

VII

Baidya-as-Technology: From Diagnosis to Pharmacy in a Bottle

Gopalchandra Sengupta's pioneering book on modern Ayurveda detailed a list of prerequisites without performing which no physician could proceed to examine the patient. The evacuation of the physician's bowels in the morning, followed by a bath and the performance of stipulated ritual prayers (*ahnik*), and even dressing in a way consonant with his social identity (*samajochita beshbhusha*) were all said to be imperatives.¹ These instructions to the physician can easily be written off as therapeutically inconsequential instructions principally aimed at the enforcement of didactic social norms. It is precisely against this separability of the socio-cultural and the therapeutic that Rosenberg has proposed his more expansive notion of 'therapeutics'. In keeping with that line of reasoning, we will urge a closer examination of these instructions for the physician.

Developing Rosenberg's arguments along a slightly different line we will argue that the socio-cultural and the therapeutic became inseparable because the body of the Ayurvedic physician functioned as a technology in and of itself. The reason Gopalchandra was concerned about the evacuation of the physician's bowel was not simply in order to enforce a social more, but because he and others like him felt that a constipated physician was a blunt instrument incapable of functioning correctly. That the injunctions about bowel movement were motivated by concerns over therapeutic function, rather than any isolated concern about social normativity, is strongly suggested by the fact that subsequent authors who stripped away at Gopalchandra's other seemingly more superfluous injunctions, chose to retain the injunctions about bowel movement. Hence Binodlal Sen writing more than a decade later jettisoned

¹ Sengupta, *Ayurveda Sarasamgraha*, vol. 1, 7.

Gopalchandra's injunctions about dress and ritual (*ahnika*), but retained those about bowel movements.² Years later, Binodlal's cousins, Debendranath and Upendranath Sengupta, reiterated the injunction on bowel movements in their four-volume classic, *Ayurveda Samgraha*, whilst ignoring the injunctions about dress, etc.³ Further confirming evidence upon this issue is available in Pandit Prayagchandra Joshi's Hindi commentary on a precolonial *nadi-parikshya* text published in 1959. Joshi, a Sanskrit scholar and an Ayurvedic physician, in glossing the injunctions about the movements of bowels explicitly stated that, "the *nadi* cannot be properly discerned so long as one has retained one's faeces, urine etc. (*malmutradi*)..."⁴

The Ayurvedic physician's relationship with the small technologies he gradually came to embrace over the period of our study was not a simple unidirectional relationship. His body was a technological object in itself and as he embraced other small technologies the physician's own body-as-technology was simultaneously recalibrated. In this chapter, we will interrogate how the physician's body-as-technology was remade in the course of the modernization of Ayurveda.

The Baidya's Mindful Body-Instrument: A Precolonial History of Practice

We do not need to read between the lines to discern the implicit logic of injunctions about evacuations to realise that Ayurvedic physicians had long figured their own bodies as medical technologies. The *Susruta-samhita* urging the need for both textual and practical grounding of physicians had famously drawn a parallel between a good physician and a two-wheeled chariot. Just as the chariot had two wheels, the *Susruta* had argued that physicians needed to be acquainted with both "knowledge of the *shastras*" and practical skills. These were his two "wheels".⁵ Whilst this metaphor is frequently cited as a testament to the importance given to practice in classical Ayurveda, what is seldom mentioned is the degree to which 'practice' is positioned as a property of the physician's body.

² Sen, *Ayurveda Bigyan*, vol. 1, 191.

³ Sengupta and Sengupta, *Ayurveda Samgraha*, vol. 1, 360.

⁴ Prayagchandra Joshi, *Shrikanadmaharishipranit Nadivigyanam*, Varanasi: Chowkhamba Sanskrit Series Office, 1959, 5.

⁵ Sarkar, *Susruta-samhita*, 8-9.

