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SŪRYANAMASKĀR: TRACING THE ORIGINS OF YOGA'S SUN SALUTATION

James Dylan Russell
University of Leeds

Abstract

In contemporary, globalised yoga, few practices are as widespread or as emblematic as *sūryanamaskār* ('salutation to the sun'). This short sequence of postures linked through movement and breath is the cornerstone of numerous popular yoga brands, where it serves both as a standalone practice and as an adjunct to additional postural techniques. Whilst purportedly rooted in ancient rites of sun worship, *sūryanamaskār* is typically harnessed towards secular physiological goals, such as improved health, fitness and flexibility. Despite prevailing assumptions surrounding the antiquity of *sūryanamaskār*, the practice does not feature in any known yogic tradition. Its provenance remains obscure and has eluded conclusive identification. This article sheds fresh light on the origins of *sūryanamaskār* by exploring new avenues of research at the intersections between *haṭhayoga* and Indo-Persian martial traditions.

KEYWORDS

Sūryanamaskār, Sun Salutation, *Vyāyāma*, Indo-Persian Wrestling, *Pahlavān*, *Malla*, *Physical Culture*, *Shenâ*, *Daṇḍ*, *Haṭhayoga*, Modern Yoga

Introduction

Sanskrit texts, as early as the third-century[1] *Mahābhārata*, record customs of reverential prostration known as *praṇāma* (obeisance) or *namaskāra* (salutation) (Mallinson 2019: 2). Prostrations typically involve rudimentary acts of bowing forward and kneeling, lying prone like a stick (*daṇḍavat*), with eight limbs (*aṣṭāṅgena*), before standing again (e.g. Sastri 1952, *Ānandakanda* 1.3.56.1).[2] Prostrations to Hindu deities and persons of high status have been performed in India for millennia and are still widely observed today. In the 1920s, a variety of prostration to the sun god Sūrya emerged, known as *sūryanamaskār* (Hindi) (Figure A1, Appendix A). In contrast to prostrations performed solely as expressions of religious piety, *sūryanamaskār* is distinguished by its unprecedented emphasis on postural elements, harnessed towards new temporal aspirations of physical health, fitness and wellbeing. This fitness-orientated, postural prostration is the subject of this article.

Scholarship by Goldberg (2016) has examined the social and political conditions that shaped *sūryanamaskār's* popularisation, and Sarbacker (2023) has explored its religious dimensions. However, as noted by Goldberg (2016: 187), there is still much to learn about the origins of its physical components. The theoretical impetus for my research is a hypothesis advanced by Joseph Alter that *sūryanamaskār* is a synthesis of *yogāsana*s (yogic postures) and *vyāyāma* (indigenous exercise), specifically a type of jackknife push-up widely practised by Indian wrestlers and known as a *daṇḍ* (1992: 98–104; Figure A2, Appendix A).[3] This theory was echoed by Sjoman (1999: 54) and has recently been supported by Armstrong's investigation of *vyāyāma* in yoga (2023: 285–8). Whilst Alter's theory has thus gained traction, dedicated research has yet to be conducted on the posited synthesis of *daṇḍ* and *yogāsana*, which precipitated the production of *sūryanamaskār*. I, therefore, address this matter by examining three interrelated areas. In Section 1, I investigate Indo-Persian wrestling. I locate *daṇḍ*s within the Indian wrestling tradition and, building upon Rochard and Bast's 2023 study of Indo-Persian martial syncretism, consider prior Persian influences. Section 2 examines the development of *āsana* (posture) within *haṭhayoga,* focusing on literature from the eighteenth century in which extensive *āsana* compendia include elements resembling the *daṇḍ* and *sūryanamaskār*. In Section 3, I survey the confluence of these martial and

[1] Mallinson and Singleton 2017: xxxix.

[2] The eight-limbed prostration, also known as *sāṣṭāṅga*, is described by Monier-Williams as 'a reverential prostration of the body so as to touch the ground with the hands, breast, forehead, knees and feet' (1960[1899]: 1212).

[3] *Daṇḍ* may be a Hindi contraction of *daṇḍavat* (Sanskrit) (Mallinson 2019: 3).

yogic elements in the early twentieth century and the two emergent styles of *sūryanamaskār* that became assimilated by a burgeoning postural yoga movement. A combination of literary and pictorial analysis identifies morphological links between the exercises of Persian wrestlers, Indian wrestlers, *haṭha* yogis and advocates of *sūryanamaskār,* thereby offering fresh insights into *sūryanamaskār's* genealogy. Given the prominent role of *sūryanamaskār* in contemporary transnational yoga, this article will interest both practitioners and scholars alike.

1. Indo-Persian Wrestling

1.1 Indian Mallas

The performative combat of the wrestling arena appears antithetical to yoga's contemplative introspection. However, *bhāratīya kuṣṭī* (Indian wrestling) is an ancient martial art in which somatic and ethical disciplines intersect with yoga at multiple junctures. Joseph Alter's seminal ethnographic study of contemporary North Indian wrestlers reveals numerous contiguities between *mallavidyā* (wrestling knowledge) and yoga (Alter 1992: 94). Secular and religious boundaries blur as *malla*s (wrestlers) participate in wrestling both as a leisure activity and as a way of finding meaning and identity in the world. The male yogi and his wrestling counterpart each adopt a disciplined lifestyle within the *akhāṛā*, which is a regimented fraternity with its own social ecosystem.[4] Yogis and *malla*s wear simple *laṅgoṭ*s (loincloths) and, with bodies besmeared with purificatory substances,[5] seek to transcend the limits of the physical body through dietary modification and regimes of physical and ethical discipline. Contemporary *malla*s adopt yogic practices of *yama*, *niyama*, *āsana* and *prāṇāyāma* and participate in devotion to Hanumān, whose qualities of *śakti* and *bhakti* they seek to embody (Alter 1992: 94–7, 198). Alter's wrestlers also incorporated both *sūryanamaskār* and *daṇḍ*s into their training regimen, with *sūryanamaskār* being particularly favoured by older *malla*s seeking to maintain physical fitness (ibid.: 98–105).

'Malla' was originally an ethnic designation for a tribal group inhabiting territory within the region today known as eastern Uttar Pradesh.[6] The antiquity of the Mallas is

[4] *Akhāṛā* (arena): an ascetic training area or lineage. In *kuṣṭī*, the *akhāṛā* denotes a wrestling club (Pinch 2012: 35).

[5] The yogi uses ash, the wrestler uses earth (Alter 1992: 219).

[6] Mallas established twin capitals at Kusinārā and Pāva (Bollée 1981: 178–9).

affirmed by an early reference in the *Jaiminīya Brāhmaṇa* (*c.* 800–600 BCE) [7] and their presence in the Buddhist *Mahāparinibbānasutta* and the Jain *Kalpasūtra* (Bollée 1981: 178; Gethin 1998: 91–7; Jacobi 2008[1884]: 266). Use of the term *malla* to denote 'wrestler' derives from the tribal Mallas' renowned expertise in the art of wrestling (Bollée 1981: 180). Legendary wrestling bouts (*mallayuddha*) are featured in the *Mahābhārata* (2.22.1–10) and *Rāmāyaṇa* (4.11–12), as well as later Purāṇas such as the *Bhāgavata-purāṇa* (10.44) and *Viṣṇupurāṇa* (5.20.18–81.2). Despite the high ranking of the protagonists in these epic contests, vocational *malla*s were generally of low status (e.g. *Manusmṛti* 10.22.1). Hence, the *Mahābhārata* (12.69.58) situates wrestlers in the same social stratum as actors, dancers and magicians. In the medieval period, wrestling found favour within royal courts. The *Mānasollāsa*, a twelfth-century courtly work, discusses *malla*s indentured to King Someśvara of Kalyāṇi (in modern-day Karnataka) and their role as pugilistic entertainers and totems of stately power (Shrigondekar 1925: vi; Alter 2000: 120). The most successful of their number, *jyeṣṭhika*s,[8] received wealth and prestige, so that wrestling offered low-caste boys an opportunity for both physical development and socio-economic advancement (Shrigondekar 1925: 36–7; Alter 2000: 122). The *Mānasollāsa* details the *malla*s' regimented lives: their devotion to Kṛṣṇa, hierarchy, specialist diet and segregation from women. Although the *Mānasollāsa* discusses various training exercises (*śrama*s), it contains neither *daṇḍ*s nor *yogāsana*s (Shrigondekar 1925: 36). Dating of the *Mānasollāsa* and epigraphic records of a migration of *malla*s from Gujarat to Undigeyahāl attest to a well-established wrestling community in Karnataka for at least eight centuries (Jetty 1959: 91). This district would later become the nexus of a new yoga movement, which Elizabeth De Michelis (2008: 188) terms 'Modern Postural Yoga'. For a map of key locations discussed in this article, see Figure B1, Appendix B.

The fifteenth- to sixteenth-century *Mallapurāṇa* is the principal Sanskrit work concerning wrestling, which it presents as a soteriological martial discipline and *dharmic* duty of the *jyeṣṭhimalla*s, a sub-caste of Gujarati Brahmins (Das 1968: 141–50). *Mallavidyā* destroys *duḥkha*, 'suffering,' and through *abhyāsa*, 'repeated practice,' wrestlers conquer the three worlds (*Mallapurāṇa* 13.03,10.01). Although the *Mallapurāṇa* enjoins a martial pathway to liberation, yogic elements are discernible:

> Having performed his morning routine, rinsed his mouth out with handfuls of water and washed his face, being focused, he should go to the arena. Having gone there, the *jyeṣṭhi* should first do *prāṇāyāma* (breath

[7] Mallinson and Singleton 2017: xii.

[8] In Southern India, *jetty* (from *jyeṣṭi*) came to denote anyone of robust strength (Jetty 1959: 93).

> control), and then, having reverently touched the earth,[9] he should engage in physical exercise.[10]

Next, during the performance of Vaiṣṇava rites, which include *mantra*, *praṇāma* and *mūrti-dhyāna* meditation, certain *malla*s are enjoined to sit in *padmāsana* whilst the elder *malla*s conduct the ceremony (6.30–41). Then, with bodies besmeared with earth (6.44), *malla*s adopt a seated *āsana* according to a fivefold classification:

> These are the five types of wrestler: *gaja* (elephant), *siṃha* (lion), *vṛṣa* (bull), *mṛga* (deer), and the fifth is known as *bhaviṣya* (prospect). They have five postures. Through practice of the science [of wrestling], these five gradually become *jyeṣṭhi*s (great wrestlers). They each sit in their respective postures diligently. The elephant should do *padmāsana* (lotus posture), and the lion should do *garuḍāsana* (eagle posture). *Phaṇāsana* (serpent's hood) is for the deer, and the bull should do *kukkuṭāsana* (cockerel).[11] The prospect should sit on his buttocks. Next, [each wrestler] should take physical exercise, and do [it] on his own.[12]

Whilst descriptions of these *āsana*s are not provided, *padmāsana* and *kukkuṭāsana* were both well-established, seated yogic *āsana*s by this time and featured in the thirteenth-century *Vasiṣṭhasaṃhitā* (1.71, 78) and fifteenth-century *Haṭhapradīpikā* (1.23, 44). *Garuḍāsana* is not found in earlier yogic works but is a prevalent seated *āsana* in later *haṭhayoga* works, such as the eighteenth-century *Gheraṇḍasaṃhitā* and *Haṭhābhyāsa-paddhati*. *Phaṇāsana* is not found within yogic texts, and its method remains unknown. In the absence of instructions beyond 'sitting,' the techniques of these *āsana*s and their homology with *haṭhayoga āsana*s remains undetermined. However, their ancillary position to physical exercise is clear, as well as their classification according to experience and physique (McCartney 2023: 241, 246).

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[9] Similar acts of reverence to the earth are performed by Persian wrestlers when entering the arena (Fischer 1973: 254).

[10] *Mallapurāṇa* 6.24–25: *gaṇḍūṣair mukhaśuddhiś ca mukhaprakṣālanaṃ tathā | saṃdhyādikaṃ ca nirvṛtya raṅgaṃ gacchet samāhitaḥ || gatvā ca prathamaṃ jyeṣṭhī prāṇāyāmaṃ ca kārayet | bhūmivandanapūrvaṃ ca kārayec ca tataḥ śramam ||*

[11] The text has *kukuṭṭāsana*, but likely refers to *kukkuṭāsana*.

[12] *Mallapurāṇa* 6.45–48: *mallāḥ pañca bhavanty ete gajaḥ siṃho vṛṣo mṛgaḥ | bhaviṣyaḥ pañcamo jñeyaḥ pañcaiṣām āsanāni ca || vidyābhyāsena pañcaite bhavanti jyeṣṭhinaḥ kramāt | āsanair upaviśanti svaiḥ svaiḥ sarve 'pi sādarāḥ || gajaḥ padmāsanaṃ kuryāt siṃho 'pi garuḍāsanam | phaṇāsanaṃ mṛgaḥ kuryāt vṛṣo 'pi kukuṭṭāsanam || bhaviṣyo 'pi tathā kuryād āsanaṃ jaghanopari | kārayec ca śramaṃ paścāt prakuryāt svayameva ca ||*

Chapter 8 of the *Mallapurāṇa* features a second group of seventeen *āsana*s, also practised as an auxiliary of physical exercise. *Garuḍāsana* and *kukkuṭāsana* are again listed, and joined by *śirāsana*, *agrāsana*, *paścādāsana*, *madhyāsana*, *siṃhāsana*, *kūrmāsana*, *dārdurāsana*, *gajāsana*, *ūrdhvāsana*, *kakṣāsana*, *grīvāsana*, *bhujāsana*, *dvibhujāsana*, *phaṇaguptāsana* and *udarāsana* (*Mallapurāṇa* 8.16–21). *Siṃhāsana* may refer to a well-established yogic *āsana* of the *Vasiṣṭhasaṃhitā*, and *kūrmāsana* of the *Haṭhapradīpika*. *Paścādāsana* may be a synonym of *paścimatānāsana*, a preeminent posture in the *Haṭhapradīpika* (1.29). However, like the first group of *āsana*s, the correspondence of these *āsana*s with *haṭhayoga āsana*s remains inconclusive. Furthermore, the role of this second group is less clear-cut than the first. Although they similarly precede exercise, their textual proximity to slaps, holds and wrestling positions may, as Patrick McCartney has proposed, suggest a pugilistic rather than yogic function (McCartney 2023: 248).

The *Mallapurāṇa* also lists a variety of *śrama* exercises. Sandesara and Mehta have equated three of these with *daṇḍ*s: *āsthādanaka*, *bāhuśrama* and *bāhupreraṇikaśrama* (1964: 17). However, a close examination of the verses cited by these authors has failed to establish a correlation. *Āsthādanaka* is paired with *āmardakīśrama*, a type of massage in a single corrupted half-verse.[13] Its method is undisclosed, and its interpretation as a *daṇḍ* relies, somewhat tenuously, on a reworking of *āsthādanaka* to form *āsthā-daṇḍa-ka*. *Bāhuśrama* is listed, without description, as an arm exercise.[14] *Bāhupreraṇikaśrama* is described as an arm-moving exercise bringing strength to eight regions: palms, hands, arms, shoulders, thighs, head, knees and hips.[15] *Bāhupreraṇikaśrama* may be a synonym of *bāhupellaṇakaśrama*, a resistance exercise included in the *Mānasollāsa*, which Shrigondekar (1925: 36) equates with 'hand clasping.' Neither a *daṇḍ* nor an exercise of its kind is included in the *Mallapurāṇa*. Likewise, although *malla*s perform Vaiṣṇava *praṇāma* prostrations, *sūryanamaskār* is not included within their daily regimen (*Mallapurāṇa* 6.29–37). The *Mallapurāṇa* does, however, demonstrate the porous boundaries of *mallavidyā* and the absorption of yogic practices of *prāṇāyāma* and *āsana* as preparatory physical exercises, as early as the fifteenth to sixteenth century.

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[13] *Mallapurāṇa* 10.04.1: *āmardakīśramaḥ śreṣṭho yāñcāsthādanakaḥ śramaḥ* |

[14] *Mallapurāṇa* 10.08: *tatrādau madhyāmāṃś cānyān anyāṃs te kathayāmy aham* | *stambhaśramaṇikā bāhubāhuśramaṇam eva ca* ||

[15] *Mallapurāṇa* 11.9–12: *pavanasya jayaś caiva etad aṣṭaguṇaṃ smṛtam* | *mallānaṃ vijayakaraṃ tasmād etat samabhyaset* || *aṣṭadhā bhavati prāṇaṃ bāhupreraṇikaśramāt* | *talahastabhavaṃ prāṇaṃ bhujaprāṇaṃ tathaiva ca* || *skandhaprāṇam uraḥprāṇaṃ bhujaśīrṣabhavaṃ tathā* | *jānuprāṇaṃ kaṭiprāṇaṃ ropaṇaṃ talapādayoḥ* || *urdhvasthāyikam evaitat prāṇa ekādaśātmakaḥ* | *ataḥ sarvaprakāreṇa śramam eva sadābhyaset* ||

1.2 Persian Pahlavāns

Turco-Persian wrestling arrived in India as early as the fourteenth century and, hastened by Mughal ascendency, became established in the Deccan from the sixteenth century (Rochard and Bast 2023: 183; Flatt 2010: 161). The incoming wrestling style became known as 'Khorasanian,' distinguishing it from Indian *mallayuddha* and linking it to Khorasan, a region extending from Persia to central Asian areas of Uzbekistan, Turkmenistan and Afghanistan (Rochard, forthcoming). Contact between Khorasanian and indigenous Indian wrestlers is well evinced. The sixteenth-century Mughal emperor Akbar, who himself wrestled as a child, kept a stable of champions from Persia, Turkestan and Kurdistan, as well as local *malla*s from Gujarat (Beveridge 2000[1907]: 456; Blochman 1873: 253). Mughul ruins in Bidar attest to Iranian-style wrestling gymnasia (*zurkhāneh*)[16] in Karnataka, which, as already established, had been a hub of homegrown *mallavidyā* from at least the twelfth century (Flatt 2010: 161). Additional literary references to *zurkhāneh* are found in descriptions of Bidar as well as Ahmadnagar, Maharashtra (ibid.).

The Hindi term *pahalavāna* for 'wrestler' originates in the Persian *pahlavān*, meaning 'Parthian,' signifying inhabitants of Parthia, Northeastern Iran (Chehabi 2018: 244). Persian epics use *pahlavān* to denote a 'hero' or 'champion,' and the term subsequently became synonymous with 'wrestler' (Flatt 2010: 171). The Hindi word *kuṣṭī* for 'wrestling' also originates in Persia, where wrestlers were known by the Parthian, *kushti-gir*, meaning 'belt-seizers' (Chehabi 2018: 237–42). By the tenth century, *kushti-gir* became superseded by the Persian *koshti* and equated with 'wrestling' (ibid.: 241–2). *Koshti* enjoys a rich historical legacy in Persia and is featured in pre-Islamic and Islamic literary works. Firdawsī's *Shāhnāma* (*c.* 1010 CE)[17] contains numerous episodes of *koshti*, most famously the tragedy of Rostam,[18] whose widespread legend led to Indian wrestling champions before 1947 being titled *Rustam-i Hind* (Chehabi 2018: 281). Wrestling is further mentioned in Sistān cycle epics such as the *Garshāsbnāmeh* and *Kok Kuhzādnāmeh* and in later Islamic works such as the fifteenth-century *Kohavar*, which chronicles the triumphs of the Prophet's son-in-law, Alī al-Murtaḍā (ibid.: 271).

[16] Persian: 'House[s] of strength' (Krawietz 2013: 144).

[17] Flatt 2010: 156.

[18] Unaware of his opponent's identity, Rostam slays his own son, Sohrāb, in combat. See Chehabi 2018.

Information beyond the epics is contained in several works. Most pertinent is the *Tumār-e afsāneh* (*c.* 1600–1700 CE),[19] which, as Rochard and Bast have noted, contains numerous parallels with the *Mallapurāṇa* (Rochard and Bast 2023: 189–91). The *Tumār-e afsāneh* (9) includes a celebrated training method of the *zurkhāneh*, a type of jackknife push-up called '*shenâ*':

> The *varzesh-e shenâ* [exercise of *shenâ*] must be done a hundred times and no more because it is harmful, and the rule is to put the two palms of the hands and the two points of the feet on the ground, and the knees and the stomach must not touch the ground (Partow-Beyzā'i Kāshāni 1958/59: 364; trans. Philippe Rochard, p.c. 15/05/23).

