak of a planet doing 'little harm' (*alpadoṣaṃ* [...] *kurute*; *alpadoṣaḥ*).

On the three occasions that Viśvanātha quotes the *Karmaprakāśa* in his commentary, he refers to it only by title (as the *Manuṣya-jātaka*), never by author; and on one such occasion, he adds: '[This] is also said in Samarasiṁha'.¹²⁸ Further on, in the context of a disputed reading, Viśvanātha

¹²⁸ *uktam ca manuṣyajātake [...] samarasiṁhe 'py uktam asti* (ad *Samjñātāntra* 2.36). The stanza quoted from the *Karmaprakāśa* is 3.9.

states: ‘However, in Samarasiṃha and likewise in the *Yavanatājika* and likewise in the *Manuṣyajāṭaka*, the reading is [...].’¹²⁹ Both ‘Samarasiṃha’ and the *Karmaprakāśa* are then quoted verbatim in the gloss: it is ‘Samarasiṃha’ that contains the exact phrase discussed (*lagnād dvitīyabhavanāt*), while the *Karmaprakāśa* (4.4) includes a very similar one (*lagnād dvitīyāc ca*). The reference to a *Yavanatājika*, not quoted, remains unclear.¹³⁰ None of the stanzas that Viśvanātha explicitly attributes to Samarasiṃha is found in the *Karmaprakāśa*, although, as noted above, those on general topics (such as aspect doctrine or lots) have close parallels—always in other metres—in that text.¹³¹

As for Nīlakaṇṭha, he was not only familiar with Samarasiṃha’s *Tājikaśāstra* himself, but also expected his readers to be so. This is clear from a reference found in the *Samjñātāntra* of his *Tājikanīlakaṇṭhī* (2.51–52), which includes a partial quotation:

From the example beginning *If the moon occupies Aries [with] Saturn*, others say that *itthaśāla* and the other [configurations apply] to a slower and a swifter [planet] occupying a single sign. That is incorrect, since it is clearly said there that an *itthaśāla* of a fallen [planet] with [another] fallen [planet, or] of an enemy with an enemy, destroys the object [asked about].¹³²

129 *paraṃ tu samarasimhe tathā yavanatājike tathā manuṣyatājike* [sic] *lagnād dvitīyabhavanād ity eva pāṭho ’sti* (ad *Samjñātāntra* 3.24), reading *manuṣyajāṭake* for what is almost certainly a scribal error. (Though the mistake is present in all three editions at my disposal, the actual quotation from the *Karmaprakāśa* at the end of the same gloss is preceded by the correct title: *tathā coktaṃ manuṣyajāṭake*.) The disputed phrase from ‘Samarasiṃha’ is also quoted and discussed by Balabhadra in *Hāyanaratna* 4.2.

130 Pingree 1970–94 A5: 326 lists ten MSS of Tājika works attributed to ‘Yavana’, one with the title given as *Yavanatājika*. I have not seen any of these texts. On the other hand, a possible reason for Viśvanātha not actually quoting from the *Yavanatājika* could be that he is referring not to a Sanskrit text, but to an Arabic one. A few sentences earlier Viśvanātha had invoked ‘the school/opinion of the Yavanas’ (*yavanānām mate*), which could conceivably denote contemporary Muslim astrological practice.

131 The same is true of *Praśnatantra* 4.49–57, 60–61 (at the very end of the text, derived from Sahl’s *Introduction* rather than his work on interrogations), which correspond minutely to *Karmaprakāśa* 2.10–14; 3.4–7, 9, and most likely formed part of Samarasiṃha’s *Samjñātāntra* rather than his original *Praśnatantra*. For an actual borrowing between the *Tājikaśāstra* and the *Karmaprakāśa*, see note 135.

132 *meṣasthe ’bje śanītyādīdr̥ṣṭāntān mandaśighrayoḥ |*
ekarkṣāvasthitān itthaśālādīn apare jaguḥ ||
tad ayuktaṃ nīcagasya nīcena ripuṇā ripoḥ |
itthaśālāḥ kāryanāśīty uktam tatra yataḥ sphuṭam ||

The point Nīlakaṇṭha is making is that, since no two planets share the same sign of fall, an *itthaśāla* or application between two fallen planets must be formed between different signs.