If we continue to read the passage in the *Susruta-samhita*, we immediately run into detailed descriptions of bodily discipline and comportment. Yet most modern readers and authors unfortunately stop with the chariot metaphor without bothering with subsequently discussions that they likely consider superfluous. The genealogy of such partial readings can be traced back to the pioneering scholarship of the British Orientalist, HH Wilson. Writing in the *Oriental Magazine* in 1823, Wilson reproduced a pithy translation of the chariot analogy and followed it up by lamenting that, “It is much to be regretted that these aphorisms have so little influenced Hindu practitioners”.⁶ In 1837, another British Orientalist, John Forbes Royle, again repeated the comment.⁷ Thence it gradually evolved into a cliché that is always rolled out to strengthen Golden Age narratives about the precocious advances of “ancient Hindu science”.⁸

Yulia Frumer has recently pointed out that when speaking of translation of technological practices between distinct historical cultures, the word ‘practice’ often appears “to be all-encompassing and hence too coarse”.⁹ The problem, Frumer points out, arises partly through the collapse of distinctive notions such as ‘custom’, ‘convention’ and ‘habit’ into a single monolithic concept of ‘practice’ in our historical lexicon. In the case of the chariot metaphor, as it has been handled by modern authors since Wilson, the coarseness of the term ‘practice’ has certainly been misleading. In the modern usage, ‘practice’ has emerged as a term opposed to and complementary with ‘theory’. We, however, would argue that a more apposite sense of ‘practice’ as it was originally used in the classical Ayurvedic tradition was to designate a mode of embodied reasoning that ran parallel, rather than being the complementary opposite of, the more textually grounded form of propositional reasoning.

Lissa Roberts and Simon Schaffer point out that there is a long and hallowed tradition dating back to Aristotle that distinguishes *episteme* and *techne* by rendering manual and mental labour as two totally different categories of action. No matter how positively

⁶ Wilson, “Medical and Surgical Sciences”, 382.

⁷ Royle, *Antiquity of Hindoo Medicine*, 50.

⁸ NH Keswani, “Medical Education in India Since Ancient Times” in Charles Donald O’Mailey (ed.), *History of Medical Education: A Symposium*, Berkeley: University of California Press, 1970, 339.

⁹ Yulia Frumer, “Translating Time: Habits of Western-style Timekeeping in Late Edo Japan”, *Technology & Culture*, 55:4, 2014, 787.

repurposed in the writings of Wilson, Royle and their Indian inheritors, this breach between *episteme* and *techne* sustained a whole range of social, moral and scientific hierarchies which had its roots in early modern Europe.¹⁰ But Roberts and Schaffer do not simply show up this polarity to be false. Instead they espouse a historical approach to what they call the “mindful hand”. They urge an exploration of the actual historical spaces, disciplines and discourses through which such contrasts and hierarchies were operationalized.

Borrowing from these insights, we will argue that in order to trip up the coarse translations of the medical Orientalists that have become postcolonial clichés, we must look closely at exactly what the actual habits that were being promoted in the classical texts were. Instead of taking colourful metaphors out of their textual and historical contexts, we need to read them within the web of associations in which we find them. Returning to the *Susruta-samhita* then, we must look closely at what the actual habits—or ‘practices’ for that matter—that the text urged physicians to develop were.

The section where the chariot metaphor is deployed goes on to describe a fairly large number of practical injunctions that a medical student ought to abide by in order to become a successful physician. These injunctions might be heuristically organized into three sets. Foremost is a set of injunctions about the maintenance of ritual purity (*shuchi*). Second is a group of injunctions about personal comportment. These latter touch both upon mental and somatic states of being. To give a few examples, they instruct the medical pupil to wear an *uttariya* (‘modesty scarf’), not be over-eager in his mind, be brave, not be sleepy etc. Finally, there is a set of injunctions about inculcation of *sastric* knowledge through memorization. Here again a number of specific directions are given as to exactly how to pronounce texts and how to memorize them.¹¹ Every gesture and action required by these injunctions is called a *karma* or ‘practice’. ‘Practice’ or *karma* clearly does not have the modernist designation of manual or clinical dexterity that is implied by Wilson and others. Whilst it is true that, upon reading the entire section, there is a weak sense that these embodied acts will produce a form of therapeutic prowess, it

¹⁰ Roberts and Schaffer, “Preface”, *The Mindful Hand*, xiii.

¹¹ Sarkar, *Susruta-samhita*, 9.

cannot be equated with the kind of clinical dexterity that underwrites the ideology of the modern clinic.

Reconceptualising the distinction between *episteme* and *techne* as an artefact of history immediately opens up a more plural, less monolithic notion of ‘practice’. *Karma*, the word Wilson had glibly translated as ‘practice’, emerges as a much more polyvalent term. It includes actions taken to ensure ritual purity, gestures aimed at aiding the memorization of textual knowledge, mental dispositions as well as possibly certain more familiar types of clinical practice. Moreover, the point was not to hold this as a form of embodied action controlled by the mind. Rather, it was a form of embodied praxis that allowed the physician to affect a cure.