Shenâ means 'swimming' and derives from the undulating movement of the exerciser's body, which is described in Mir Najat's homoerotic *Guli-i Kushtī* (1700 CE) as 'a beautiful wave of intoxicating water' (Rochard and Chehabi 2002: 315; Partow-Beyzā'i Kāshāni 1958/59: 389–90, Rochard, p.c. 06/08/23). A more detailed picture is furnished by Carsten Niebuhr's illustrated Persian travelogue (1778 CE), which was later reproduced in Krünitz's 1799 encyclopaedia (see Figure 1 and the excerpt below).

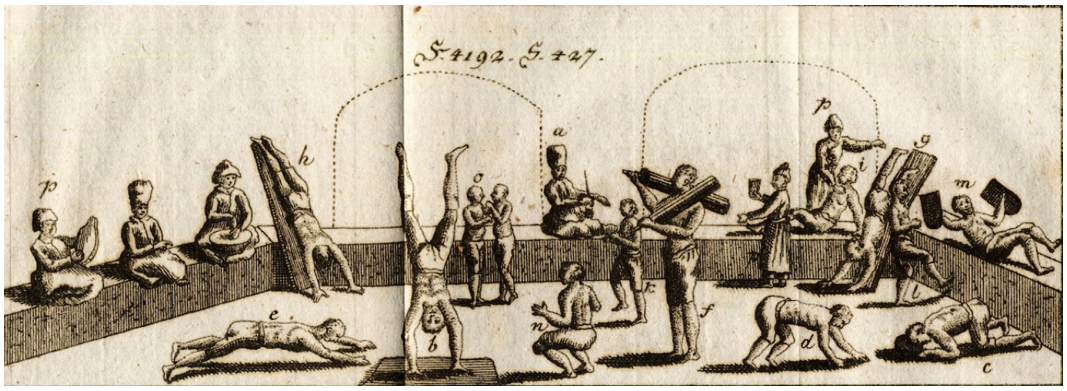

Figure 1: Niebuhr's annotated Persian gymnasium (reproduced in Krünitz 1799: Leibes=Stellung).

> Most of them immediately did their prayers, throwing their faces to the ground several times (*c*). The first exercise is illustrated at (*d*) and (*e*)... The whole company stood next to each other on hands and feet... In this position, without moving their hands or feet, together they [each] had to trace a circumference with their head... The more often one can repeat

[19] Partow-Beyzā'i Kāshāni 1958/59.

> this exercise, the greater one's skill. I believe that some of them repeated it more than 60 times. Everything was done according to the music and very rhythmically (Niebuhr 1778 in Krünitz 1799, 'Leibes=Stellung' entry, trans. Anja Nikodem, p.c. 06/08/23).

Niebuhr's account echoes the proximity between ritual, exercise and religious prostration found in Chapter 6 of the *Mallapurāṇa*. The first position of the exercise at (*d*) resembles the first position of a *daṇḍ*[20] and position 7 of *sūryanamaskār*,[21] which in transnational yoga is known as *adhomukhaśvānāsana* (downward-facing dog posture).[22] Although the description and illustration of (*e*) are similar to *adhomukhaśvānāsana,* the distance between the hands and the feet is greater. As in *Tumār-e afsāneh*, the exercise is done repeatedly (no more than a hundred times in the *Tumār-e afsāneh* and sixty times according to Niebuhr). Like *Tumār-e afsāneh*, Niebuhr stipulates that the abdomen must not touch the floor. 'Circumference' refers to the bobbing movement of the head as the body is lowered and raised from the floor. A similar scene is depicted in an early nineteenth-century print entitled *Gymnase des Persana*, published by Madame Veuve Hocquart (Figure 2). Here, a *pahlavān* on the left also performs a wide-stance *adhomukhaśvānāsana* position. The *pahlavān* on the right performs a variation of *shenâ* known as *shenâ-ye pich* (twisted) (Partow-Beyzā'i Kāshāni 1958/59: 50–52). As in Niebuhr's illustration, a musician accompanies the exercise.

As early as the eighteenth century, *shenâ* was commonly performed with *takht-i shenâ*, a wooden board placed on the floor underneath the palms (Figures 3 and 4). A large plank was originally used so that athletes could perform a range of acrobatic exercises (including *shenâ*) on the training area's loose soil. Then, as acrobatic elements diminished and harder ground was used, the plank was retained for *shenâ* but became smaller and featured two small feet or handles (Rochard, forthcoming).

Takht-i shenâ is still widely used in contemporary Iranian *zurkhāneh*, where the *shenâ* exercise comprises two principal positions broadly corresponding with Niebuhr's 1778 description (Figures 5 and 6).

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[20] See Figure A2, Appendix A.

[21] See Figure A1, Appendix A.

[22] See Krishnamacharya 2011[1934]: 132.

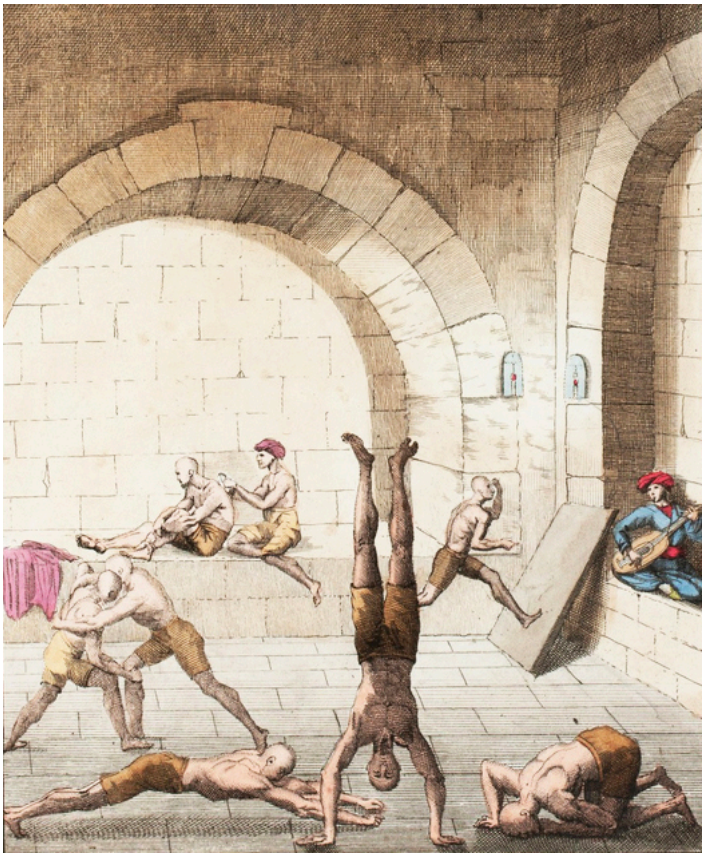

Figure 2: *Gymnase des Persana* (Hocquart 1811–1814).

Figure 3: *takht-i shenâ* with feet (Uliasz 2023).

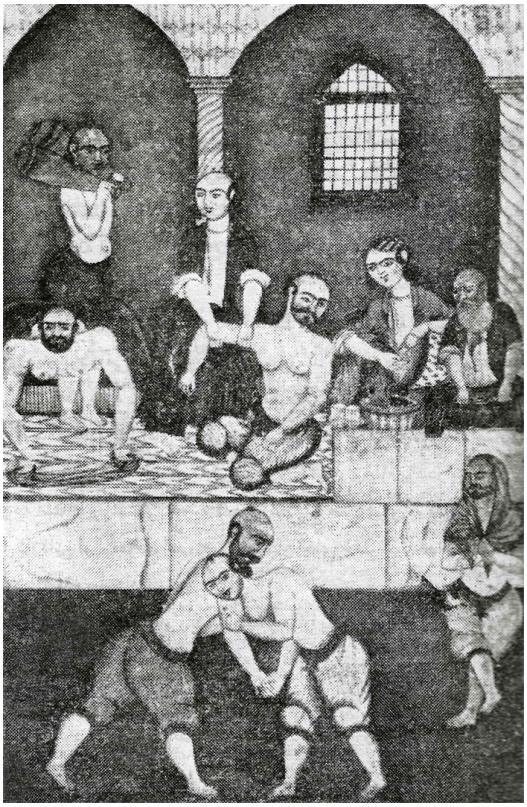

Figure 4: Persian miniature (1797–1834 CE). Middle-left figure is using a *takht-i shenâ* with handles (Partow-Beyzā'i Kāshāni 2003/2004: 39).

Figure 5: *Shenâ* position 1 with *takht-i shenâ*, Zurkhāneh in Iran (Contreras 2016).

Figure 6: The head is brought forwards as the chest is lowered towards the board (Lafforgue 2015).

The first position (Figure 5) resembles a wide-legged version of (e) in Krünitz's encyclopedia and thus corresponds with the first position of the *daṇḍ*, the seventh position of *sūryanamaskār* and the yoga posture *adhomukhaśvānāsana*.[23] Then, as shown in Figure 6, *pahlavāns* lower themselves to the floor into a position closely resembling the second position of the *daṇḍ*[24] and the yoga posture known as *caturaṅga-daṇḍāsana* (four-limbed stick posture).[25] *Pahlavāns* then return to the first position and perform the exercise repeatedly. As in Niebuhr's account, contemporary *shenâ* is performed as a group and rhythmically in tandem with music. A *murshid* (teacher) leads the athletes through the exercise to the accompaniment of a *zarb* (drum), with a combination of song, verse-recitation and call-and-response exclamations praising Allāh and Alī, and cursing Alī's enemies (Baker 1997: 75; Krawietz 2014: 153). A verse from the *murshid* punctuates each push-up, which is performed to the accompaniment of a drumroll from the *zarb*. Repetitions of the exercise thus combine physical conditioning with ritual prostration:

[23] See Figures A1 and A2, Appendix A.

[24] See Figure A2, Appendix A.

[25] See Krishnamacharya 2011[1934]: 130.

> The exercise also has a religious interpretation: each push-up is a prostration to God, and the interpretive enthusiast may even suggest that each hair on the head of each pahlavān is chanting 'Allāh, Allāh, Alī, Alī' (Fischer 1973: 256).

Partow-Beyzā'i Kāshāni (1958/59: 50–2) describes four *shenâ* varieties:

- *korsi* (wide, like a table)
- *dast-o pâ moqâbel* (feet and hands aligned)
- *do shalâqeh* (twice quickly)
- *pich* (twisted).

Shenâ-ye korsi is also known as *sar navâzi* (head stroking), a reference to the head movement alluded to by Niebuhr. In *shenâ-ye dast-o pâ moqâbel* (also known as *shenâ keshideh*), the feet are closely aligned, and a third position is added (shown in Figure 7), which resembles position 3 of the *daṇḍ*,[26] position 6 of *sūryanamaskār*[27] and the posture known as *ūrdhvamukhaśvānāsana* (upward-facing dog posture).[28] The complete exercise, shown in Figure 8, corresponds exactly with a *daṇḍ*.

Figure 7: *shenâ keshideh* (Zelzowski 2016).

[26] See Figure A2, Appendix A.

[27] See Figure A1, Appendix A.

[28] See Krishnamacharya 2011[1934]: 131.

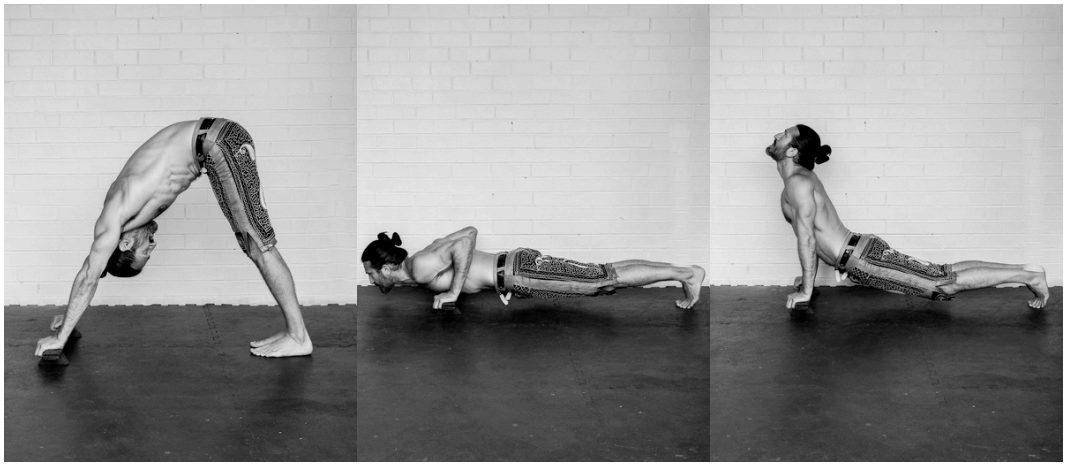

Figure 8: *shenâ keshideh* (Azad 2024).

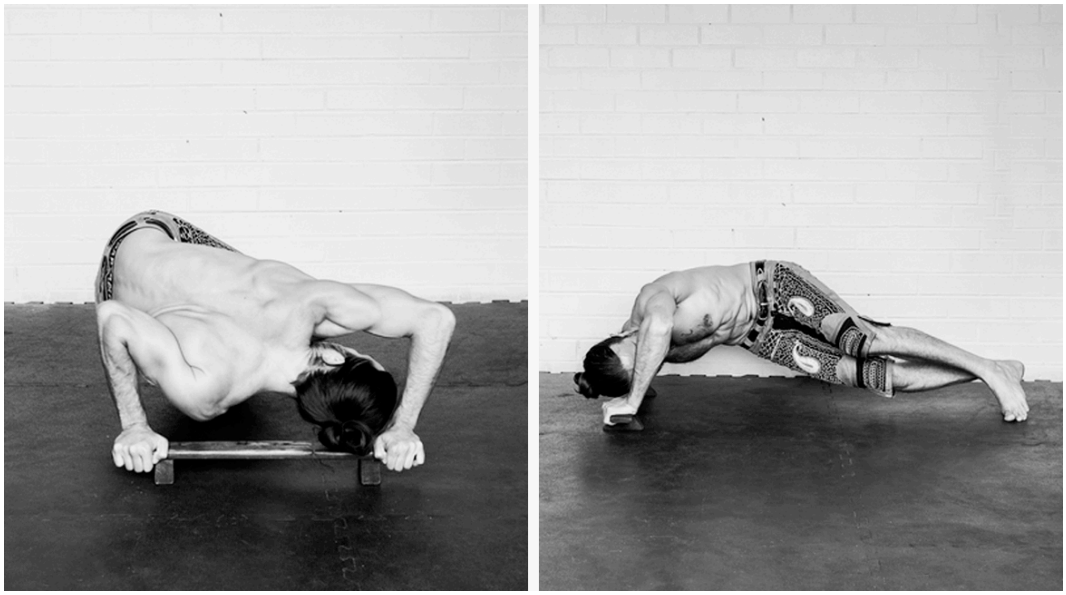

Figure 9: *shenâ-ye pich* (Azad 2024).

In *shenâ-ye pich*, the chest turns to create a twist as the body is lowered to the floor (Figure 9) in a position broadly resembling the figure in Hocquart's *Gymnase des Persana* (Figure 2).

Although premodern *shenâ* descriptions are rudimentary, they nonetheless point towards an exercise sharing similarities with contemporary praxis in Iran.

1.3 Transculturation

Whilst early references to *shenâ* occur exclusively in Persian literature between 1600 and 1700 CE,[29] iconography attests to *takht-i shenâ* in Mughul India from at least the eighteenth century (see Figures C1 and C2, Appendix C). An illustration in the manuscripts of J. Gentil of Faizabad contextualises wrestling's position amongst other Mughal courtly pursuits and depicts exercises which include *varzesh-e shenâ* (Figure 10).

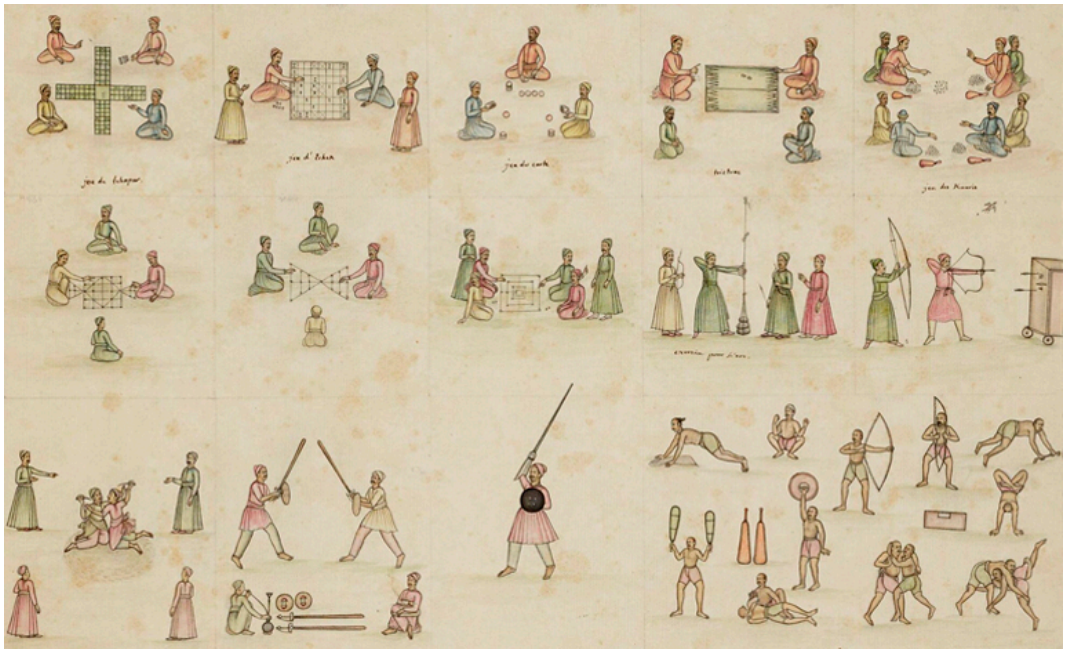

Figure 10: *Sports and Pastimes of Nobility* (Gentil *c.* 1774). © Victoria and Albert Museum, London.

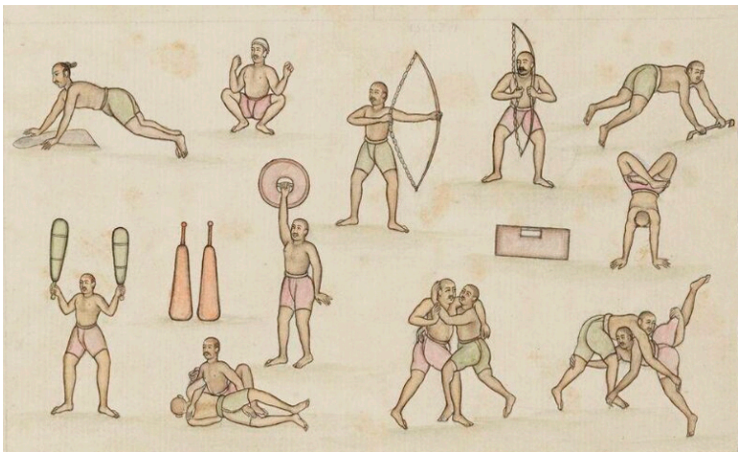

Figure 11: Close-up (ibid.). © Victoria and Albert Museum, London.

[29] E.g., *Tumār-e afsāneh* (*c.* 1600–1700 CE) and *Guli-i Kushtī* (1700). See Partow-Beyzā'i Kāshāni 1958/59.

Figure 12: A solitary wrestler (middle left) performs *takht-i shenâ* (Lal 1830).
© Victoria and Albert Museum, London.