Viśvanātha's commentary gives the original verses in full and identifies them as originating with Samarasiṁha, an attribution corroborated by Balabhadra.¹³³ The opening of Nilakaṇṭha's *Varṣatantra* is likewise a pastiche on a stanza by Samarasiṁha—most probably from his own **Varṣatantra*—which we know from a quotation in the *Hāyanaratna*:

'Samarasiṁha' (Tājikaśāstra)	Nilakaṇṭha: Varṣatantra
In general, [true] understanding does not shine forth for men in [considering] the results of genethlialogy (<i>jātaka</i>), which are applied to long [times]. Therefore, the annual results proclaimed by the Tājikas are elucidated here. ^a	Because the results of the periods related in [texts on] nativities (<i>jātaka</i>) clearly give [only] the results of large [periods of] time, [and] the understanding of the astrologer does not shine forth in [using] them, therefore I shall explain the results of the year from the ancient Tājika [doctrine]. ^b

a Quoted in *Hāyanaratna* 1.2:

prāyo na jātakaphale ciraprayojye matiḥ sphurati puṁsām |
tenātra hāyanaphalaṁ prakāśyate tājikaproktam ||

b *Varṣatantra* 1.2:

jātakoditadaśāphalaṁ ca yat sthūlakālaphaladaṁ sphuṭaṁ nṛṇām |
tatra na sphurati daivavinmatis tad bruve 'bdaphalaṁ āditājikāt ||

An earlier and even closer pastiche of Samarasiṁha's verse is found in Tejaḥsiṁha's *Daivajñālaṁkṛti* 1.2 (1337; cf. note 105):

prāyo 'tra jātakaphale bahukālasādhye
buddhir nṛṇām sphurati no khalu duḥkhasādhye |
tat tājikoktam anuvacmy anubhūya pūrvam
saṁkṣīpya vārṣikavilagnaphalaṁ sphuṭārthaṁ ||

'In general, understanding does not shine forth for men in [considering] the results of nativities (*jātaka*), which are produced with much [expenditure of] time [*or*: for long periods of time] and with much difficulty. Therefore, I relate the results of the annual horoscope proclaimed by Tājika [teaching], which are clear in meaning, having first verified and abbreviated them.'

133 *meṣasthe 'bje śaninā karkasthe bhūbhuvā strīyām kavinā |*
makarasthe guruṇā saha mīnasthe jñena na śubhaṁ ca ||
yadi nīco nīcena ca muthaśilakāri tathā ripur dviśatā |
tat kambūlaṁ neṣṭaṁ candro 'pi vināśako 'muṣmin ||

These two stanzas are also quoted (with the minor variation *tadvat tat kambūlaṁ* in the penultimate *pāda*) in *Hāyanaratna* 3.3. The former stanza is based directly on the explication of *ghayr al-qabūl* or non-reception in Sahl's *Introduction* (3,58–60).

Of the *Karmaparakāśa*, however, Nilakaṇṭha appears to have been ignorant. He neither quotes nor makes any mention of it; moreover, the technical terms *hillāja* and *khattakhutta*—explained in the *Karmaparakāśa* as discussed above—are mistaken both by Nilakaṇṭha and by much of the later Tājika tradition for the personal names of earlier authorities.¹³⁴ This circumstance strongly suggests that Nilakaṇṭha had not actually read the *Karmaparakāśa*, perhaps even that he was unaware of its existence, which in turn may indicate that the *Karmaparakāśa* never achieved the same circulation as the *Tājikaśāstra*. Balabhadra's *Hāyanaratna*, which is a *nibandha* or meta-commentary drawing on many important expositions of Tājika, does contain a single reference to the *Karmaparakāśa* (under the title *Manuṣyajāta*), which he recognizes as authored by Samarasimha.¹³⁵ Despite having at least some acquaintance with the *Karmaparakāśa*, however, Balabhadra—whether solely out of respect for his *guru*'s brother, or because he was unfamiliar with certain parts of the work (perhaps due to an incomplete manuscript)—perpetuates the misunderstanding of *hillāja* and *khattakhutta* as personal names.¹³⁶

The relative dating of the *Tājikaśāstra* and the *Karmaparakāśa* cannot, perhaps, be conclusively settled on purely text-internal grounds; but one or two points of interest may be noted. First, as discussed above, while the verse just quoted from the *Tājikaśāstra* contrasts the Tājika approach with that of genethlialogy (*jāta*), the *Karmaparakāśa* specifically addresses Tājika genethlialogy. This difference in focus may reflect a development in Samarasimha's

134 Balabhadra in *Hāyanaratna* 1.2 quotes this stanza from the *jyotiṣa* section of the *Toḍarānanda*, completed by Nilakaṇṭha in 1572:

khattakhutto romakaś ca hillājo dhiṣaṇāhvayaḥ |
dur mukhācārya ity ete tājikasya pravartakāḥ ||

'Khattakhutta, Romaka, Hillāja, Dhiṣaṇa and Durmukhācārya: these are the propounders of Tājika.' I have previously suggested (Gansten 2012a) that *hilāj* and *kadkhudāh* may have been thus misunderstood due to being of Persian rather than Arabic origin (unlike the majority of Tājika technical terms), but I now rather believe the reason to be the early decline—one might almost say the death in infancy—of Tājika genethlialogy.