In this regard, it is worth underlining the emphasis on ritual purity or *shuchi*. There is a clear notion that is further developed in post-classical texts that even the best medicine, if proffered by a ritually impure physician, could turn into a harmful object. This notion of *shuchi* and its therapeutic value then also serves to undermine any clear-cut distinction between the physician and the therapy he gives. At least partially, the physician *is* the therapy in an embodied sense.

What becomes unquestionable in these discussions is that the Kaviraj’s own body is clearly a technology that can influence the therapeutic outcome of a patient. Following Dominik Wujastyk it is also worth pointing out that the very metaphor of the chariot is well known in a story found in the *Katha Upanishad* wherein the self is described as a “chariot owner” and the body his chariot.¹² The view that the physician’s body was a technology or vehicle in and of itself is therefore well established in the region. Yet this did not mean that therapeutic reasoning was disembodied. Instead it was precisely because medical thinking was an embodied action that one could think of the body as an instrument whose malfunction could fatally undermine medical reasoning itself. It was precisely because of the twin reality of the body being a tool of action and thought not being independent of the body that made the state of the physician’s bowels a factor in proper diagnosis and therapy.

The physician’s mindful body though clearly conceived of as a technology, i.e. a chariot, did not remain unchanged since the time of *Susruta*. In Gobindadas’

¹² Wujastyk, *Roots of Ayurveda*, 246.

Bhaisajyaratnabali we have an important and locally hugely influential version of how this technology had evolved since the classical period. The most obvious shift was the explicit refashioning of the body-instrument within the emergent local notions of caste. As we have noted in Chapter II, the eighteenth century was a period of great social ascent for the *Baidya* caste under the stewardship of Raja Rajballabh. Gobindadas' reworking of the form and function of the physician's mindful body-instrument was also shaped by this emergent status of the caste. Gobindadas emphasized that any medicine prepared by one not belonging to the *Baidya* caste was to be "untouchable" (*asprishya*). Even if a patient mistakenly consumed a medicine prepared by a Brahmin, the consequences were dire. For the lowest castes, they would have to perform ritual penance, whilst the higher castes would permanently lose their caste status.¹³

Whereas in the *Susruta-samhita* a physician can achieve ritual purity (*shuchi*) by engaging in certain acts of purification and observance of set rules, by the eighteenth century in Bengal this had emerged into a much more firmly embodied quality. This is not to suggest that only hereditary practitioners were physicians in the eighteenth century. As we have seen in Chapter II, there is enough evidence to suggest that the *Baidya* caste, despite its astounding social ascent in the period, was not sealed off and continued to admit new entrants into its folds. Yet the emphasis on caste identity as a marker of ritual purity and its connection to therapeutic success most likely made embodied social identity a much more conspicuous factor in therapeutic considerations. In any case, it showed how the physician's mindful body-instrument continued to evolve through new figurations of the physician's body and its material role in therapeutics.

Instrumentalizing the Diagnostician's Body

The influx of small technologies produced and nurtured a new breach between 'sensory data' and reasoning. Instead of the body-instrument being materially entangled in the diagnostic process, it gradually became a mere medium through which sensory data was collected. Ironically, it was precisely at this moment when the body was being robbed of its embodied powers of diagnostic reasoning, and thereby being reduced to the status of

¹³ Sen, *Bhaisajyaratnabali*, 5.

an unthinking tool, that its status as technology akin to any of the other technologies came to be vigorously denied. Whereas earlier texts had unabashedly equated the body to technological objects such as the chariot, now the body came to be contrasted dramatically with the various tools that the physician regularly used.

This double move whereby the physician's body was denied any power of diagnostic reasoning and yet promoted as being much more than a tool was most clearly visible in Nagendranath Sengupta's *Kaviraji Shikshya*. On the one hand, Nagendranath insisted that the body was merely a medium through which necessary sensory data was obtained, whilst on the other hand he also presented all technologies as mere extensions of bodily capacities, thereby in turn elevating the body to a unique and privileged position. In the process, Nagendranath also opened up a clear divide between textual knowledge and sensory data. Whereas earlier texts had constantly sought inscribe textual knowledge through memorization into the realm of bodily instincts, Nagendranath clearly separated the sensory knowledge obtained through the body from the textual learning.