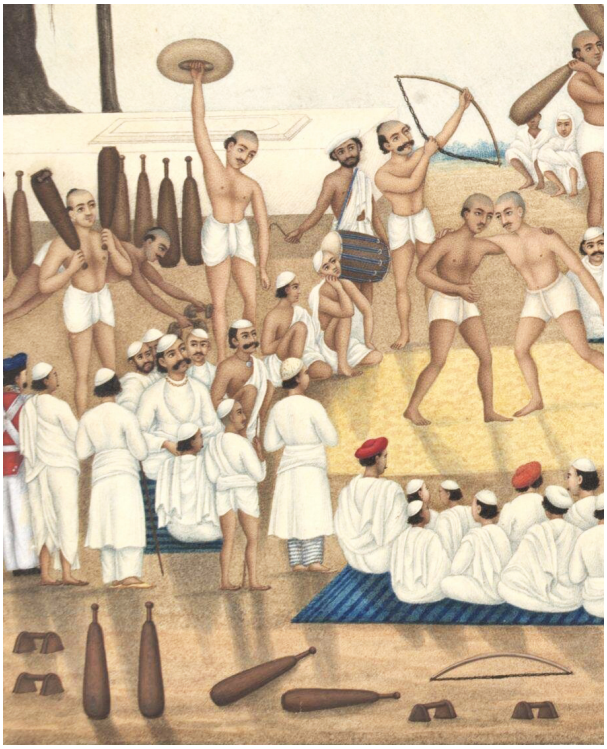

Figure 13: Close-up (ibid.).

A closer examination of Figure 11 reveals that the wrestler at the top right uses *takht-i shenâ* and performs some type of *shenâ* exercise. The wrestlers may be Persian, or it may be that these are Indian *malla*s who have adopted *koshti* practices and apparatus. Other activities depicted, such as the *nāl* (stone weights) and *mil* (clubs), were widely practised by both Indian and Persian wrestlers (Rochard 2023). Whilst the figure at the top left may, as O'Hanlon (2007: 497) proposes, be performing *sūryanamaskār*, he could be practising some other type of prostration or *shenâ* exercise. A Company work, originating in Bihar, titled 'Indian Sports' (1830), by Hulas Lal, includes a partially concealed figure using *takht-i shenâ* in the first position of *shenâ*. Several *takht-i shenâ* are also visible in the foreground (Figures 12 and 13).

A travelogue from a Marathi camp, dated 1809 CE,[30] includes a clear description and illustration of an exercise closely resembling *shenâ keshideh* but performed without a wooden board and referred to instead as *Dhun* or *Dund* (i.e. *daṇḍ*), meaning 'stick':

> The first exercise is generally the *Dhun*, or rather *Dund*, which is thus performed. The exerciser, having balanced himself upon his hands and toes, each about two feet apart, throws the body forwards till the chest comes within three or four inches of the ground, loosening his elbows and tightening his knees, but without moving his hands or feet from their original position: in which motion almost every muscle of the body is exerted. He then straightens his elbows and erects his head and chest; and, having remained in this position a few seconds draws back to his first posture and repeats his *Dhuns* as long as his strength will allow him to continue (Broughton 1995[1813]: 164).

Like Niebuhr's 1778 account of *shenâ*, Broughton's '*Dhun*' is a preliminary exercise preceding wrestling combat, which he terms *kooshti*. Broughton's description and illustration (Figure 14) of the torso hovering above the ground corresponds with the *Tumār-e afsāneh* and Niebuhr's stipulation that the abdomen must not touch the floor. Broughton goes on to state that, with practice, as many as three hundred repetitions are performed, a figure much higher than in earlier descriptions (1995[1813]: 164). Both Persian and Hindi terms are employed in Broughton's description. Wrestling combat is termed *kooshti* rather than *mallayuddha*, and an accomplished wrestler is titled *puhlwan* rather than *jyeṣṭhi* (ibid.: 164–6). The arena, however, is called an *ukhara* (*akhāṛā*) rather than *zurkhāneh*. The training session concludes with further '*dhuns*,' which, like Niebuhr's account of the *zurkhāneh*, are performed by the whole group in a

[30] Broughton's account of wrestlers is dated 21 July 1809 (Broughton 1995[1813]: 160).

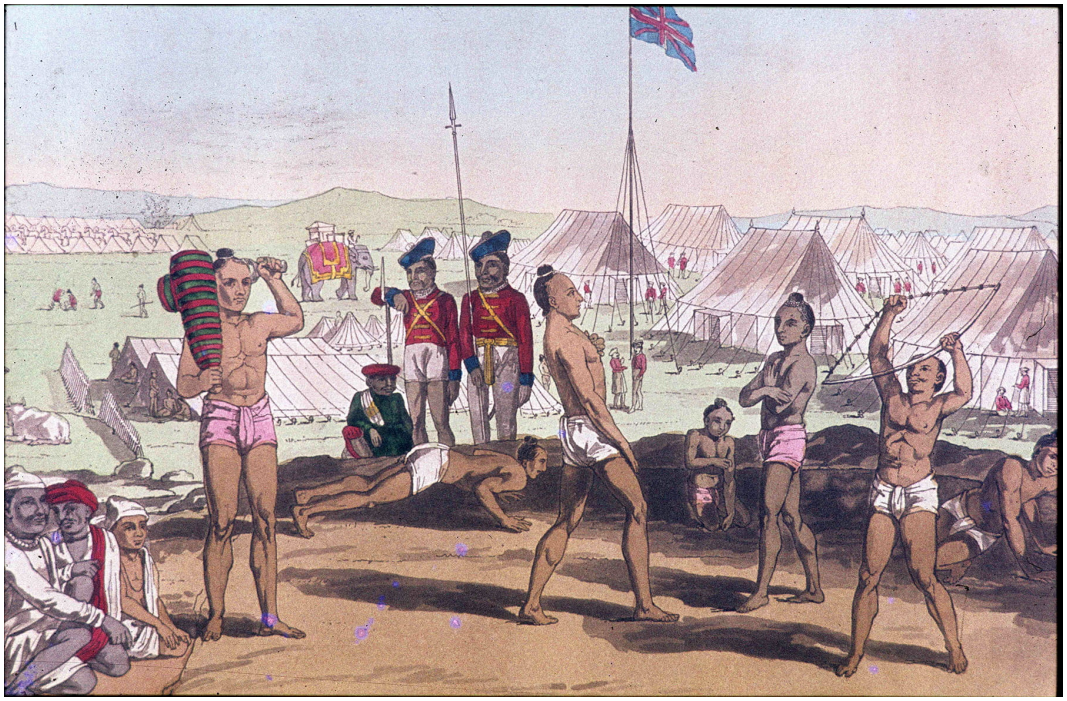

Figure 14: An *ukhara* with a view of the British residents' camp (Broughton 1813).

row (ibid.: 165). Broughton's description demonstrates the syncretic amalgamation of language and practices between Indian *mallavidyā* and Persian *koshti* by the early nineteenth century.[31]

Contemporaneous Indian literature also uses the term *daṇḍ* or *daṇḍa*. The eighteenth-century[32] Telugu work *Hamsaviṃśati* (1.206) lists, without description, twelve varieties of *daṇḍa*:[33] *sama*, *gaja*, *bhṛṅgidaṇḍa*, *eḍamavara-bhṛṅgidaṇḍ*, *uḍivara-bhṛṅgidaṇḍ*, *bhṛṅgipaṭala*, *payivarapu*, *siṅgapu*, *podalika*, *aḍugaḍugu podalika*, *maddela sañcu*, and *kukkuṭa*. Although *gaja* and *kukkuṭa* are both *āsana*s named in the *Mallapurāṇa*, a connection is unclear.

In the late nineteenth and early twentieth centuries, wrestling was championed by royal patrons of kingdoms within Maharashtra, Gujarat, Madhya Pradesh, Rajasthan and Punjab (Ganneri 2013: 129). *Akhāṛā*s became established throughout western India, most notably in Maharashtra and Karnataka, which, as already shown, were also home to

[31] Broughton also states that women wrestlers perform the same training regime (1995[1813]: 165–6). This is attested by a Rāgamālā painting depicting women wrestlers training, one of whom performs *shenâ*: see Figure C3, Appendix C.

[32] Kumar 1991: 562.

[33] And indicates there are others (Narayananatyudu 1945: 25–6).

Persian *zurkhāneh*.[34] This flourishing tradition of royal patronage converged with a nationalist revival of indigenous *vyāyāma* fuelled by anticolonialism, a growing global physical culture movement and the introduction of physical education within Indian schools (Ganneri 2013: 123–8; Alter 2013: 10). During this period, *daṇḍ*s moved beyond the realm of wrestling to become included within the broader sphere of gymnastics and Indian *vyāyāma*. The Bengali gymnastics manual *Byāẏāma Śikshā* describes five varieties of *daṇḍ phelā*, four of which are variations of the standard *daṇḍ* (Śarmmā 1875: 22–5). The fourth variation resembles a contemporary postural technique termed *utpluti* ('lifting up'), which forms a component of either jumping back from sitting to *caturaṅga-daṇḍāsāna* (four-limbed stick posture) or jumping the legs (*plavana*) from *adhomukhaśvānāsana* (downward-dog posture) (see Figures 15.a–b, below):

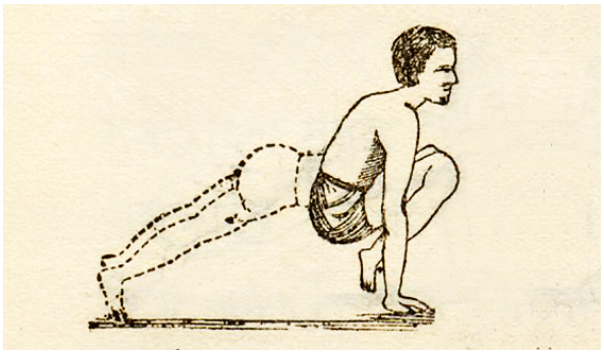

Figure 15.a: *daṇḍ phelā* (ibid.: 24).

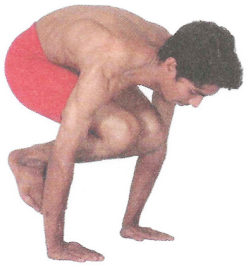

Figure 15.b: *Utpluti* (Ramaswami 2005: 37).

Another late-nineteenth-century gymnastics manual, *Vyāyāmadīpike*, published in Mysore, Karnataka, devotes an entire chapter to *daṇḍ*s (*daṇḍe* in Kannada) (Bharadwaj 1896: 28–35). Ten exercises are described, of which three are optional supplementary practices. Each *daṇḍe* is performed twelve times. The following are named: *daṇḍe* (foundation sequence), *salakaṇi*, *ṣēr*, *chakkara*, *jhōku*, *horaḷike* (two variations) and *edehoraḷike*. *Ṣēr* means 'tiger' and may refer to the same practice listed in the *Hamsaviṃśati* as *siṅgapu*, which means 'tiger' in Telugu. *Vyāyāmadīpike* echoes Broughton's 1809 account of a *daṇḍ* in its description of the foundational *daṇḍe* sequence upon which subsequent *daṇḍe*s develop:

> Both the palms, the chest and the big toes of the feet must be pressed into the ground, and the body must be lifted up. Then, having done what I first described, immediately thereafter, the body must be pulled back to

[34] See Guthrie 1881: 8–9 for an account of an *akhāṛā* in Hubli, Karnataka.

the full extension of the arms, as shown in the picture [Figure 16]. Then, quickly lower your body. In the same movement, push it forward one foot ahead of where you planted your hands on the ground and lift your head, as shown in the picture [Figure 17] (Bharadwaj 1896, *Vyāyāma Dīpike*: 29–30, trans. Shubha Shanthamurthy, p.c. 17/07/23).

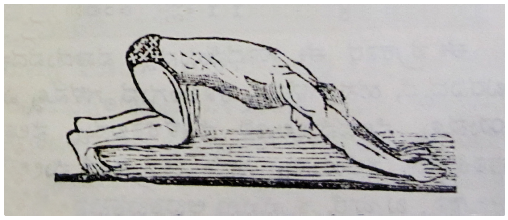

Figure 16: *daṇḍe* (ibid.: 29).

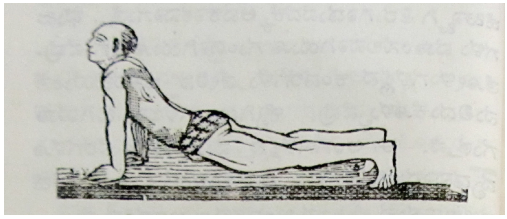

Figure 17: *daṇḍe* (ibid.: 30).

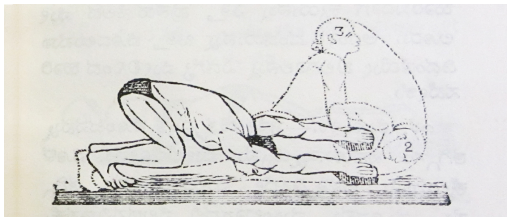

Figure 18: *ṣēr-daṇḍe* (ibid.: 31).

Figure 19: *horaḷike-daṇḍe* (ibid.: 33–4).

An illustration of *ṣēr-daṇḍe* (Figure 18) shows blocks underneath the palms in a similar fashion to *takht-i shenâ*, and an illustration for *horaḷike-daṇḍe* (Figure 19) includes a twist of the body identical with *shenâ-ye pich*.

The *Vyāyāmadīpike* demonstrates that by the advent of the twentieth century, exercises resembling Persian *shenâ* had been assimilated within Indian *vyāyāma* and become known as *daṇḍs*. Early-twentieth-century *vyāyāma* manuals feature a broadening repertoire of *daṇḍs*. Fifteen types of *daṇḍ* in the 1904 *Vyāyāma Śikṣak* include a transitional position called *adho mukha āsana,* which resembles the first position of *shenâ* and *daṇḍ*, the central position of *sūryanamaskār* and the yogic posture *adhomukhaśvānāsana* (Armstrong 2023: 286). Mujumdar's *Vyāyām Jñānakośa* (1939) presents a bricolage of exercises that includes *sūryanamaskār*, *yogāsana*s and numerous *daṇḍs*, including *daṇḍs* with props resembling *takht-i shenâ* (Figure C4, Appendix C).

To summarise, neither *daṇḍ* nor *sūryanamaskār* were a feature of pre-Mughal Indian wrestling. Indian *malla*s did, however, engage in ritualised religious prostration as an adjunct to physical exercise. As early as the seventeenth century, *mallavidyā*

appropriated physical yoga practices of *āsana* and *prāṇāyāma*. The earliest references to wrestlers performing exercises resembling the *daṇḍ* occur within seventeenth- and eighteenth-century Persian sources. Here, training commenced with *shenâ*, performed as a group in combination with music and ritual prostration to Allāh, often using a small wooden board, the *takht-i shenâ*. Iconography attests to the arrival in India of *takht-i shenâ* and *shenâ* in the eighteenth century, which in literary sources is referred to as *daṇḍ* or *daṇḍa*. This may refer to the stick-like position of the body or the exercise's similarity to *daṇḍavat*-style prostrations. A further possibility is that the name *daṇḍ* originates in Persian wrestlers' use of the wooden board. The absence of earlier records of *daṇḍ* practices in pre-Mughal India and the significant influence of *koshti* on *mallavidyā* indicates that the *daṇḍ* originates in the Persian exercise named *shenâ* and was incorporated into the training regimes of Indian wrestlers in the eighteenth century. Persian *koshti* previously evolved through contact with cultures from other Khorasanian regions, such as East Turkestan and Afghanistan, so that the *shenâ* itself may be the product of broad-ranging influences. The proximity of religious prostration to physical exercise within both Indian and Persian traditions may have allowed for a natural amalgamation of push-ups with prostrations in the development of a practice that in the twentieth century would become known as *sūryanamaskār*.

2. Haṭhayoga

Early yogic works such as the first- to third-century[35] *Bhagavadgītā* (6.11–13) and the *Pātañjalayogaśāstra* (2.46–47), dating from around 400 CE,[36] frame *āsana* as a seated posture adopted for the purpose of meditation. Within the later tradition of *haṭhayoga*, the parameters of *āsana* expanded beyond a purely seated format to encompass a variety of postures. The twelfth- to thirteenth-century *Vasiṣṭhasaṃhitā* teaches ten *āsana*s, including the non-seated postures *mayūrāsana* (peacock) and *kukkuṭāsana*[37] (cockerel) (Birch 2018: 106). Eight of the fifteen *āsana*s taught in Svātmārāma's fifteenth-century *Haṭhapradīpikā* are non-seated (Mallinson and Singleton 2017: xl, 91). Although the Sanskrit term *haṭha* denotes 'force,'[38] Svātmārāma includes exertion (*prayāsa*) in a list of six obstacles to *haṭhayoga* and proposes effortlessness in *āsana* as a prerequisite for further practices of *mudrā* and *prāṇāyāma* (*Haṭhapradīpikā* 1.15, 55).

[35] Mallinson and Singleton 2017: xxxix.

[36] See Maas 2020: 1.

[37] *Kukkuṭāsana* is named twice in the *Mallapurāṇa* (see Section 1.1).

[38] Monier-Williams 1960[1899]: 1287.

Where works such as *Vasiṣṭhasaṃhitā* (1.72) and *Haṭhapradīpikā* (1.35) employ verbs related to *vinyāsa,* it is to indicate correct positioning of bodily limbs rather than *vinyāsa's* modern equation of breath-coordinated movement (e.g. Swenson 1991: 11). Postural explanations that include the term *daṇḍa* signify the body's stick-like shape rather than a prostration or push-up-style exercise.[39] Although medieval *haṭhayoga* works typically include verses expressing *praṇāma* or *namaskāra* towards a tutelary deity such as Ādinātha or Brahmā,[40] they do not propose *sūryanamaskāra*[41] or other forms of physical prostration within their yogic teachings. Such practices may have been observed according to the religious customs of participants in *haṭhayoga*, but they were not a facet of *haṭhayoga's* non-sectarian[42] methodology.

Whilst still intrinsically linked with meditation, *āsana* had by this time acquired an increasingly physiological and therapeutic role. For example, Svātmārāma credits *āsana* with bringing 'steadiness, good health and physical fitness' (*Haṭhapradīpikā* 1.17)[43] and ascribes numerous *āsana*s with therapeutic benefits.[44] Later works present an ever-widening spectrum of *āsana*s. The sixteenth-century Persian work, the *Baḥr al-ḥayāt,* teaches twenty-two, primarily seated, postures (Mallinson and Singleton 2017: 92). The *Yogacintāmaṇi*, dating to the late sixteenth or early seventeenth century, teaches thirty-four *āsana*s, and Śrīnivāsa's seventeenth-century *Haṭharatnāvalī* lists eighty-four, of which thirty-six are described (Birch 2018: 110).[45] The eighteenth-century *Gheraṇḍa-saṃhitā* equates postural proficiency with bodily strength and teaches thirty-two *āsana*s (1.10, 2.1–45). Jayatarāma's *Jogapradīpyakā* (1737 CE)[46] teaches ninety *āsana*s, imbued with a range of both soteriological and physiological benefits (Maheśānanda 2006: 32–70).

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[39] E.g., *Vasiṣṭhasaṃhitā* 1.77.

[40] E.g., *Yogabīja* 1, *Yogayājñavalkya* 1.9–19.

[41] *Suryānamaskār* is referred to as *suryānamaskāra* when discussed in Sanskrit contexts.

[42] See *Dattātreyayogaśāstra* 41–2.

[43] See Mallinson et al., *Haṭhapradīpikā*, 2024. Early recensions of the *Haṭhapradīpikā* have *aṅgapāṭava* in this verse, which Mallinson et al. (2024) translate as 'physical fitness'. Many later recensions have *aṅgalāghava*, denoting 'lightness of limbs'.

[44] E.g., *paścimatānāsana* slims the abdomen, stimulates digestion and produces good health; *mayūrāsana* eradicates disease and rebalances bodily humours. *Haṭhapradīpikā* (1.29, 1.31).

[45] *Haṭharatnāvalī* (3.44) includes *daṇḍa-mayūrāsana*, which shares similarities with wrestling *daṇḍs*. This may be incidental rather than the result of contiguity with *mallavidyā.*

[46] Birch and Hargreaves 2023: 34.

Movement and embryonic postural sequencing also began to emerge during the eighteenth century. The *Haṭhatattvakaumudī* (IX: 13–19) proposes ten varieties of *cāraṇā*s, repetitive joint movements which, when practised in conjunction with *āsana*s, alleviate disease and prepare the practitioner for *nāḍīśodhana*. Kapālakuraṇṭaka's *Haṭhābhyāsapaddhati* posits postural training as a means of acquiring physical strength in preparation for *ṣaṭkarma* and teaches one hundred and twelve *āsana*s, including numerous moving postures and rudimentary postural sequences (Birch and Singleton 2019). The *āsana* content of the *Haṭhābhyāsapaddhati* is later reproduced and illustrated in the *Śaivanidhi* portion of the *Śrītattvanidhi*, a work composed in the Mysore royal court between approximately 1849 and 1868 (ibid.: 14).