135 *Hāyanaratna* 3.7: *manuṣyajātake samarasimho 'pi*, quoting *Karmaparakāśa* 3.8. At a later point in the *Hāyanaratna* (5.7), Balabhadra also quotes two consecutive *āryā* verses on the scheme of triplicity rulerships from 'Samarasimha', the former of which does occur in *Karmaparakāśa* 1.21 but is probably quoted here from the *Tājikaśāstra*; see Gansten 2018: 175 f.

136 Not only does Balabhadra quote Nilakaṇṭha with approval (cf. note 134), but he actually states at the beginning of the *Hāyanaratna* (1.2):

hillājakhattakhuttāryakhindhiromakasaṃmatam |
sāraṃ samarasimhasya kriyate vārṣikaṃ phalam ||

'[Here] the results pertaining to the year are set forth: the essence of [the writings of] Samarasimha, approved by Hillāja, the noble Khattakhutta, Khindhi and Romaka.'

understanding of Tājika, and perhaps in his access to Arabic-language sources, with the *Karmaparakāśa* representing a later and more inclusive phase. Second, as was also noted, the evidence strongly suggests that the doctrine of the sixteen configurations (*ṣoḍaśayoga*) was received by the Indian tradition through Samarasiṁha, whose distinctive misnumbering is repeated by every later author on the subject; but the original examples that accompany some of Sahl's definitions, though present in later authors such as Nilakaṇṭha and Gaṇeśa, are lacking from the *Karmaparakāśa*. This implies that the doctrine in question, with the examples intact, was transmitted through the *Tājikaśāstra* rather than through the *Karmaparakāśa*; and in fact, Samarasiṁha's rendition of one such example has been preserved for us in the extant text of the *Praśnatantra* (4.58–59).¹³⁷ Assuming that a Sanskrit version preserving material from the Arabic original is likely to be earlier than an abridged version, this would support the hypothesis of the *Karmaparakāśa* having been composed after the *Tājikaśāstra*.¹³⁸

If Samarasiṁha did indeed author three interrelated texts known individually as the *Samjñātantra*, *Praśnatantra* and **Varṣatantra*, it seems more than likely that Nilakaṇṭha's own *Samjñātantra* and *Varṣatantra* were intended to emulate and perhaps to eclipse the work of his illustrious predecessor. In this he was ultimately successful, an achievement probably not unrelated to his official position as *jyotiṣarāja* at Akbar's court.¹³⁹ The extant, hybridized *Praśnatantra*, while containing no original contribution by Nilakaṇṭha, may have been compiled by himself or one of his students in order to complete the triad; or the compilation may have been mistakenly attributed to Nilakaṇṭha on the strength of his existing *Samjñātantra* and *Varṣatantra*. If Nilakaṇṭha was further unaware that Samarasiṁha had also composed a *jātaka* work—namely, the *Karmaparakāśa*—this would help to explain the lack of any genethialogical material in his own writings.

¹³⁷ See Gansten 2014:105 ff.; cf. also note 124 above. While the surrounding verses (*Praśnatantra* 4.54–57, 60) are closely mirrored in *Karmaparakāśa* 3.4–7, the latter text omits the example. As it relates to a fundamental concept of Tājika, the example in question is likely originally to have occurred in the *Samjñātantra* of Samarasiṁha's *Tājikaśāstra* rather than in its *Praśnatantra*.

¹³⁸ As remarked above (note 20), the fact of the *Karmaparakāśa* lacking an eponymous variant title may lend some support to the hypothesis of another well-known work with such a designation (*Samarasiṁhatājika* or *-śāstra*) preceding it in time, and may also have played a part in obscuring the authorship of the *Karmaparakāśa*.

¹³⁹ See Pingree 1997: 92 f.; Sarma 2000.

7 Concluding Remarks

Irrespective of who was technically the earliest writer on Tājika, Samarasiṃha remains undoubtedly the single most influential author in the tradition as a whole, both directly and through his impact on Nilakaṇṭha, whose works in their turn have largely defined Tājika since early modern times. Although next to nothing is known of Samarasiṃha personally, and even the century of his *floruit* remains somewhat conjectural, a close study of his preserved writings enables us to form some tentative conclusions about his role in the Sanskrit-language transmission of Perso-Arabic astrology.