In Nagendranath's view, there were three components to diagnostic reasoning, i.e. *shastropadesh* (textual instruction), *pratyaksha* (witnessing) and *anuman* (deduction), and these were organized along a linear chronology. Rather schematically, he said that the physician had to begin by witnessing, and then comparing the information thus obtained with the textual instructions he had, the physician had to deduce the illness. Through this algorithmic structuring of medical reasoning, Nagendranath not only displaced the earlier emphases on embodied reasoning, but also organized the entire reasoning process into a linear, temporal framework. Since Nagendranath's algorithm placed the greatest emphasis on clinical witnessing, this is what he spent the greatest time developing.

It is useful here to remind ourselves that precolonial texts such as the *Bhaisajyaratnabali* had clearly eschewed any such notion of clinical witnessing. It had stated with ample clarity that for a diagnosis to be effective one needed to be textually learned and industrious. Skill in various diagnostic techniques ranging from *nadiparikshya* and *mutraparikshya* to *mukhaparikshya* was strongly recommended for a proper diagnosis. But these were certainly not presented as mere passive acts of witnessing.¹⁴ The seeing and the thinking could not be neatly separated in these acts of diagnosis.

¹⁴ Sen, *Bhaisajyaratnabali*, 6.

By recoding these complex techniques which almost always involved some form of embodied reasoning with a formulaic abstract form of deduction, Nagendranath was able to engender precisely the sort of stable subject, disconnected from its object of examination, which could be the destination of empirical knowledge derived from sensory data. He therefore catalogued precisely the kind of information each sense could obtain. Whereas Gobindadas had spoken of diagnostic acts such as *mutraparikshya* as a specialized form of analysis where various senses and reasoning were combined, Nagendranath spoke of “colour, size, slim-ness or obesity, beauty, faeces, urine and eyes” as being things to be observed. Visual witnessing or *pratyaksha darshan* came to replace a specific form of analysis or *parikshya*. Auditory, olfactory and gustatory forms of witnessing were similarly promoted.¹⁵

Once this move had succeeded in separating the knowing subject from the data through which it knew and the body through which it acquired such data, it was only a matter of time before sensory prosthesis and enhancers were being advocated.

Nagendranath argued that the senses had limits and for one reason or the other it was not always possible to use them. The taste of urine or faeces for instance, could not be determined by the use of one’s own taste buds. As a result, he recommended the use of other creatures such as ants. If ants flocked to a urine sample, one could be sure of its sugariness. Similarly, the incidence of lice or too many flies being attracted to a patient’s body signalled the preponderance of sweetness in the body. Offering a blood sample as food to a chicken or dogs could likewise help discern the qualities of the blood. By dislocating the acquisition of sensory knowledge onto the bodies of lesser animals such as ants, dogs and chicken, an equivalence was set up between the body’s own senses and the actions of the animals. Embodied human perception was therefore neither unique nor irreplaceable for the medical reasoning. The senses unthinkingly gathered information and it was in processing that information, through a purely abstract cognitive act, that medical reasoning emerged.

It was through this framework that Nagendranath could also seamlessly introduce a range of new small technologies as doing little more than supplementing or extending the human perceptual apparatus. Whereas the earliest modernizing authors such as

¹⁵ Sengupta, *Kaviraji Sikshya*, vol. 1, 12-13.

Gopalchandra, as we have seen in Chapter III, had struggled to reconcile the contradictions generated by the use of devices like the pocket watch, Nagendranath noticed no contradictions whatsoever. In speaking of the stethoscope for instance, Nagendranath stated that, “*Akarnan* is the name given to the examination of the various sounds of the chest through the medium of the auditory sense (*srabanendriya*). This can be done in two ways, i.e. immediate (*pratyaksha*) and mediate (*paraksha*) or through a machine (*jantradwara*)”. Proceeding further he stated that these two modes were exactly alike. The physician could either put his own ear directly to the patient’s chest or he could use the stethoscope. “For a variety of reasons, the stethoscope was used more often”, he pointed out though in some special cases such as when treating infants the direct approach might also be taken.¹⁶ Whilst Nagendranath’s terminology, especially given his slightly different use of the word ‘*pratyaksha*’ as witnessing only a few pages earlier, acknowledges the new layer of mediation introduced by the stethoscope his entire discussion denies that such mediation is in any way significant. By collapsing the difference between mediated and immediate use of the sense of hearing, Nagendranath renders the stethoscope a mere extension of the physician’s own bodily sense of hearing. This can only be done if sense perception is refigured as a purely data-gathering mechanism devoid of any cognitive aspect.