Brahmānanda's *Haṭhapradīpikā* commentary, *Jyotsnā* (1837 CE),[47] focuses solely on the fifteen static *āsana*s taught in the original text. Significantly, Brahmānanda's explanation of prohibited activities during periods of yogic practice directly names *sūryanamaskāra*: 'Activities that cause physical stress like excessive *sūryanamaskāra*s, or carrying heavy loads should not be done' (*Jyotsnā* 1.61).[48] Brahmānanda, thus, clearly understood *sūryanamaskāra* as a vigorous exercise akin to lifting heavy weights. Maheshananda and Sharma have established that Brahmānanda lived in Audambara, Maharashtra (2021: 5–8). In the nineteenth century, Audambara bordered Aundh State, a region which, as Section 3 will show, would become central to *sūryanamaskāra*'s propagation (see map, Figure B1, Appendix B). Whether Brahmānanda's 'excessive *sūryanamaskāra*s' refers to the overzealous performance of *namaskāra* prostrations, or if a variety of postural *sūryanamaskāra* was already present in Maharashtra, remains undetermined. Irrespective of its technique, Brahmānanda's censure of *sūryanamaskāra* indicates that he presumed his intended readers would be familiar with the practice, and suggests that some Marathi yogis were practising *sūryanamaskāra* at this time.

Despite Brahmānanda's rejection of *sūryanamaskāra*, some elements of *sūryanamaskār* are discernible within *haṭhayoga* works of this period. The eighteenth-century *Gheraṇḍasaṃhitā* (2.42–43) teaches *bhujaṅgāsana*, the 'serpent,' a posture widely known in contemporary yoga as 'cobra.'[49] *Bhujaṅgāsana* (Figures 20, 21), which has similarities

[47] Mallinson 2019: 2.

[48] The reference to *sūryanamaskāra* in the *Jyotsnā* was first discussed in an article by Birch 2015.

[49] Birch (2020: 458) identifies the *Haṭhayogasaṃhitā,* which he dates to the seventeenth century, as the probable principal source of the *Gheraṇḍasaṃhitā*. Hoth (2024) provides further philological analysis to support this connection. *Bhujaṅgāsana* may, therefore, have been taught in the seventeenth century (e.g., *Haṭhayogasaṃhitā,* Agnihotrī 1921: 28). However, currently, manuscript evidence is unavailable, and Hoth concludes that further research is necessary to substantiate the links between these two texts (2024: 37).

with *sarpāsana*,[50] features prominently in later *haṭhayoga* works and forms the sixth position of *sūryanamaskār*, as popularised by Bhavanrao Pratinidhi in Maharashtra in the 1920s.[51]

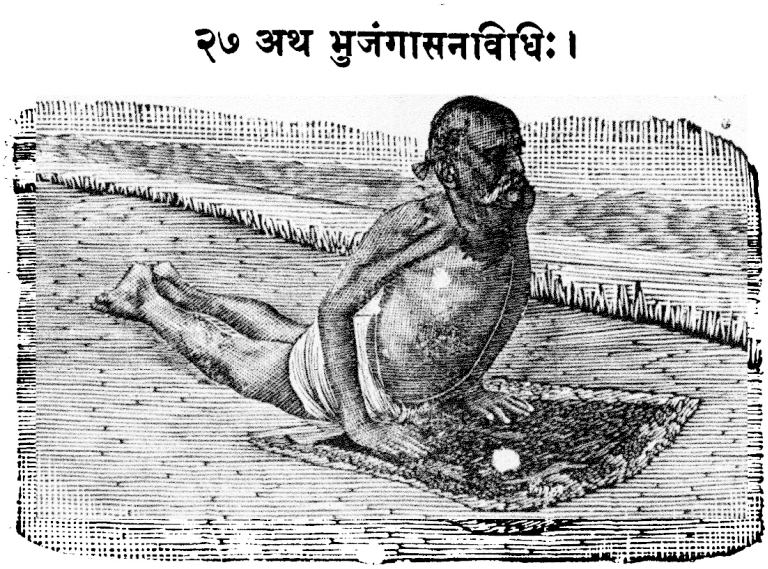

Figure 20: *Bhujaṅgāsana* – Marathi *haṭhayoga* manual *Yogasopāna-pūrvacatuṣka* (Ghamande 1905: 51).

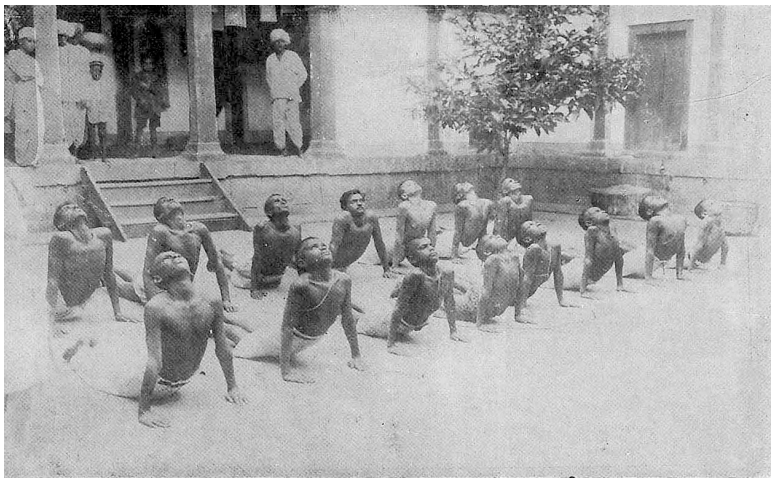

Figure 21: High-school students performing *sūryanamaskār*, Aundh, Maharashtra (Pratinidhi 1929[1928]: 115).

[50] E.g., *Haṭhābhyāsapaddhati* 46. Here, the hands are placed on the buttocks rather than the ground, and the yogi moves the chest. See Birch 2018: 156.

[51] See Figure A1, Appendix A.

Kapālakuraṇṭaka's *Haṭhābhyāsapaddhati*, which also likely originates in Maharashtra,[52] teaches *sarpāsana* as well as a series of prone postures (*nyubjāsanas*) (23–25, Birch 2018: 152–3):

- *saraṭāsana* (from the Marathi *saraṭa,* 'lizard') involves lying prone with the navel on the ground and forearms as 'pillars' while making a *sū* sound. *Saraṭāsana*'s description is reproduced in the *Śrītattvanidhi,* but the posture is named *sarpāsana* (Figure 22).

- *matsyāsana* (fish) also involves lying prone, but the elbows lift, and, supported by both hands, the body repeatedly lifts off the ground (Figure 23).

- *gajāsana* (elephant) resembles a type of moving *adhomukhaśvānāsana* in which the buttocks are initially raised, the eye gaze is towards the navel, and then the nose is lowered towards the ground and then forwards towards the hands (Figure 24).

Figure 22: *saraṭāsana*, *Haṭhābhyāsapaddhati* (23), as illustrated in the *Śrītattvanidhi* as *sarpāsana* (Sjoman 1999: Pl. 2).

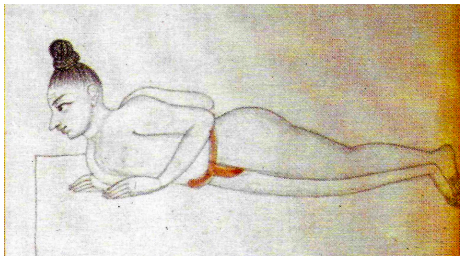

Figure 23: *matsyāsana*, *āsana* 24 of the *Haṭhābhyāsapaddhati* as illustrated in the *Śrītattvanidhi* (Sjoman 1999: Pl. 3).

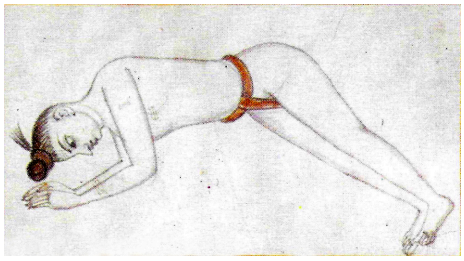

Figure 24: *gajāsana*, *āsana* 25 of the *Haṭhābhyāsapaddhati* as illustrated in the *Śrītattvanidhi* (ibid.).

[52] *Haṭhābhyāsapaddhati* (97) refers to a type of grass well-known in Maharashtra using a now-obselete colloquial term (Mandal 2015: 80–1).

The configuration of postures 23–25 of the *Haṭhābhyāsapaddhati* thus broadly corresponds with a *daṇḍ*. However, given that each *āsana* is a distinct exercise, that *saraṭāsana* is characterised by the utterance of a *sū* sound, and that *matsyāsana* is a jumping posture, it seems unlikely that this group of *āsana*s directly mirrors the *daṇḍ*. Nevertheless, the *Haṭhābhyāsapaddhati's* description of *gajāsana* is notably striking both in its similarity with the yoga posture *adhomukhaśvānāsana*[53] as well as the repetitive movements of the *daṇḍ* and its Persian source, *shenâ keshideh*:

> [Lying] pronely, [the yogi] should put the toes on the ground, keep [the legs] long, place the palms of both hands at the top of the head and raise up the buttocks. Gazing at the navel and taking the nose onto the ground, [the yogi] should take [the nose forward] as far as the palms of his hands. He should do thus again and again. [This] is the elephant pose (25, Birch 2018: 153).

Although, as previously discussed, the *Mallapurāṇa* names *gajāsana* approximately two centuries earlier, and *gaja* is a variety of *daṇḍ* listed in the eighteenth-century *Hamsaviṃśati*, without descriptions in those works, it is impossible to establish a direct correlation with the *Haṭhābhyāsapaddhati's gajāsana*. Kapālakuraṇṭaka's instruction to look at the navel in *gajāsana* is later echoed by the twentieth-century Mysore teacher K. Pattabhi Jois, in his 1962 description of *adhomukhaśvānāsana* in *sūryanamaskār* (Jois 2010[1962]: 43).

Following *gajāsana*, the *Haṭhābhyāsapaddhati* (26–29) posits further variations of *gajāsana*:

- *tarakṣvāsana* (hyena) – the head is brought to the armpit or upper abdomen[54]
- *ṛkṣāsana* (bear) – the practitioner alternately bends each leg
- *śaśāsana* (hare) – both knees are bent
- *rathāsana* (chariot) – each leg is alternately rotated laterally and forward

Similar variations of *adhomukhaśvānāsana* are commonplace in contemporary postural yoga (e.g., Scaravelli 1991: 164; Land 2023). The *Śrītattvanidhi*'s illustration of *ṛkṣāsana* (Figure 25) depicts the bent leg being brought forward towards the hands, which Sjoman (1999: 72) interprets as a movement of *sūryanamaskāra*. The *Śrītattvanidhi*'s

[53] Sjoman's comparison of *āsana*s of the *Śrītattvanidhi* with B.K.S. Iyengar's *Light on Yoga* (1966) notes *gajāsana*'s similarity with *adhomukhaśvānāsana* (1999: 71).

[54] This *āsana* broadly resembles *horaḷike-daṇḍe* (*Vyāyāmadīpike* 1896: 33-4) and the Persian *shenâ-ye pich*, suggesting syncretism between *haṭhayoga*, *vyāyāma* and Persian *koshti*.

illustration of *rathāsana* (Figure 26) also broadly resembles a forward-stepping lunge. However, the *Haṭhābhyāsapaddhati* and *Śrītattvanidhi*'s textual descriptions of *ṛkṣāsana* suggest more of a walking movement than a lunge, and their descriptions of *rathāsana* indicate some form of external leg rotation. Therefore, affinities between the *Śrītattvanidhi*'s depictions of these *āsana*s and the lunge of *sūryanamaskār*[55] may stem from artistic constraints rather than morphological similitudes.

Figure 25: *ṛkṣāsana*, *āsana* 27 of the *Haṭhābhyāsapaddhati* (as illustrated in the *Śrītattvanidhi*, Sjoman 1999: Pl. 3).

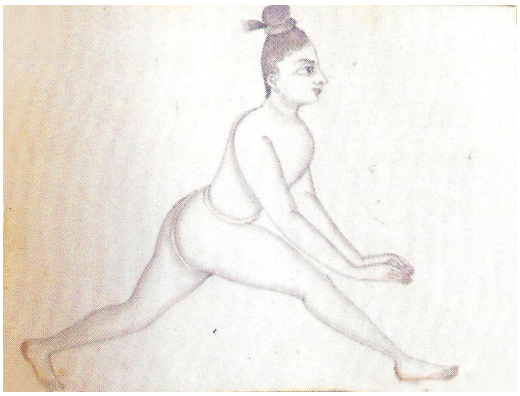

Figure 26: *rathāsana*, *āsana* 29 of the *Haṭhābhyāsapaddhati* (as illustrated in the *Śrītattvanidhi*, Sjoman 1999: Pl. 4).

A final noteworthy text is *Yogāsana*, an unpublished nineteenth-century North Indian Jain work from the *Śvetāmbara* sect that teaches 108 *āsana*s (see Satapathy and Sahay 2014). Many postures are identical to prolific *haṭhayoga āsana*s, whilst others are novel innovations or distinctly Jain (e.g. *udāsīnatāsana* and *dīkṣāsana*). Although the text does not arrange *āsana*s sequentially, the fourteenth and fifteenth postures complement one another to describe a prostration (Figures 27 and 28).

In *Devaguruvandanāsana*, 'Divine-Guru salutation posture,' the monk is instructed to sit on the knees and the toes and offer reverence to his spiritual teacher (ibid.: 46). *Pañcāṅganamaskārāsana* describes a rudimentary five-limbed prostration (see Birch and Hargreaves 2016). *Yogāsana* is the only known pre-twentieth-century work to expressly teach a *namaskāra* prostration as a yogic technique and demonstrates that as early as the nineteenth century, yogis were already incorporating elements of religious prostration within their postural repertoire. *Yogāsana* also teaches two *āsana*s resembling elements of the *daṇḍ* and *sūryanamaskār*: *bhujaṅgāsana* and *marālāsana* (goose posture) (Figures 29–30). These *āsana*s, however, appear to be practised arbitrarily

[55] The third and eighth position of Bhavanrao Pratinidhi's *sūryanamaskā*. See Figure A1, Appendix A.

rather than as part of a structured sequence. *Marālāsana* closely mirrors the second position of a *daṇḍ*.[56]

Figure 27: *devaguruvandanāsana* of the *Yogāsana* (Satapathy and Sahay 2014: 51).

Figure 28: *pañcāṅganamaskārāsana* of the *Yogāsana* (ibid.).

Figure 29: *Bhujaṅgāsana*, posture 29 (ibid.).

Figure 30: *Marālāsana*, posture 31 (ibid.: 52).

This Section has established that movement-based postural sequences such as *sūryanamaskār* are not recorded in premodern yogic traditions. Whilst early Sanskrit works propose a static, seated *āsana* for meditation, within thirteenth- to sixteenth-century *haṭhayoga*, *āsana* evolved to encompass a broad range of both seated and non-seated postures and acquired new physiological and therapeutic objectives. A shift towards increasingly physicalised postural praxis is evinced by the production of large *āsana* compendia from the seventeenth century onwards. Brahmānanda's *Jyotsnā* demonstrates the presence of an energetic form of *sūryanamaskāra* in Maharashtra in the early nineteenth century. However, Brahmānanda does not describe its method and

[56] Also known as *haṃsāsana* in a later work, the *Sacitra Cauryayasin Asane* (1899), which reproduces many of the *āsana*s in *Yogāsana*. See Gharote 2006: 124, 191.

explicitly disassociates it from *haṭhayoga* praxis. Nonetheless, postural elements of *sūryanamaskār* were already present in works such as the *Gheraṇḍasaṃhitā* and *Haṭhābhyāsapaddhati*. As *haṭhayoga* became increasingly concerned with physical conditioning, its practices converged with modes of exercise originating in Indo-Persian wrestling. The inclusion of several sequential moving postures in the *Haṭhābhyāsapaddhati* and later reproduced in the *Śrītattvanidhi* points towards the assimilation of *daṇḍ*-like wrestling drills within *haṭhayoga* by the eighteenth-century. These exercises form the core of the postural mode of *sūryanamaskār* that would later rise to prominence in the twentieth century. The *Haṭhābhyāsapaddhati* is likely to have been composed in Maharashtra and the *Śrītattvanidhi* in Karnataka. As previously discussed, these neighbouring states were vital regions in the development of Indo-Persian wrestling traditions and also the burgeoning physical culture movement of the nineteenth century. Within these South Indian yoga manuals, yogic postures were not associated with religious supplication. However, the *Yogāsana* points towards an alternative Northern tradition in which religious *namaskāra*-style prostrations were incorporated into yoga praxis during the nineteenth century.

3. Convergence

3.1 Maharashtra

In 1909, Bhavanrao Pratinidhi was crowned *rājā* (king) of Aundh, a semi-autonomous state in modern-day southwestern Maharashtra (Alter 2000: 88). Pratinidhi was a well-educated, forward-thinking Brahmin who, between 1917 and 1939, initiated democratic reforms ceding governing powers to the people of Aundh (ibid.: 89–93). In 1923, he introduced statewide free education and a comprehensive curriculum that included compulsory physical education comprising gymnastics, *sūryanamaskār*, wrestling and *yogāsanas* (Goldberg 2016: 198). Pratinidhi was an avid physical culturist who wrestled as a child. He believed physical exercise was essential for young people's health and wellbeing, and should thus be available to all boys and girls over eight (Pratinidhi 1929[1928]: 3).[57] He particularly championed the efficacy of *sūryanamaskār* in this regard and its unique suitability for mass exercise in schools (ibid.: 6–7).

In 1928, Aundh State Press published Pratinidhi's *Surya Namaskars Sun Adoration for Health, Efficiency and Longevity*, an English translation of a 1924 compilation of articles he

[57] Pratinidhi (1929[1928]) was an advocate of girls' exercise (pages 72–74) and devotes a chapter to *sūryanamaskār* for women (pages 22–23).

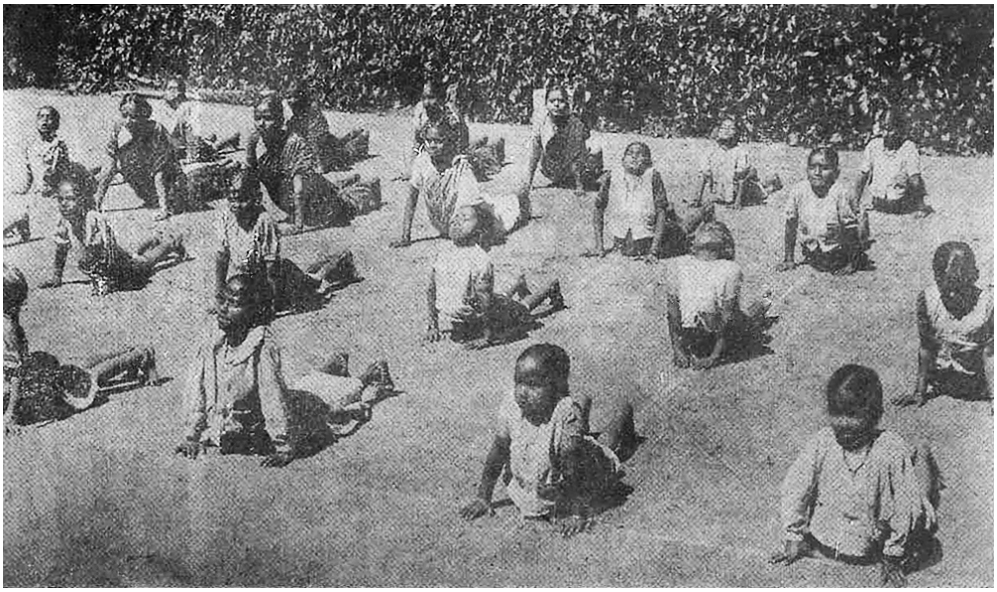

Figure 31.a: Aundh schoolgirls performing *sūryanamaskār* (Pratinidhi 1929[1928]: 117).