The available evidence, then, suggests that Samarasiṃha authored at least four works on Tājika, the first three of which were interconnected and known collectively as the *Tājikaśāstra*, with variants. The individual parts dealt with general principles, interrogations, and annual prognostication, respectively; the former two were known as *Samjñātantra* and *Praśnatantra*, the third most likely as **Varṣatantra*. Very likely it was this *Tājikaśāstra* that Balabhadra had in mind when defining his subject matter at the beginning of the *Hāyanaratna*:

The word Tājika denotes the treatise (*śāstra*) composed by Yavanācārya in the Persian language, comprising one area of astrology and having for its outcome the prediction of the various kinds of results of annual [horoscopy] and so on. That same treatise was rendered into the Sanskrit language by those born after him, Samarasiṃha and other Brahmins versed in grammar, and that [work], too, is denoted by the word Tājika.¹⁴⁰

These three works depended heavily (though, in the case of the **Varṣatantra*, perhaps only indirectly) on Sahl ibn Bishr, with some influence from other Arabic-language authorities—one of which may have been al-Kindī, and another ‘Umar aṭ-Ṭabarī—as evinced by the extant *Praśnatantra*. Centuries later, the latter text was substantially enlarged by the addition of excerpts from other, mostly non-Tājika works, and the text as a whole was (mis)attributed to Nilakaṇṭha. The *Samjñātantra* and **Varṣatantra* are apparently lost, or at least not available in print nor listed under those names in any manuscript catalogues examined by me; their positions of authority seem to have

¹⁴⁰ *Hāyanaratna* 1.2: *yavanācāryeṇa pārasayā bhāṣayā prañītaṃ jyotiḥśāstraikadeśarūpaṃ vārṣikādīnānāvidhaphalādeśaphalakaṃ śāstraṃ tājikaśabdavācyam | tadanantara-saṃbhūtaiḥ samarasimhādibhir adhīṭavyākaraṇair brāhmaṇais tad eva śāstraṃ saṃskṛtaśabdopaniḥbaddhaṃ tad api tājikaśabdavācyam eva*. As remarked above, Balabhadra appears not to have distinguished Arabic from Persian, nor is his identification of Samarasiṃha as a Brahman correct.

been usurped by Nīlakaṇṭha's identically named works, jointly known as the *Tājikanīlakaṇṭhī*. Samarasiṁha's *Tājikaśāstra* was, however, still extant in the early seventeenth century, as confirmed by quotations in the works of Viśvanātha and Balabhadra.

The transmission of Tājika doctrines formulated by Samarasiṁha appears to have taken place primarily through this *Tājikaśāstra*, while his fourth work, the *Karmaprakāśa* on genethliology, has exercised comparatively little influence on the later tradition. For this work, Samarasiṁha explicitly cites 'Khindika', probably identical with al-Kindī, as the author of his source, which may have been a compendium. The ultimate Arabic source texts appear to be the genethliological works of Abū Bakr (for the bulk of the text), Abū Ma'shar (particularly for lots, *sahama*), 'Umar (a brief passage) and one or more authors as yet unidentified. Some of the material in the initial part of the *Karmaprakāśa*, ultimately based on Sahl, was most probably adapted in slightly abbreviated form from Samarasiṁha's own *Tājikaśāstra*.

There is reason to suspect that the extant text of the *Karmaprakāśa* is incomplete, lacking as many as seven or more chapters. The material that it does contain is highly abbreviated as compared to the source texts, and sometimes imperfectly understood. One reason for this may be that Samarasiṁha viewed the Perso-Arabic doctrines through the lens of Indian astrological tradition. By contrast, the transmission of the same doctrines to the Latin west, which had no previous tradition of judicial astrology to speak of, was much fuller and more faithful. Even so, the Sanskrit versions do occasionally include material which is not present in the surviving Latin translations.

Given the paramount importance of Samarasiṁha for the tradition of Tājika astrology, we may wonder why his genethliological teachings seem not to have been passed down the generations as diligently as those on annual prognostication and interrogations. One partial explanation may be the lack of a living teacher-student tradition of Tājika in the period immediately following Samarasiṁha. Such a situation is indicated by Tejaḥsiṁha, who—although belonging to the same region, hereditary community and social class as Samarasiṁha, intimately familiar with at least some of his works, and writing within perhaps two or three generations of him—explicitly states that he wrote his own work after verifying by experience the statements taken from books, 'even without the mediation of a true teacher'.¹⁴¹ Significantly, Tejaḥsiṁha deals only with definitions and revolutions, not with genethliology

141 *Daivajñālaṁkṛti*, penultimate verse (with minor emendations; see Gansten 2017: 121 f.):
[...] *sadguror yat |*
pāramparyād ṛte 'pi svayam anubhavanād granthajārthasya [...]

proper, suggesting that only parts of Samarasimha's *oeuvre* were available to him; perhaps he also contributed to their wider distribution.

Despite these circumstances, the *Karmaparakāśa* has outlived—at least in part—Samarasimha's more popular works, although its authorship was sometimes forgotten. Ironically, its relatively neglected status may have contributed to its survival, as Nīlakaṇṭha and other authors of the Mughal era did not attempt to outshine it with genethliological works of their own.

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