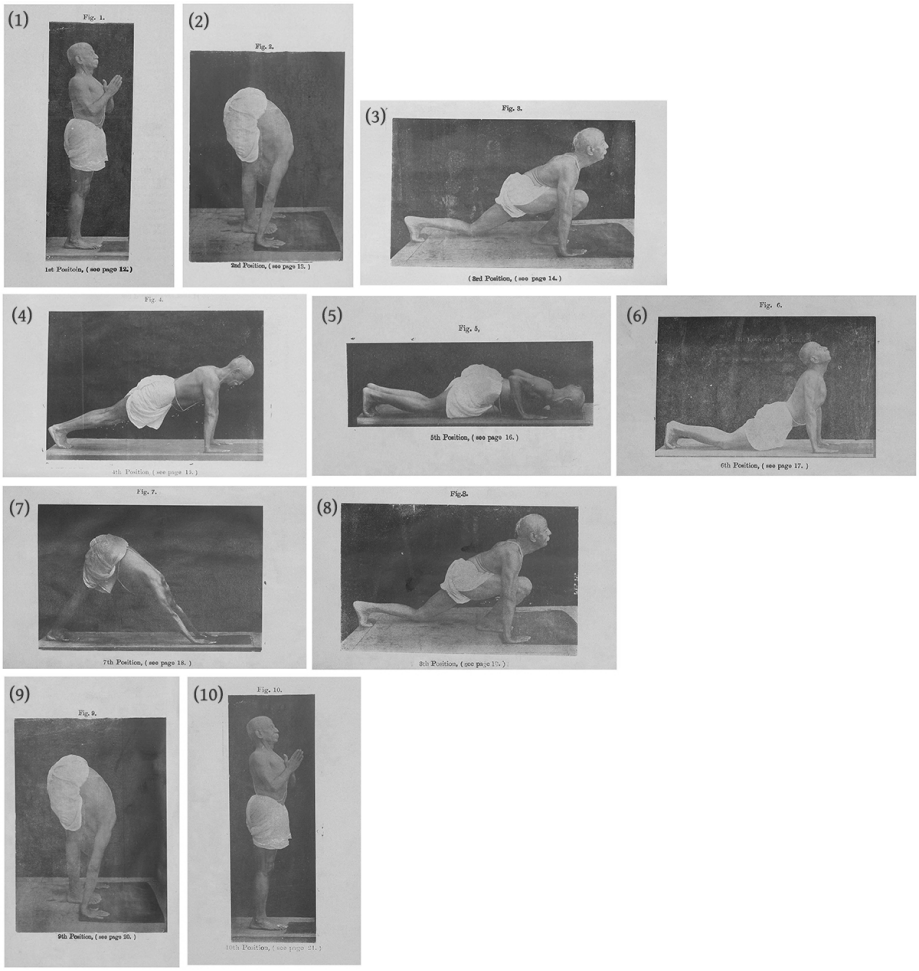

Figure 31.b: Pratinidhi's ten-part *sūryanamaskār* (Pratinidhi 1929[1928]: 11–21, numbers added).

wrote for the Marathi magazine *Puruṣārth* (ibid.: i–ii). Pratinidhi outlines a method of *sūryanamaskār*, comprising twenty-five repetitions of a sequence of ten 'positions' (Figure 31.b).

Positions 4–7 parallel the *daṇḍ* and *shenâ* discussed in Section 1 and the *haṭhayoga āsana*s discussed in Section 2. An important difference is position five, which corresponds with the eight-limbed *sāṣṭāṅga-namaskāra* prostration, described by Monier-Williams as 'a reverential prostration of the body so as to touch the ground with the hands, breast, forehead, knees and feet' (1960[1899]: 1212). As noted by Jerome Armstrong (2023: 286–7), positions three and eight resemble *Hanumān daṇḍ,* an alternating lunge of the legs taught in Mazumdar's *Vyāyāma Śikṣak* (1904). The lunge may, as Sjoman proposes, have been taught as *ṛkṣāsana* in the *Śrītattvanidhi* (1999: 72). It may also have evolved naturally as a way of stepping back from position 2 to position 4 and stepping forward from position 7 to position 9. Elements of Pratinidhi's *sūryanamaskār* clearly resemble a *daṇḍ*. However, whilst freely acknowledging physical culture influences, Pratinidhi distances *sūryanamaskār* from the *daṇḍ* exercises of '*pahilvans,*' which he equates with over-exercise and fatigue (1929[1928]: 74–76). Pratinidhi proposes *sūryanamaskār* as a superior health regimen:

> It builds up your physique, normalizes your bodily functions, distributes and conserves energy, increases your disease-resisting power, and, in short, gives you the glowing spirit of youth. If you wish to attain these worthy ends, you should make a hobby of Sūrya Namaskārs – the best course of physical culture (ibid.: 90).

Although Pratinidhi aligns *sūryanamaskār* with physical culture, numerous yogic and religious elements are discernible within his system. He repeatedly quotes from the *Bhagavadgītā* (ibid.: 35, 146, 147, 154). *Sūryanamaskār* is equated with *tapas* (physical austerity) (ibid.: 11). Each repetition incorporates movement with three breaths, described in yogic jargon as *prāṇāyāma* (breath control), *pūraka* (inhalation), *kumbhaka* (retention) and *recaka* (exhalation) (ibid.: 46). Pratinidhi also incorporates *japa* meditation by punctuating repetitions of *sūryanamaskār* with (optional) recitation of verses combining *praṇava* (*oṃ*), *bīja* mantras and Hindu appellations to the sun. Two additional 'unabridged' versions of *sūryanamaskār* include the recitation of hymns from the *Ṛgveda* and *Yajurveda* (ibid.: 160–5). A further yogic technique employed is concentrative eyesight and, citing *Bhagavadgītā* 6.13, Pratinidhi posits concentration upon the image of a deity or circle (ibid.: 35). When Pratinidhi's book was re-published in 1938, it was re-titled *The Ten-Point Way to Health*, and many of these elements were omitted, including concentrative eyesight, Sanskrit terminology, Vedic hymns and *Bhagavadgītā* references (Pratinidhi and Morgan 1938). Under the guidance of British

journalist Louise Morgan, Pratinidhi toned down religious themes to make *sūrya-namaskār* more accessible to a widening, non-Hindu audience (Goldberg 2016: 294).[58]

Pratinidhi's original 1928 work situates *sūryanamaskār* within the rubric of *namaskāra* prostrations, equating the exercise with *saṣṭāṅga-namaskāra*: 'This sort of salutation is termed "Sāshtānga Namaskārs" – an eight-sided or eight-limbed adoration, as we might call it' (Pratinidhi 1929[1928]: 11).[59] This summation is consistent with position 5 of Pratinidhi's method. He recalls initially learning 'the old style' of *sūryanamaskār* as a child and his father's fifty-five-year devotion to its practice (ibid.: 99, 11). In 1908, at the suggestion of Gangadhar-Rao Patwardhan (*rājā* of Miraj and wrestling coach),[60] Pratinidhi commenced regular *sūryanamaskār* practice in the old style and then, after a year, made the following adaptations to enhance movement and physical benefits:

- bringing the foot closer towards the hands during lunges
- straightening the legs during forward bends
- thoracic expansion during standing
- exerting pressure on the abdomen when forward-stepping
- three breaths per repetition instead of one (1929[1928]: 92, 99–101).

A further crucial innovation made by Pratinidhi was the instruction to assume a standing position between each repetition rather than performing several repetitions whilst stooping over (ibid.). Later, inspired by a 1924 edition of *Physical Culture*, Pratinidhi began to vocalise mantra elements 'slowly, loudly and clearly' at the new standing junctures between repetitions rather than the old method of reciting mantras quickly and humbly whilst bent over (ibid.: 99). Pratinidhi thus invigorated an older variety of *saṣṭāṅga-namaskāra* and, whilst preserving original elements of religious supplication, repurposed its function within the emergent physical-culture paradigm. If Pratinidhi's above modifications are subtracted, a picture develops of a premodern *sūryanamaskār* resembling a combination of religious *namaskāra* prostration and *daṇḍ*. This 'old style' of *sūryanamaskār* may correspond with an exercise taught by one of Pratinidhi's contemporaries, the wrestler and bodybuilder Professor Rammarthy Naidu, and presented in Volume 4 of the Marathi periodical *Vyāyām Jñānakośa* (Mujumdar 1939) (Figure 32).

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[58] Morgan was also instrumental in promoting *sūryanamaskār* to British women in 1936 (Newcombe 2019: 43–4).

[59] Pratinidhi's eight foci are homologous with a prostration in the *Skandapurāṇa* (Sarbacker 2023: 315).

[60] *The Science of Wrestling* claims Patwardhan daily practised 350 *namaskār*s, even in his sixties (Patwardhan 1927: 5).

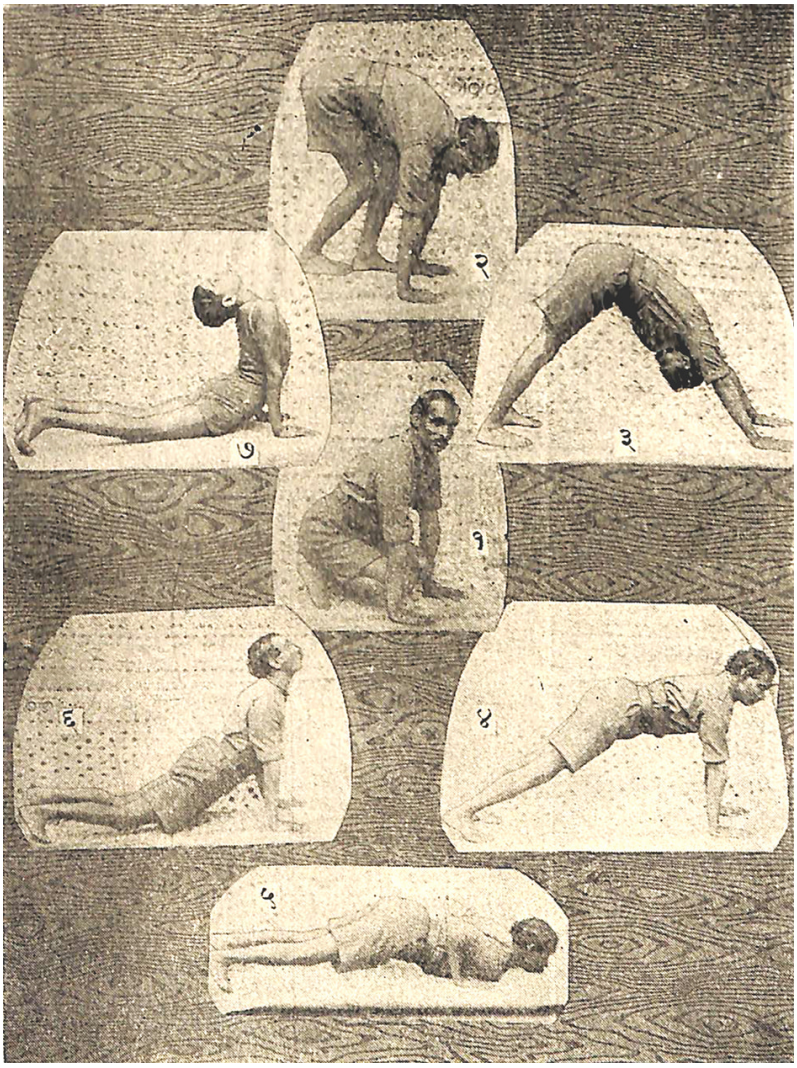


Figure 32: Naidu's seven part *daṇḍ* (Mujumdar 1939: 85).

Despite Pratinidhi's success in the 1920s in propagating *sūryanamaskār* in Aundh schools, not all Maharashtrian physical culturists accepted the exercise. Swami Kuvalayānanda, a pioneering integrator of *vyāyāma* and yoga, affirms *sūryanamaskār's* hybridity but ultimately rejects the exercise:

> The advocates of Namaskaras have indeed imported much from outside their system, but as they have tried to accomplish everything within the narrow compass of one exercise and as they ever want to tack that exercise onto Sun worship, there is little chance of their system ever being accepted as a system of physical culture (Kuvalayānanda 1926: 212).

Kuvalayānanda also claims that 'Namaskaras before the Sun God' were widely practised in Maharashtra in preceding centuries, particularly amongst the Marathi elite and that some eighteenth-century youths would daily perform as many as twelve hundred repetitions (ibid.).[61] This claim is echoed by Mujumdar, who credits the popularisation in Maharashtra of *namaskāra*s 'meant for worshipping the Sun God' to the seventeenth-century polymath Samarth Rāmdās, who is said to have performed twelve hundred repetitions daily (Mujumdar 1950: 18–19). Stuart Sarbacker has investigated these claims and concluded that although lacking in historical veracity, Rāmdās' seventeenth-century *Dāsbodh* does include *namaskāra* prostrations to a Hindu pantheon that includes Sūrya and stipulates an eight-limbed *sāṣṭāṅga* prostration (2023: 311–15). However, as previously discussed, similar references are found in numerous sources and by no means point towards a singular enterprise on the part of Rāmdās. Nonetheless, as discussed in Section 2, Brahmānanda attests to the association of *sūryanamaskār* with strenuous physical exercise in nineteenth-century Maharashtra. It may be that sun worship, which is well documented in Maharashtra and includes *namaskāra*s, when performed with zeal, naturally became blurred with physical exercise (ibid.: 309–10). Bhagavat Siṃhajī summarises a similar merging of religious and physical culture in nineteenth-century Gujarat: 'Some of the Hindoos [sic] set aside a portion of their daily worship for making salutations to the Sun by prostrations. This method of adoration affords them so much muscular activity that it takes to some extent the place of physical exercise' (Siṃhajī 1927[1896]: 61).

3.2 Karnataka

In Bangalore, in 1922, the renowned Indian bodybuilder K.V. Iyer established the Hercules Gymnasium, where he taught a system of physical training, merging techniques of *haṭhayoga* with European-style bodybuilding (Goldberg 2016: 142, 252). Although Iyer rejected wrestling *vyāyāma* and Swedish gymnastics, he was impressed by Pratinidhi's 1928 *sūryanamaskār* and integrated the exercise within his own method (Goldberg 2016: 144, 145, 262; Singleton 2010: 123). Whilst acknowledging the spiritual dimension of *sūryanamaskār*, Iyer was primarily interested in its chiropractic application and utility as a warming-up exercise (Goldberg 2016: 263).

In 1935, under the patronage of the Maharaja of Mysore, Krishnaraja Wodeyar IV, Iyer established a second gymnasium in Mysore at the Jaganmohan Palace, managed by his senior student Anant Rao (ibid.: 251). According to Goldberg, weight training at Iyer's gymnasia was complemented by classes that included a combination of *sūryanamaskār*

[61] Kuvalayānanda himself incorporated *daṇḍ*-like exercises in his system (Singleton 2010: 205).

and *yogāsana* (ibid.: 252). In 1937, Iyer produced a small book entitled *Surya Namaskar*, primarily based on Pratinidhi's 1928 version, with the addition of the yogic chin lock *jālandharabandha* as well as a standing posture, dramatically posed on the book's front cover (Figure 33). Iyer is arguably the first teacher to combine *yogāsana* and *sūryanamaskār* with European-style physical conditioning.

Figure 33: *Surya Namaskar* 1937 cover (Goldberg 2016: 269).

In 1931, the Maharaja of Mysore had also recruited Tirumalai Krishnamacharya, initially to teach Mīmāṃsā at Mysore's Sanskrit College and then in 1933 to establish a *yogaśālā* (yoga school) at the Jaganmohan Palace, where he taught boys from Mysore's elite families in an old gymnastics' hall, a short distance from where Iyer would open his gymnasium in 1935 (Goldberg 2016: 212; Singleton 2010: 179, 181). Royal patronage enabled Krishnamacharya to publish *Yoga Makaranda* in 1934, in which he presents a postural method comprising a broad repertoire of sequential *āsana*s executed through predetermined arrangements of breath-coordinated movements and jumps, termed *vinyāsa*s (Krishnamacharya 2011[1934]). Krishnamacharya's bibliography includes the *Śrītattvanidhi*, and several elements in his teaching affirm his familiarity with the Mysore text. *Yoga Makaranda's* initial standing postures are followed by a series of three key postures (Figure 34) closely resembling the *āsana*s of the *Śrītattvanidhi* discussed in Section 2. Each posture is executed both statically and dynamically as part of a sequence that directly corresponds with Broughton's 1809 account of a *dhun* and *Vyāyāmadīpike*'s 1896 description of a *daṇḍe* (discussed in Section 1.3).

Caturaṅga-daṇḍāsāna (four-limbed stick posture) is taught in two versions, the second of which is shown in Figure 35. Its name may derive from the body's stick-like shape or, given the posture's similarity with a central position of the *daṇḍ*, the term *caturaṅga-daṇḍāsāna* may semantically link *yogāsana* with *vyāyāma daṇḍ*s. Sjoman (1999: 54, 71) credits the *Vyāyāmadīpike* as the source of Krishnamacharya's *caturaṅga-daṇḍāsāna* and *ūrdhvamukhaśvānāsana,* and the *Śrītattvanidhi* as the basis for correspondences between *gajāsana* and *adhomukhaśvānāsana*.

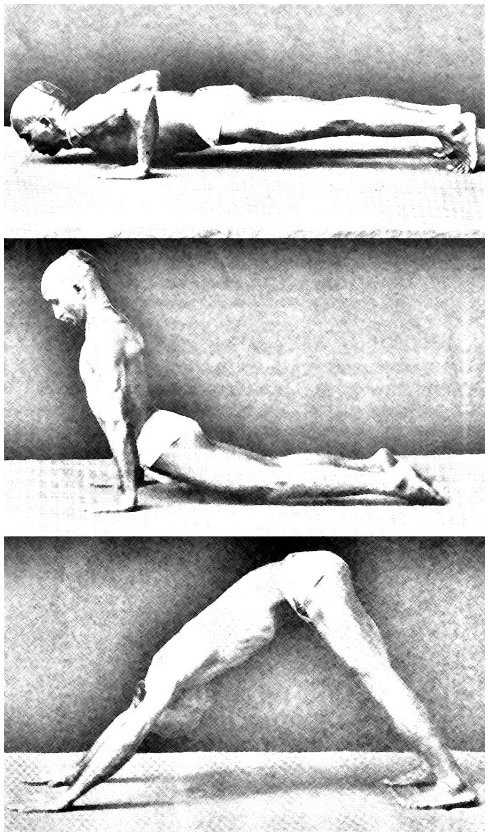


Figure 34: *caturaṅga-daṇḍāsāna*, *ūrdhvamukhaśvānāsana* and *adhomukhaśvānāsana* (*Yoga Makaranda*, Krishnamacharya 2011[1934]: 130–2; artistic reproduction).

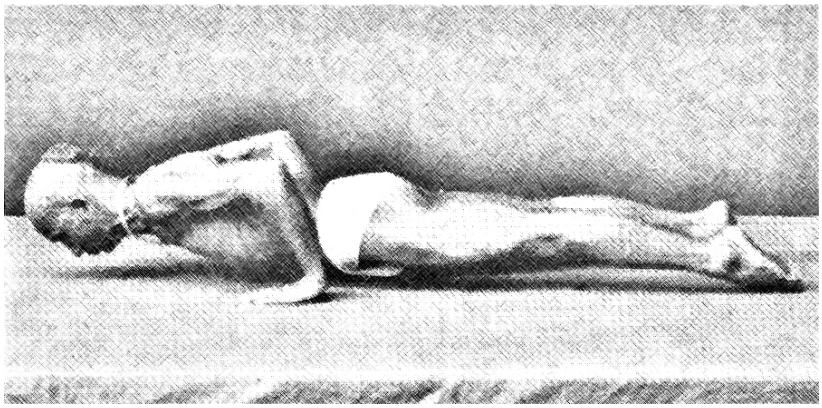


Figure 35: *caturaṅga-daṇḍāsāna*, version 2 (ibid.: 130).

The *āsana*s in Figure 34 are located within a broader sequence, which begins with the standing position *samasthiti* (Figure 36).

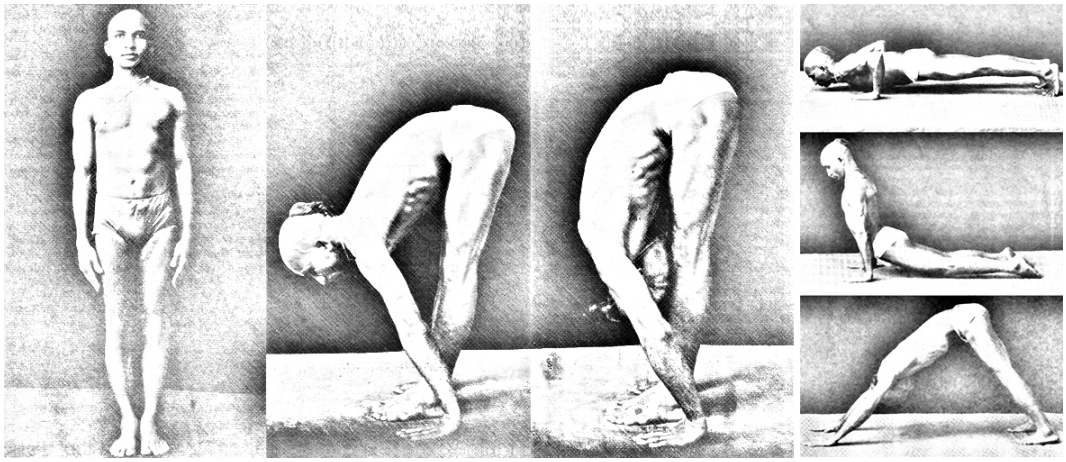


Figure 36: Krishnamacharya's lead *vinyāsa* arrangement (ibid.: 112–32).

The above sequence is used to navigate to and from the subsequent seated postures in the system. For example, Krishnamacharya's first seated posture, *paścimatānāsana*, is arrived at by following the above sequence. Then, from *adhomukhaśvānāsana*, the legs are jumped between the hands in a movement closely resembling *daṇḍ phelā* of *Byāẏāma Śikshā* (1875) (see Figure 15.a). The legs are then lowered and outstretched to perform *paścimatānāsana*. Having held *paścimatānāsana*, the practitioner performs *utpluti* (Figure 15.b) before jumping back to *caturaṅga-daṇḍāsāna* and returning through the sequence to finish in *samasthiti*. The entire process thus comprises a total of sixteen *vinyāsa* movements. Each subsequent seated *āsana* in Krishnamacharya's method is similarly executed.

Although Goldberg (2016: 240) credits *sūryanamaskār* as the source of Krishnamacharya's *vinyāsa* method, *sūryanamaskār* is not mentioned in *Yoga Makaranda* and does not feature in Krishnamacharya's 1934 *vinyāsa* method. Archives at the Jaganmohan Palace, excavated by Mark Singleton, record Krishnamacharya teaching separate *yogāsana* and *sūryanamaskār* classes, indicating that he regarded them as discrete systems (Singleton 2010: 180). The 1938 Tamil edition of *Yoga Makaranda* does, however, include a static posture equated with sun worship, *tāḍāsana* (mountain posture), to be held for fifteen minutes each day: 'Practice this *āsana* every day at sunrise worshipping the Sun God (*Sūrya-bhagavan*)' (Krishnamacharya 2011[1934]: 113, 196–7; Figure 37).

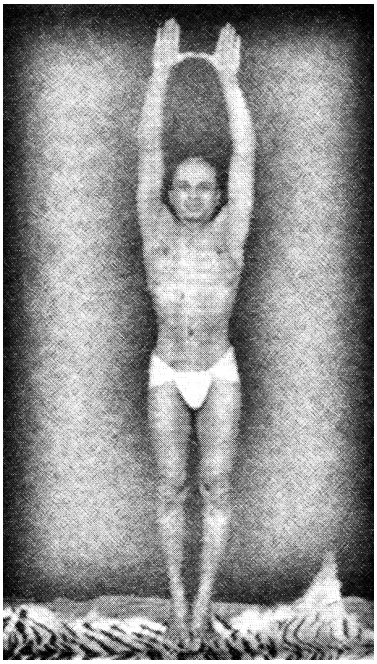


Figure 37: *tāḍāsana* (ibid.: 197).

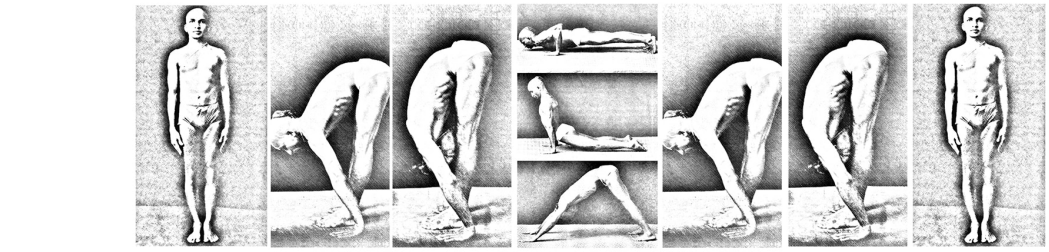
This *āsana* is included in *Sacitra Cauryayasin Asane* (1899) and *Yogāsana*. It also resembles *uṣṭrāsana* in the *Haṭhābhyāsapaddhati* and *Śrītattvanidhi*, where it is practised while balancing on the big toes (Gharote 2006: 333). Like Pratinidhi, Krishnamacharya integrates breath control as well as concentrative eyesight (*dṛṣṭi)* in numerous *āsana*s, either towards the nose tip or brow centre, as in *uttānāsana* (2011[1934]: 116). Krishnamacharya also includes menstrual and pre-natal contraindications and, like earlier *haṭhayoga* works, attributes numerous *āsana*s with therapeutic benefits (e.g. ibid.: 116, 152). He does not, however, align his system with physical culture, even though, as Singleton notes, his classes were thus classified at the Jaganmohan Palace (Singleton 2010: 180). Unlike Iyer, Krishnamacharya was antipathetic towards European exercises requiring apparatus, which he dismisses as 'anti-limb exercises' (2011[1934]: 81). He is also somewhat disparaging of wrestling:

> I have to say that even its practice is haphazard and not properly systematised... The main drawback in wrestling is the absence of subtle results (*sūkṣma-phala*), such as intellectual power, suppleness and equanimity of body, which comes with *yoga-sādhana* (ibid.: 82).

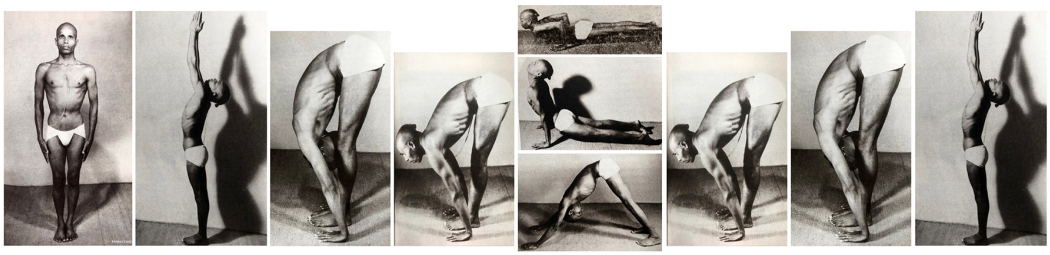
Krishnamacharya repeatedly aligns his system with *yoga-sādhana* and discusses other yogic methods such as *yama*, *niyama*, *kriyā* and *mudrā* (ibid.: 68–111). However, he taught in an environment shaped by royal patronage and longstanding syncretism between wrestling, gymnastics and yoga at the Mysore palace. Krishnamacharya's ambivalence towards physical culture and his familiarity with the *Śrītattvanidhi* suggests that his configuration of dynamic, sequential *āsana*s resembling the structure of the *daṇḍ* originates in prior postural innovations, discussed in Section 2.

Krishnamacharya's influence was far-reaching, and several of his students, most notably Jois, Iyengar, Indra Devi, and Desikachar, would later be instrumental in developing and propagating transnational yoga. Krishnamacharya's *vinyāsa* method played a particularly significant role in shaping the pedagogy of Pattabhi Jois, whose 1962 Kannada work *Yoga Mala*, teaches two varieties of *sūryanamaskār*[62] that build upon Krishnamacharya's earlier teachings. Jois' first *sūryanamaskār* consists of nine *vinyāsa* movements, which, as Figure 38 demonstrates, closely resemble the central *vinyāsa* arrangement of *Yoga Makaranda*:

[62] Either as a precursor to further postural practices or to religious worship (Jois 2010[1962]: 47).



Yoga Makaranda - T. Krishnamacharya 1934



Yoga Mala - P. Jois 1962

Figure 38: (Krishnamacharya 2011[1934]: 112–32; Jois 2010[1962]: 35–42.)

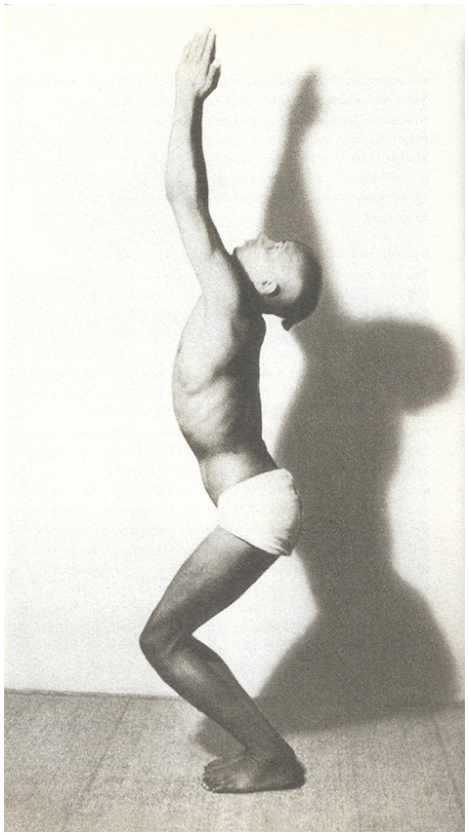


Figure 39: *utkaṭāsana* (Jois 2010[1962]: 44).

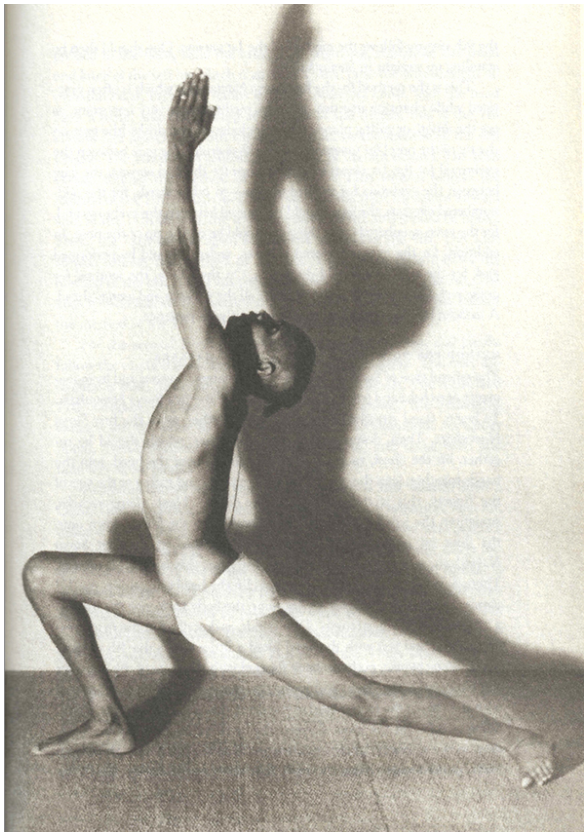


Figure 40: *vīrabhadrāsana* (ibid.: 45).

Jois adds an upward extension of the arms similar to Krishnamacharya's sun-worshipping *tāḍāsana*. He also switches the order of Krishnamacharya's second and third positions. Jois' *sūryanamaskār* forms one coherent, self-contained cycle.[63] Later in *Yoga Mala* (68–96), Jois uses the first six *vinyāsa*s of this version of *sūryanamaskār* to transition to and from other seated postures in the same way as Krishnamacharya, as previously discussed. Jois' second version of *sūryanamaskār* comprises seventeen *vinyāsa* movements and integrates two additional postures, *utkaṭāsana* and *vīrabhadrāsana*, within the same sequence (Figures 39 and 40).

Figure 41 shows *utkaṭāsana* and *vīrabhadrāsana's* placement within the sequence:

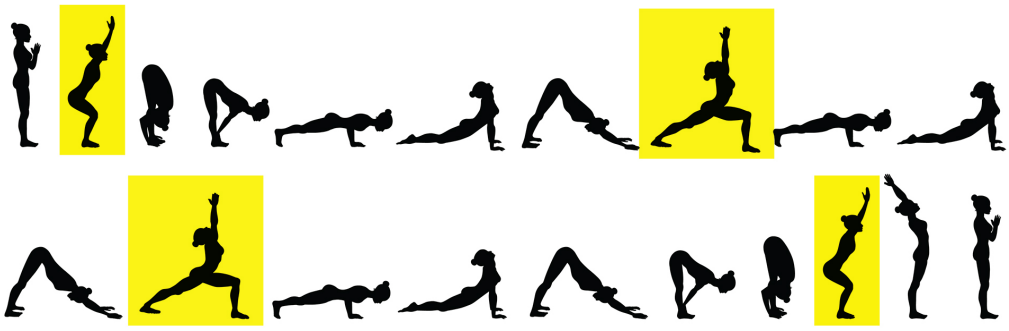


Figure 41: *Surya namaskara B* (Baleika 2024, highlights added).

Utkaṭāsana was earlier taught in the *Gheraṇḍasaṃhitā* (2.27)[64] as a squatting position whilst balanced on the toes and is illustrated in the Ghamande's 1905 Marathi *haṭhayoga* manual *Yogasopāna-pūrvacatuṣka* (Figure 42).[65]

Vīrabhadrāsana (Figure 40) does not feature in any known premodern yogic works. However, a similar position known as the 'Charge' features prominently in Watson's *Hand-Book of Callisthenics and Gymnastics* (1864), both as a callisthenic exercise and as a gymnastics exercise with a 'wand' or with dumb-bells (Figure 43 and 44).

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[63] Although the sequence is practised dynamically, Jois indicates that the posture at the end of the sixth *vinyāsa, adhomukhaśvānāsana,* is held statically for an unspecified period of time (2010[1962]: 43). In contemporary praxis, this posture is held for five breaths (Swenson 1999: 17).

[64] And also the *Haṭhayogasaṃhitā*, which may be the principal source of the *Gheraṇḍasaṃhitā*. See Birch 2020: 458 and Hoth 2024.

[65] An early reference to *utkaṭāsana* (without description) occurs in the *Haṭhapradīpikā*'s section on *basti* (2.26).

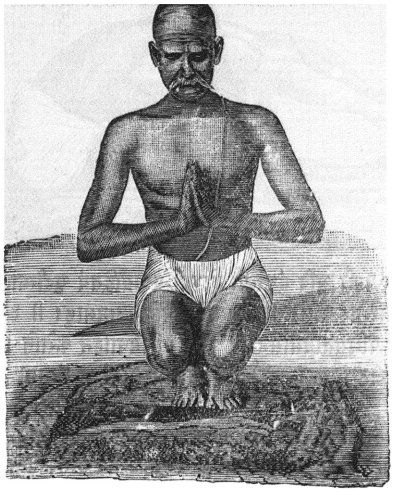

Figure 42: *Yogasopāna-pūrvacatuṣka* (Ghamande 1905).

In the late nineteenth century, these exercises were incorporated into the drills of the British Armed Forces, which, as illustrated in Figures 45 and 46, included units of the British Indian Army (Robinson 1899: 345, 447).

Martial drills were widely taught in Indian schools in the early twentieth century by ex-military gymnastic instructors (Singleton 2010: 83–4). *Vīrabhadrāsana's* morphological similarity to the Charge and the ubiquity of gymnastic exercise within India's physical education curricula suggests that the posture originated within this martial context.

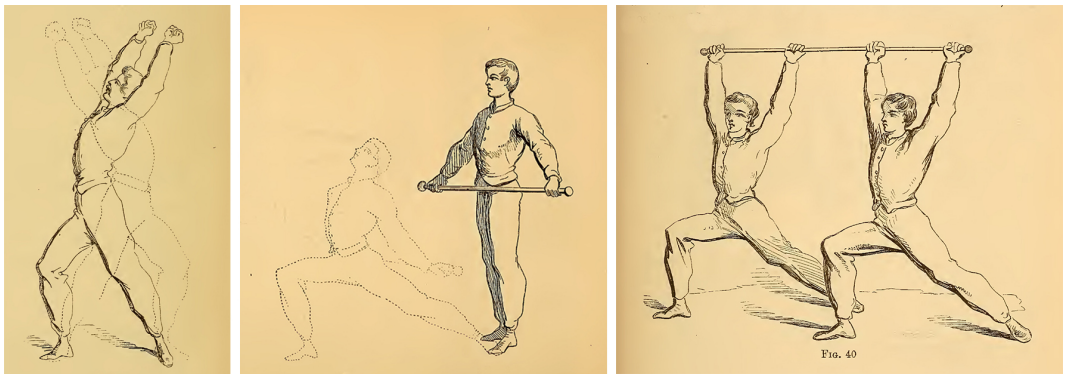

Figure 43: Charge as callisthenics and with wand (Watson 1864: 216, 287, 295).

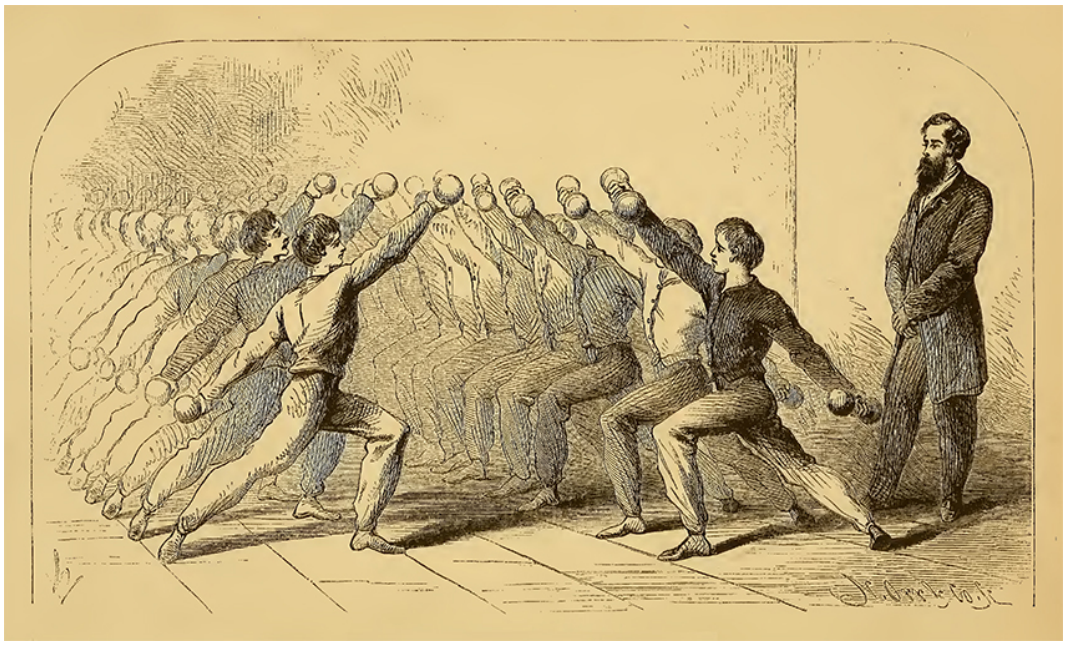

Figure 44: Charge with dumb-bells (ibid.: 334).

Figure 45: British Indian Army 1891 (Duncan 2019).

Figure 46: Charge with dumb-bells from *The Navy and Army Illustrated*, 1897 (Ilbusca 2020).

Like Krishnamacharya and Pratinidhi, Jois' method of *sūryanamaskār* utilises *dṛṣṭi*, primarily towards the tip of the nose or the eyebrows (2010[1962]: 46). According to Jois, the traditional practice of *sūryanamaskār* integrates techniques of *vinyāsa*, *prāṇāyāma*, *dhyana*, *dṛṣṭi* and *bandha* (ibid.: 40). Jois also aligns *sūryanamaskār* with sun worship and equates benediction of the sun god with good health (ibid.: 34). He credits *sūryanamaskār* with the capacity to mitigate *karma* and bestow remarkable therapeutic benefits, including the curing of mental illness and leprosy (ibid.: 41). Although Jois mentions that *sūryanamaskār* is sometimes practised in conjunction with mantras, he

does not elaborate on their use (ibid.: 46). Jois' method of *vinyāsa*-style yoga, known as 'Ashtanga Vinyasa,' would become highly influential in the late twentieth century, inspiring several prominent offshoots such as 'Power Yoga' and 'Vinyasa Flow' (Singleton 2010: 176).

3.3 Uttarakhand

In 1939, Swami Sivananda of Rishikesh, Uttarakhand, published *Yogic Home Exercises*, in which he discusses the 'system of physical exercises called Surya Namaskar' (1939: 17–19). Recalling *sūryanamaskār* demonstrations given by Pratinidhi in Bangalore, Sivananda lauds the efforts of Pratinidhi and his father Rajasaheb to promote *sūryanamaskār* (ibid.). Sivananda proposes 'sun therapy' as a treatment for leprosy and urges his readers to perform *sūryanamaskār* for 'health, vigour and vitality' (ibid.). He does not, however, describe its physical technique but proposes daily repetition of the twelve names of the sun and verses of sun adoration from the *Īśopaniṣad* and *Yajurveda* (ibid.). This passage is echoed in Sivananda's *Japa Yoga* (1942), which adds *praṇava* to each of the twelve solar appellations (Sivananda 1942: vi-ix). Sivananda's *Health and Long Life* (1945) recounts the longstanding popularity of *sūryanamaskār* in Southern India and its spread to Uttar Pradesh, Bihar and the Punjab (Sivananda 1945: 192–3). He encourages the reader to perform one hundred and eight repetitions of *sūryanamaskār* each morning in conjunction with verse recitation but again does not elaborate on a method (ibid.). In *Health and Happiness* (1950), Sivananda repeats his 1939 injunction to recite twelve appellations to the sun in conjunction with *praṇava* and also provides complete instructions on how to perform *sūryanamaskār* after each recitation (Sivananda 1950: 156–8). The technique mirrors that of Pratinidhi but adds a standing extension of the arms overhead in a similar fashion to K.V. Iyer's 1937 *sūryanamaskār*. Eye gaze in positions four, seven and nine are towards the sky or sun, and breath instructions are not supplied (ibid.). Notably, Sivananda refers to position six as 'Sashtanga Namaskar' and position seven as 'Bhujangasana' (ibid.).

Sivananda's gradual introduction of *sūryanamaskār* into his teachings demonstrates the incorporation of the exercise within yoga praxis between 1939 and 1950. Sivananda's disciple, Vishnudevananda, later promotes the same method of *sūryanamaskār* in *The Complete Illustrated Book of Yoga* (1960) as a preliminary *āsana* exercise for weight loss and increased flexibility (69–79). Although Vishnudevananda mentions the twelve sun appellations, he does not provide details (ibid.). Other prominent disciples of Sivananda, namely Satchidananda and Satyananda, taught the same mode of *sūryanamaskār*. Satchidananda's *Integral Yoga Hatha* (1970) devotes the second of eight auxiliary parts of

haṭhayoga to '*Soorya Namaskāram*' (1972[1970]: 9). Satyananda's *Surya Namaskara* (1973) proposes *sūryanamaskār* as a practice in its own right, emphasising mantra and solar visualisation. Sivananda, Vishnudevananda, Satchidananda and Satyananda were all highly instrumental in propagating a variety of modern yoga, which De Michelis terms Modern Psychosomatic Yoga (De Michelis 2008: 188).

Two distinct styles of *sūryanamaskār* have thus been identified, both linked with ancient rites of sun worship but promoted primarily as secular health regimens. The first originates in 1920s Maharashtra with Bhavanrao Pratinidhi, who in 1909 transformed a dynamic variety of *saṣṭāṅga-namaskāra* he had learned in the late nineteenth century into a mode of ritualised physical exercise. Many elements of Pratinidhi's *sūryanamaskār* resemble the syncretic blending of *āsana*, *daṇḍ*, and *shenâ* discussed in Section 2. Iyer subsequently adopted Pratinidhi's *sūryanamaskār* in Karnataka, as did Sivananda in Uttarakhand. A second style developed in Mysore, Karnataka, from the 1934 *vinyāsa* method of Krishnamacharya. This approach more faithfully retains *daṇḍ* and *shenâ* elements and emerged from a well-established tradition of syncretism between *vyāyāma* and *yogāsana* at the Mysore palace. Jois' 1962 Mysore *sūryanamaskār* introduced additional elements partly derived from European callisthenics used in the drill exercises of the British Indian Army. A crucial distinction exists between the two styles. The Maharashtrian *sūryanamaskār* includes a traditional *saṣṭāṅga-namaskāra* in which knees, chest, and forehead are lowered to the floor. Then, during prone extension, the knees remain on the floor in a position resembling *bhujaṅgāsana* (positions 5 & 6, Figure A1, Appendix A). In the Mysore style, the knees and chest do not touch the floor in either the lowered position (*caturaṅga-daṇḍāsana*) or the prone extension (*ūrdhvamukhaśvānāsana*) (Figure 34). This version aligns with *Tumār-e afsāneh's* seventeenth-century injunction that knees and stomach must not touch the floor during *shenâ,* and with Broughton's 1809 description of a *daṇḍ* (discussed in Section 1.2–3).

Conclusion

The chief postural elements of *sūryanamaskār* do not originate solely within an Indian context but evolved through previously unrecognised Persian influence. The exercise known as *daṇḍ,* widely practised by Indian wrestlers, forms the central morphological structure of *sūryanamaskār*. The *daṇḍ* emerged in eighteenth-century India through contact between Indian and Khorasanian wrestlers and originates in an exercise named *shenâ* recorded in Persian works as early as the seventeenth century. Maharashtra and Karnataka were vital regions of Indo-Persian wrestling and subsequently became the nexus of a revival of indigenous *vyāyāma* and physical yoga. From within this locus, the

authors of *haṭhayoga* manuals in the eighteenth and nineteenth centuries combined *āsana*s with sequential moving exercises closely resembling the *daṇḍ* and *shenâ* formulae. *Sūryanamaskār* is a composite hybrid of these syncretic strands, consolidated under the rubric of a *namaskāra* prostration. Brahmānada's reference to *sūryanamaskār* and Pratinidhi's account of modifications to the 'old style' practised by his father suggest that this amalgamation took place in Southern Maharashtra in the nineteenth century, no later than 1873 CE (*Jyotsnā* 1.61; Pratinidhi 1929[1928]: 11, 99–102). In the early twentieth century, royal patronage facilitated the development of two distinct styles of *sūryanamaskār*. The first, originating in Maharashtra, retained elements of *sāṣṭāṅga-namaskāra,* whilst the second, in Karnataka, adhered more faithfully to the Persian method of *shenâ.* The subsequent incorporation of these varieties within newly created transnational yoga brands resulted in the widespread dissemination of *sūryanamaskār* in the latter half of the twentieth century.

These findings have far-reaching implications. The origins of *sūryanamaskār* extend beyond India's political, religious and geographic boundaries. Despite prevailing assumptions surrounding the antiquity of *sūryanamaskār*, it did not become an established yogic technique until as late as 1950. The assimilation of novel martial and *namaskāra* elements demonstrates the porous boundaries of postural praxis and reflects wider shifts in the methods and aspirations of participants in physical yoga. Joseph Alter's assessment of *sūryanamaskār's* syncretic, yoga and *vyāyāma* composition (1992: 98–103) is, to a large extent, accurate but does not account for the extraneous martial elements uncovered in this article. Future study of *sāṣṭāṅga-namaskāra,* and parallel customs within Jain, Buddhist and Islamic settings would provide further context and meaning to these findings. *Sūryanamaskār's* story is more complex than a merger of *daṇḍ* and *yogāsana* or a collection of *daṇḍ*s. From the *zurkhāneh* of Tehran to the *akhāṛā* of Benares, from the schoolyard of Aundh to the transnational yoga studio, several common themes prevail. *Shenâ*, *daṇḍ* and *sūryanamaskār* are each a mode of cyclical group exercise, rhythmically executed through predetermined steps of physical supplication and motivated by a shared belief in the power of exercise as a panacea for physical weakness and disease. Whether punctuated by the drumroll of the *zarb*, prayers to Allāh, Vedic incantations, or *vinyāsa* breaths, participants enact an ancient somatic ritual in which self-determination converges with reverential dissolution in an exercise that transcends cultural boundaries and straddles the gap between religious and secular experience.

Acknowledgements

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Appendices

Appendix A

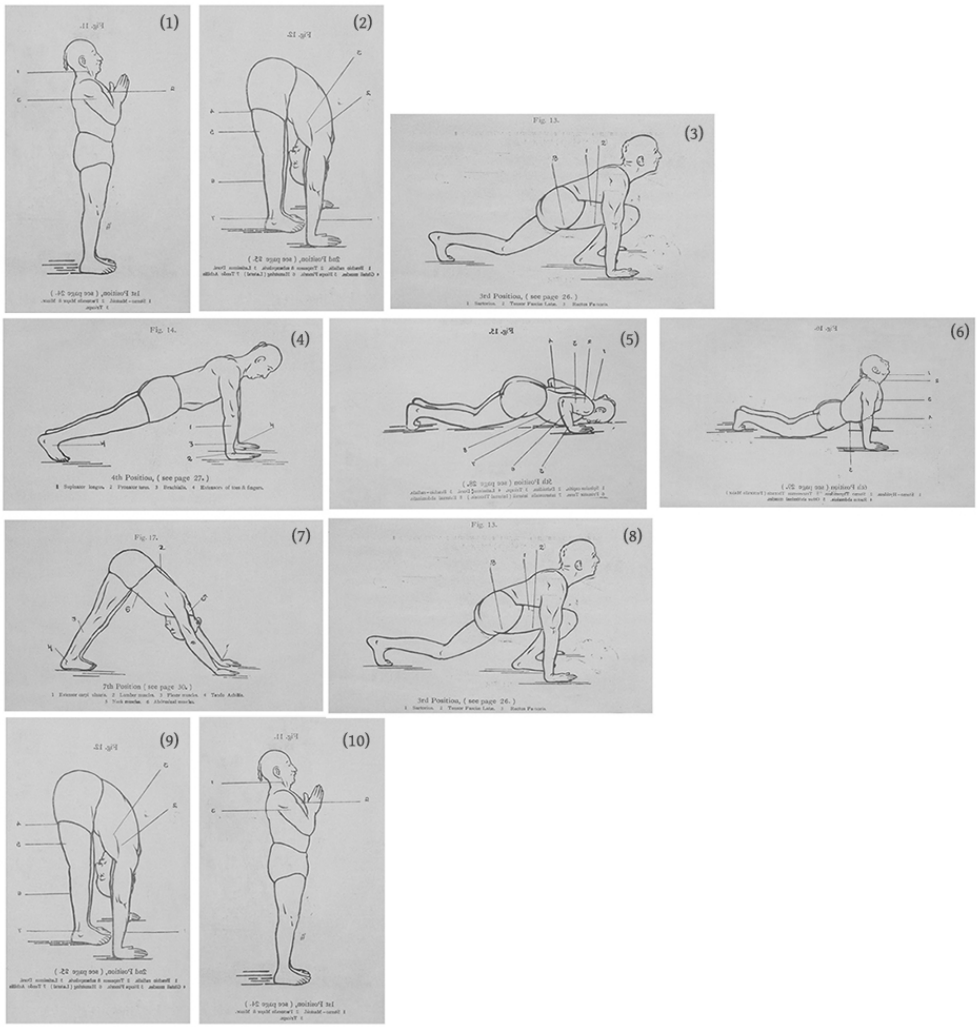

Figure A1: *sūryanamaskār* (Pratinidhi 1929[1928]: 24-34; numbers added and some images have been flipped horizontally for ease of viewing).

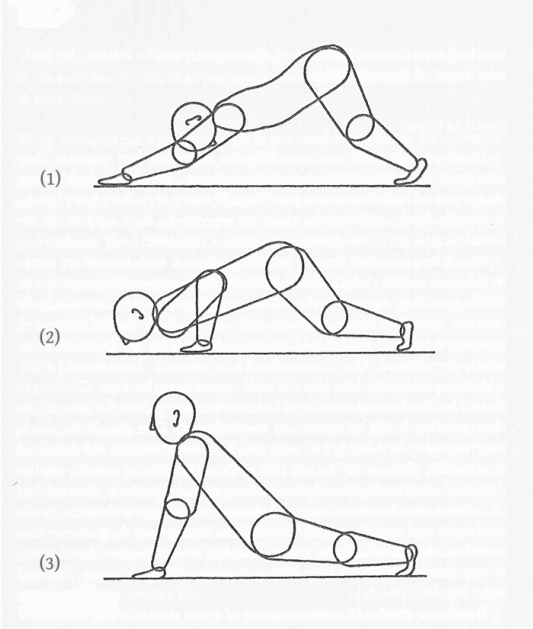

Figure A2: *daṇḍ* (Alter 1992: 104; numbers added). Alter discusses this *daṇḍ* in relation to a version of *sūryanamaskār* closely resembling Pratinidhi's 1928 presentation, shown above. (1992: 99, 100).

Appendix B

Figure B1: Key locations in this study (locations plotted using Google Maps 2023 and Pratishkhedekar 2021).

Appendix C

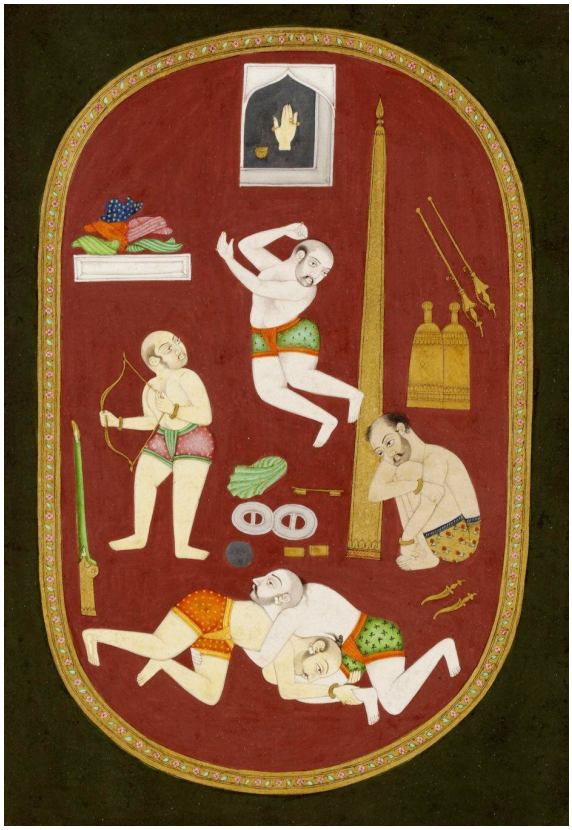

Figure C1: Desakhya Ragini, Hyderabad 1770. Below the feet of the central jumping wrestler is *takht-i shenâ* (Gangoly 1948: Plate XXXIV).

Figure C2: Two men wrestling in *Tashrih al-aqvam* (composed in Hissar district, India). A *takht-i shenâ* is on the left of the figures (Skinner 1825).

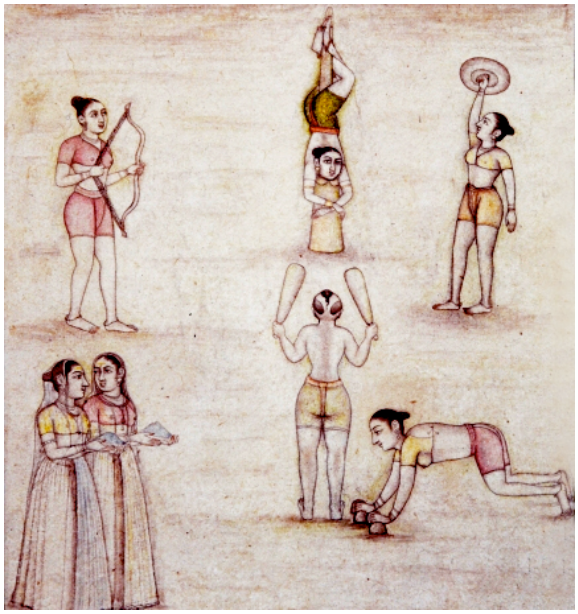

Figure C3: Women wrestlers training (Desakh, Rāgamālā Painting, date unknown). The figure at the bottom right performs *shenâ* (Ebeling 2015).

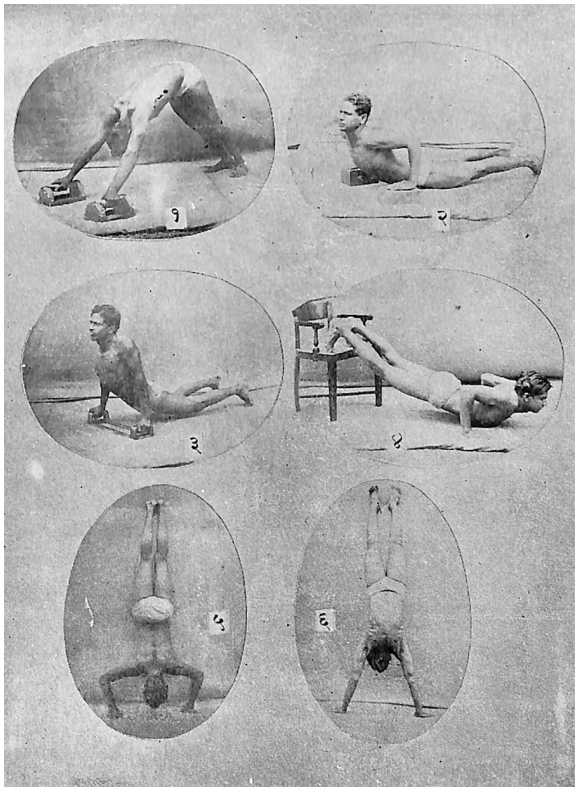

Figure C4: *daṇḍ*s using props which include hand-supports resembling *takht-i shenâ*, in the Marathi exercise periodical *Vyāyām Jñānakośa* (Mujumdar 1939: 55).

Bibliography

Primary Sources

Agnihotrī, P. N. (ed.). 1921. *Haṭhayoga Saṃhitā, Bhāṣānuvāda Sahita.* Varanasi: Śrībhāratadharma Press.

Akers, B. D. 2002. *The Hatha Yoga Pradipika*. Woodstock: YogaVidya.com.

Awasthi, B. M. 2018. *Yoga Bija.* Delhi: Swami Keshawananda Yoga Institute.

Bharadwaj, S. 1896. *Vyāyāma Dīpike*. Bangalore: Caxton Press.

Bhandarkar Oriental Research Institute. 1999. *Mahābhārata*. Poona: Digitised by Muneo Tokunaga et al.; Revision: J. Smith, Cambridge, et al.; managed by Oliver Hellwig. Retrieved from: http://www.sanskrit-linguistics.org/dcs/. Accessed on: 18 September 2024.

Digambaji, S., P. Jha and G. Sahay. 2017. *Vasiṣṭha Saṃhitā*. Pune: Kaivalyadhama.

Ghamande, N. 1905. *Yogasopāna-Pūrvacatuṣka*. Bombay: Janardan Mahadev Gurjar, Niranayasagar Press.

Gharote, M. 2007. *Haṭhatatvakaumudī: A Treatise on Haṭhayoga by Sundaradeva*. Lonavla: The Lonavla Yoga Institute.

Gharote, M., P. Devnath and V. Jha. 2009. *Haṭharatnāvalī*. Lonavla: The Lonavla Yoga Institute.

Goldman, R. P. and S. J. Sutherland Goldman. 2021. *The Rāmāyaṇa of Vālmīki*. Woodstock: Princeton University Press.

Jacobi, H. 2008[1884]. "Kalapa Sūtra." In *The Sacred Books of the East Vol.XXII Jaina Sūtras Part-1*. Edited by F. M. Müller and H. Jacobi, 217–311. Delhi: Low Price Publications.

Maheśānanda, S. 2006. *Jogapradīpyakā of Jayatarāma*. Lonavla: Kaivalyadhama.

Maheshananda, S. and B. R. Sharma. 2021. *Jyotsnā Brahmānanda's Commentary on Haṭhapradīpikā*. Pune: Kaivalyadhama.

Mallinson, J. 2004. *The Gheranda Samhita*. New York: YogaVidya.com.

—2013. "Translation of the *Dattātreyayogaśāstra*, the earliest text to teach haṭhayoga." *Academia*. Retrieved from: https://www.academia.edu/3773137/Translation_of_the_Datt%C4%81treyayoga%C5%9B%C4%81stra_the_earliest_text_to_teach_ha%E1%B9%ADhayoga. Accessed on: 21 March 2023.

Mallinson, J., J. Birch, J. Hannedar, M. Demoto-Hahn, and N. Liersch, eds. 2024. *Haṭhapradīpikā* (Digital Edition). Retrieved from: http://www.hathapradipika.online/. Accessed on: 9 December 2024.

Mandal, N. 2015. *Kapālakuraṇṭaka's Haṭhābhyāsa-paddhati*. Lonavla: Kaivalyadhama.

Mohan, A. G. 2013. *Yoga Yājñavalkya.* Singapore: Svastha Yoga Pte Ltd.

Mohan, A. G. and G. Mohan. 2017. *Haṭha Yoga Pradīpikā*. Great Britain: Svastha Yoga.

Narayananatyudu, A. 1945. *Hamsaviṃśati.* Masulipatam: K. G. Murthy.

Sandesara, B. J. and R. N. Mehha. 1964. *Mallapurāṇa*. Baroda: Oriental Institute.

Śarmmā, H. 1875. "Byāẏāma Śikshā." The British Library. Retrieved from: http://access.bl.uk/item/viewer/ark:/81055/vdc_100072644412.0x000001. Accessed on: 9 June 2023.

Sastri, S. V. 1952. *Ānandakanda.* Srirangam: Sri Vilasam Press.

Schreiner, P. 2024. *Viṣṇupurāṇa*. Digitised by Peter Schreiner; managed by Peter Schreiner. Retrieved from: http://www.sanskrit-linguistics.org/dcs/. Accessed on: 18 September 2024.

Shastri, J. L. (ed.). 1983. *Manusmṛti*. Digitised by M. Yano and Y. Ikari; managed by Oliver Hellwig. Retrieved from: http://www.sanskrit-linguistics.org/dcs/. Accessed on: 18 September 2024.

Shastri, J. L. and G. V. Tagare. 1955. *Bhāgavata Purāṇa Part IV.* Delhi: Motilal Banarsidass.

Shrigondekar, G. K. 1925. *Mānasollāsa of King Somesvara*. Baroda: Central Library.

Secondary Sources

Alter, J. S. 1992. *The Wrestler's Body: Identity and Ideology in North India*. Oxford: University of California Press.

—2004. *Yoga in Modern India*. Princeton: Princeton University Press.

—2007. "Yoga and Physical Education: Swami Kuvalayananda's Nationalist Project." *Asian Medicine* 3 (1):20–36.

—2000. *Gandhi's Body Sex, Diet, and the Politics of Nationalism.* Philadelphia: University of Pennsylvania Press.

—2013. "Physical Education, Sport and the Intersection and Articulation of 'Modernities': The Hanuman Vyayam Prasarak Mandal." In *The Politics of Sport in South Asia*. Edited by S. R. Chakraborty, S. Chakrabarti and K. Chatterjee, 8–23. Abingdon: Routledge.

—2014. "Yoga, Bodybuilding, and Wrestling: Metaphysical Fitness." In *Yoga The Art of Transformation*. Edited by D. Diamond, 85–93. Milan : Arti Grafiche Amilcare.

Armstrong, J. 2023. "Uncovering Vyāyāma in Yoga." *Journal of Yoga Studies* [Online] 4: 271–302.

Azad, K. 2024. *Persian Yoga*. Retrieved from: https://www.persianyoga.com/lessons/1-16-shena-keshide-stretch-pushups-3/. Accessed on: 8 October 2024.

Baker, P. 1997. "Wrestling at the Victoria and Albert Museum." *Iran* 35: 73–78. Retreieved from: https://www.jstor.org/stable/4299960. Accessed on: 25 May 2023.

Baleika, T. 2024. "Sun Salutation. Surya namaskara B. Yoga Sequence. Vector Illustration." *Shutterstock*. Retrieved from: https://www.shutterstock.com/image-vector/sun-salutation-surya-namaskara-b-yoga-675342100. Accessed on: 30 September 2024.

Beveridge, H. 2000[1907]. *The Akbarnama Of Abul Fazl.* Calcutta: The Asiatic Society.

Birch, J. 2015. "The Yogatārāvalī and the Hidden History of Yoga." *Nāmarūpa* Spring 2015 (20): 4–13.

—2018. "The Proliferation of Āsanas in Late Medieval Yoga Texts." In *Yoga in Transformation*. Edited by Phillip A. Maas and Karin Preisendanz, 101–70. Göttingen: Vienna University Press.

—2020. "Haṭhayoga's Floruit on the Eve of Colonialism." *Śaivism and the Tantric Traditions: Essays in Honour of Alexis G.J.S. Sanderson* [Online]: 451–80.

Birch, J. and J. Hargreaves. 2016. "Textural Evidence for a Namaskāra as an Āsana." *The Luminescent*. Retrieved from: https://www.theluminescent.org/2016/06/textual-evidence-for-namaskara-as-asana.html. Accessed on: 31 October 2024.

—2023. "Premodern Yogāsanas and Modern Postural Yoga Practice." *Journal of Yoga Studies* [Online] 4: 31–82.

Birch, J. and M. Singleton. 2019. "The Yoga of the Haṭhābhyāsapaddhati: Haṭhayoga on the Cusp of Modernity." *Journal of Yoga Studies* [Online] 2: 3–70.

Blochman, H. 1873. *Ain I Akbari by Abul Fazl 'Allami.* Calcutta: Baptist Mission Press.

Bollée, W. B. 1981. "The Indo-European Sodalities in Ancient India." *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 131(1): 172–91. Retrieved from: https://www.jstor.org/stable/43376760. Accessed on: 10 November 2022.

Bromber, K., B. Krawietz and J. Maguire. 2014. *Sport Across Asia.* Abingdon: Taylor & Francis.

Broughton, T. D. 1813. *An Ukhara with a view of the British Residents' Camp*. [Image]. Apollo – University of Cambridge Repository. Retrieved from: http://www.dspace.cam.ac.uk/handle/1810/240430. Accessed on: 9 October 2024.

—1995[1813]. *Letters Written in a Mahratta Camp During the Year 1809.* London: Archibald Constable and Company.

Bühnemann, G. 2011. *Eighty-Four Āsanas in Yoga: A Survey of Traditions*. New Delhi: D.K. Printworld (P) Ltd.

Chakraboty, S. R., S. Chakrabarti and K. Chatterjee. 2013. *The Politics of Sport in South Asia*. New York: Taylor & Francis.

Chehabi, H. 2018. "Wrestling in the Shahnameh and Later Persian Epics." In *The Layered Heart: Essays on Persian Poetry, A Celebration in Honor of Dick Davis*. Edited by Ali-Asghar Seyed-Ghorab, 237-82. Washington, D.C.: Mage Publishers.

Contreras, R. 2016. "Zurkhaneh in Iran." *Alamy*. Editorial license. Retrieved from: https://www.alamy.com/stock-photo-zurkhaneh-in-iran-147310576.html. Accessed on: 9 October 2024.

Danielson, A. J. 1934. *Health and Physical Education in Schools.* Calcutta: Y.M.C.A. Publishing House.

Das, V. 1968. "A Sociological Approach to the Caste Puranas: A Case Study." *Sociological Bulletin* 17, 2: 141–64.

De Michelis, E. 2008. *A History of Modern Yoga*. Bodmin: Continuum.

Diamond, D. 2014. *The Art of Transformation*. Washington DC: Smithsonian Institution.

Duncan. 2019. "British Indian Army, Sikh soldiers physical training with rifles, 1890s stock illustration." *istock by Getty Images.* Retrieved from: https://www.istockphoto.com/vector/british-indian-army-sikh-soldiers-physical-training-with-rifles-1890s-gm1183986419-333104195?. Accessed on: 10 November 2022.

Ebeling, K. 2015. "Ragamala Painting Research Collection." #8400. *Division of Rare and Manuscript Collections, Cornell University Library.* Retrieved from: http://digital.library.cornell.edu/ragamala. Accessed on: 12 May 2023.

Fischer, M. 1973. "Zoroastrian Iran between Myth and Praxis." PhD diss. University of Chicago.

Flatt, E. 2010. "Young Manliness: Ethical Culture in the Gymnasiums of the Medieval Deccan." In *Ethical Life in South Asia*. Edited by A. Pandian and Daud Ali, 153–73. Bloomington: Indiana University Press.

Flood, G. 2008. *An Introduction to Hinduism*. New York: Cambridge University Press.

Gangoly, O. C. 1926. *Masterpieces of Rajput Painting*. Calcutta: Rupam.

—1948. *Ragas & Raginis.* Bombay: Nalanda Publications.

Ganneri, N. R. 2013. "The Debate on 'Revival' and the Physical Culture Movement in Western India (1900–1950)." In *Sport Across Asia*. Edited by K. Bromber, B. Krawietz and J. Maguire, 121–43. Abingdon: Taylor & Francis.

Gentil, J. B. J. *c.* 1774. *Sports and Pastimes of* Nobility. Victoria and Albert Museum, IS 25: 23-1980. London: V and A Images/Victoria and Albert Museum.

Gethin, R. 1998. *The Foundations of Buddhism*. Oxford: Oxford University Press.

—2008. *Sayings of the Buddha.* Oxford: Oxford University Press.

Gharote, M. L. 2006. *Encyclopaedia of Traditional Asanas*. Lonavla: The Lonavla Yoga Institute.

Goldberg, E. 2016. *The Path of Modern Yoga: The History of an Embodied Spiritual Practice*. Toronto: Inner Traditions.

Google Maps. 2023. *Maharashtra and Karnataka*. Retrieved from: https://www.google.com/maps/@17.5109221,72.4098308,7z?entry=ttu. Accessed on: 7 September 2023.

Guthrie, Mrs. 1881. *Life in Western India*, Vol. II. London: Hurst and Blackett.

Hariharānanda, Āraṇya, Swāmi. 1983. *Yoga Philosophy of Patañjali*. New York: SUNY.

Hocquart, M. V. 1811–1814. *Mœurs et coutumes des peuples, ou collection de tableaux représentant les usages remarquables des diverses nations du monde.* 2 Vols. Paris: Hocquart.

Hoth, M. 2024. "The Haṭhayogasaṃhitā: The Direct Precursor of the Gheraṇḍasaṃhitā?" Bachelor's Thesis. University of Hamburg. Originally dated March 2023; revision date May 2024.

Ilbusca. 2020. "Antique photograph of British Navy and Army: Bengal Army stock illustration." *istock by Getty Images.* June 17. Retrieved from: https://www.istockphoto.com/vector/antique-photograph-of-british-navy-and-army-bengal-army-gm1250019111-364448431. Accessed on: 7 January 2023.

Jain, A. R. 2015. *Selling Yoga: From Counterculture to Pop Culture*. New York: Oxford University Press.

Jetty, B. S. 1959. "The Jetty Community of South India and Its Migration from Modhera." *Journal of the Mythic Society* 50 (2): 88–100.

Jois, K. P. 2010[1962]. *Yoga Mala*. New York: North Point Press.

Kāshāni Partow-Beyzā'i, H. 1337[1958/1959]. *Varzesh-e bāstāni-e Irān (zurkhāneh)*. Tehran: Chāpkhāneh-ye Heydari.

—1382[2003/2004]. *Varzesh-e bāstāni-e Irān (zurkhāneh)*. Tehran: Intishārāt-i Zavvār.

Kehoe, D. 1866. *Indian Club Exercise.* New York: Peck & Snyder.

Krawietz, B. 2014. "Martial Arts Iranian Style: Zurkhane Heavy Athletics and Wrestling Contested." In *Sport across Asia*. Edited by K. Bromber, B. Krawietz and J. Maguire, 144–66. Abingdon: Routledge.

Krishnamacharya, T. 2011[1934]. *Yoga Makaranda*. Chennai: Media Garuda.

Krünitz, J. G. 1799. "Oeconomische Encyklopädie oder allgemeines System der Staats, Stadt, Haus und Landwirtschaft in alphabetischer Ordnung [Encyclopedia of Economy or the General Works of the State, City, House, and Agriculture in Alphabetic Order], Vol. 72. Leibes=Stellung." *Oeconomische Encyclopädie online*. Brünn, CZ: Georg Joseph Trasler. Retrieved from: https://www.kruenitz1.uni-trier.de/. Accessed on: 12 January 2023.

Kumar, D. S. 1991. *A History of Indian Literature*, Vol. 8. Delhi: Sahitya Akademi.

Kuvalayānanda, S. 1926. "The Rationale of Yogic Poses." *Yoga-Mimamsa* 2(4): 209–19.

Lafforgue, E. 2015. "The Traditional Sport of Zurkhaneh, Isfahan Province, Kashan, Iran." *Alamy*. Editorial license. Retrieved from: https://www.alamy.com/stock-photo-the-traditional-sport-of-zurkhaneh-isfahan-province-kashan-iran-85292821.html. Accessed on: 9 October 2024.

Lal, H. 1830. *Indian Sports: Wrestling, Weight-Lifting, Archery and Sword Play*. Victoria and Albert Museum, 03433 (IS). V and A Images/Victoria and Albert Museum, London.

Land, R. 2023. "20 Ways to Change Up Your Down Dog." *Yoga Journal*. Outside Interactive, Inc., 25 October. Retrieved from: https://www.yogajournal.com/practice/downward-facing-dog-variations/. Accessed on: 12 December 2024.

Maas, P. 2020. "Pātañjalayogaśāstra." In *Brill's Encyclopedia of Hinduism Online*. Edited by Knut A. Jacobson. Retrieved from: https://referenceworks.brill.com/search?q=Maas+Patanjalayoga+sastra&source=%2Fdb%2Fenhi. Accessed on: 12 December 2022.

Mallinson, J. 2019. *Mallinson 2016 RISA Sūryanamaskāra Post*. academia.edu, 31 December. Retrieved from: https://www.academia.edu/41473315/Mallinson_2016_RISA_S%C5%ABryanamask%C4%81ra_post. Accessed on: 31 December 2022.

Mallinson, J. and M. Singleton. 2017. *Roots of Yoga*. St. Ives: Penguin Classics.

McCartney, P. 2023. "Poles apart? From Wrestling and Mallkhāmb to Pole Yoga." *Journal of Yoga Studies* [Online] 4: 215–70.

—2019. *Mallakhamb Images (Appendix Four)*. Retrieved from: https://psdmccartney.medium.com/appendix-four-mallakhamb-images-628ebaffe9f4. Accessed on: 1 November 2019.

—Forthcoming. *Yoga's Margins and the Elephant in the Room: The Contortionist's Turn and the Acrobat-Wrestler Influence on Haṭha Yoga*.

Monier-Williams, M. 1960[1899]. *A Sanskrit-English Dictionary Etymologically and Philologically Arranged with Special Reference to Cognate Indo-European Languages.* Oxford: Clarendon Press.

Mujumdar, D. C. 1950. *Encyclopaedia of Indian Physical Culture*. Baroda: Good Companions.

—(ed.). 1939. *Vyāyām Jñānakośa*, Vol. 4. Baroda: Dhondo Narayan Vidvams.

Newcombe, S. 2019. *Yoga in Britain: Stretching Spirituality and Educating Yogis*. Bristol: Equinox Publishing Ltd.

O'Hanlon, R. 2007. "Military Sports and the History of the Martial Body in India." *Journal of the Economic and Social History of the Orient* 50: 490–523. DOI: https://doi.org/10.1163/156852007783245133.

Pant, A. 1970. *Surya Namaskars: An Ancient Indian Exercise*. Delhi: Orient Longmans.

Patwardhan, Sir Gangadhar-rao Ganesh. 1927. *The Science of Wrestling*, Vol. 1. Baroda: Dhondo Narayan.

Pinch, W. R. 2012. *Warrior Ascetics and Indian Empires.* New York: Cambridge University Press.

Pratishkhedekar. 2021. *Aundh State, 1918–19.* April 15. Retrieved from: https://commons.wikimedia.org/wiki/File:Aundh_State,_1918-19.jpg. Accessed on: 8 May 2023.

Pratinidhi, B. P. 1929[1928]. *Surya Namaskars: Sun-Adoration for Health, Efficiency and Longevity*. Aundh: R. K. Kirloskar.

Pratinidhi, B. P. and L. Morgan. 1938. *The Ten-Point Way to Health: Surya Namaskars*. London: J. M. Dent and Sons Ltd.

Ramaswami, S. 2005. *The Complete Book of Vinyasa Yoga*. Cambridge MA: Da Capo Press.

Robinson, C. N. 1899. *Navy & Army Illustrated*, Vol. VII. London: Hudson & Kearns.

Rochard, P. and H. E. Chehabi. 2002. "The Identities of the Iranian Zūrkhanah." *Iranian Studies,* 35(4): 313–340. Accessed 12 October 2022. doi:10.1080/00210860208702023.

Rochard, P. and O. Bast. 2023. "Zurkhāneh, Akhāṛā, Pahlavān, and Jyeṣṭhi-Mallas." *Journal of Yoga Studies* [Online] 4: 175–214.

Saraswati, S. S. 2008. *Asana Pranayama Mudra Bandha.* Munger: Yoga Publications Trust.

Sarbacker, Stuart. 2023. "Prostration or Potentiation?" *Journal of Yoga Studies* [Online] 4: 303–29.

Sargeant, W. 2009. *The Bhagavad Gītā*. New York: State University of New York Press.

Satapathy, B. and G. S. Sahay. 2014. "A brief introduction of 'Yogāsana - Jaina'. An Unpublished Yoga Manuscript." *Yoga-Mīmāṃsā* 46 (1–2): 43–55. DOI: https://doi.org/10.4103/0044-0507.141413.

Satchidananda, S. 1972[1970]. *Integral Yoga Hatha.* New York: Holt, Rinehart and Winston.

Satyananda, S. 2013[1973]. *Surya Namaskara: A Technique of Solar Vitalization*. Munger: Bihar School of Yoga.

Scaravelli, V. 1991. *Awakening the Spine: The Stress-free New Yoga that Works with the Body to Restore Health, Vitality and Energy*. Hong Kong: Harper Collins.

Siṃhajī, Bhagavat. 1927[1896]. *A Short History of Aryan Medical Science*. New York: AMS Press.

Singleton, M. 2010. *Yoga Body: The Origins of Modern Posture Practice*. New York: Oxford University Press.

—2016. "Yoga and Physical Culture: Transnational History and Blurred Discursive Contexts." In *The Routledge Handbook of Contemporary India*. Edited by Knut A. Jacobsen, 172–84. London: Routledge.

Sivananda, S. 1939. *Yogic Home Exercises.* Bombay: D. B. Taraporevala Sons & Co.

—1942. *Japa Yoga.* Rishikesh: The Sivananda Publication League.

—1945. *Health and Long Life.* Rishikesh: The Yoga Vedanta Forest University.

—1950. *Health and Happiness.* Rishikesh: The Sivananda Publication League.

—2004[1931]. *Yoga Asanas*. Shivanandanagar: The Divine Life Trust Society.

Sjoman, N. E. 1999. *The Yoga Tradition of the Mysore Palace*. Delhi: Abhinav Publications.

Skinner, C. J. 1825. "Two men wrestling - Tashrih al-aqvam." *Wikimedia Commons. Retrieved from:* https://commons.wikimedia.org/wiki/File:Two_men_wrestling_-_Tashrih_al-aqvam_(1825),_f.203v_-_BL_Add._27255.jpg. Accessed on: 10 January 2023.

Swenson, D. 1999. *Ashtanga Yoga: The Practice Manual.* Austin, Texas: Ashtanga Yoga Productions.

Uliasz, M. 2023. "Persian shena push up board." *Alamy*. Retrieved from: https://www.alamy.com/persian-shena-push-up-board-on-a-backyard-wooden-deck-in-springtime-scenery-image551895379.html. Accessed on: 17 July 2023.

Vishnudevananda, S. 1988[1960]. *The Complete Illustrated Book of Yoga*. New York: Three Rivers Press.

Watson, J. M. 1864. *Hand-Book of Callisthenics and Gymnastics: A Complete Drill-Book for Schools, Families and Gymnasiums.* Chicago: Schermerhorn, Bancroft & Co.

Yogendra, S. 1956[1928]. *Yoga Āsanas Simplified.* Bombay: The Yoga Institute.

Zelzowski, K. 2016. "Tourists watching training session in Zoorkhaneh (House of Strength), traditional gymnasium in Yazd city, capital of Yazd Province of Iran." *Alamy*. Retrieved from: https://www.alamy.com/stock-photo-tourists-watching-

training-session-in-zoorkhaneh-house-of-strength-137181495.html. Accessed on: 17 July 2023.

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