From the use of ants and dogs to the use of stethoscopes and thermometers, Nagendranath promoted a vision of technology as an extension of the physician’s body. In so doing however, he also rejected the capacity of embodied reasoning in the physician’s body. The physician’s body, as Nagendranath conceptualized it, was a purely instrumentalized entity: unthinking, mute and entirely subordinated to an abstract and disembodied linear reasoning mechanism he had outlined at the outset.

Once the physician’s body had been thus instrumentalized the earlier injunctions about ritual purity of the physician’s body lost all therapeutic significance. Instead, developing further along the lines suggested in Gobindadas’ eighteenth-century text, modern Kavirajes turned the older injunctions about ritual purity into a question of caste-monopoly defended in the name of tradition. A lengthy essay written by an eminent Kaviraj, Satyacharan Sengupta, in the leading Ayurvedic periodical of the day in 1923-24

¹⁶ Sengupta, *Kaviraji Sikshya*, vol. 1, 25.

bears ample witness to the changes in way the physician's body was conceptualized. On the one hand, the author lamented that whereas in the past "only Baidyas used to be Ayurvedic physicians ... nowadays from Brahmins to Chandals (a ritually low caste) everyone has earned the right to practice Ayurvedic medicine ... in Calcutta, the city of wonders, one even notices three or four Muslims who have opened up Ayurvedic clinics".¹⁷ The disdain and lament was backed up by copious Sanskrit quotations to justify that only Baidyas had the right to dispense medicine and that anyone who consumed medicines prepared by other castes, high or low, stood in violation of religious obligations. Despite Satyacharan's obvious concerns and his attempts to bolster the Baidya monopoly, he made absolutely no attempt to connect the embodied caste identity of the Baidya physician to the therapeutic value of his diagnosis. He defended the monopoly as a matter of religious obligation backed up by scriptural quotations, not a diagnostic necessity. Not once did he say that the Brahmin, Chandal or Muslim Kavirajes were bad physicians. His point was simply that being treated by them would contravene religious obligations.

By thus separating religious obligation, social identity and diagnostic value of the physicians' body into separate spheres, Satyacharan could then, just as Nagendranath had done before him, speak unabashedly of the supplementing of the physician's embodied diagnostic capacities by mechanical devices. Working this argument for supplementing into a general rhetoric of decline, he said that since the modern Kavirajes no longer had the "power to diagnose by touching the *nadi*", they ought to embrace the use of the *tapman-jantra* used by *daktars*. Similarly, lacking the powers of yore to examine the patient's chest, they ought not to be embarrassed to adopt the stethoscope. Finally, since modern Kavirajes lacked the proper knowledge of yogic purificatory practices like enemas (*bastikriya*) he felt, they ought not to shy away from the use of injections.¹⁸ Satyacharan's fundamental move was to locate historically recognized precedents (though these were occasionally quite far-fetched, as in the case of enemas and injections) for modern small technologies and then urge their uptake on the grounds that the embodied skills of the modern physicians had declined since the classical age. Yet interestingly, this decline was not attributed to any change of the physician's body itself, but rather to the

¹⁷ Satyacharan Sengupta, "Chikitsaker Katha", *Ayurveda*, 8:4, 1923-24 (1330 BE), 91.

¹⁸ Sengupta, "Chikitsaker Katha", 92.

fact they were no longer properly trained and committed as they had once been. The physician's body was merely a diagnostic instrument whose capacities depended upon erudition and commitment, not on any embodied, pre-reflexive quality as such.

The physician's body that emerged through the writings of Nagendranath and Satyacharan amongst others was a body in which the biological and the social were neatly, separately and hierarchically organized. By contrast, the physician's body available in precolonial texts was much more resolutely biomoral, i.e. the biological and the moral were deeply and inseparably intertwined with each other.¹⁹ As a result, in these earlier figurations the moral valence of the physicians' body—whether calibrated to ritual performance (as in *Susruta*) or birth (as in Gobindadas)—had a direct relationship to its diagnostic function. However, in the emergent modern physician's body, social duties attached to religious affiliations and the diagnostic performance could be entirely decoupled.

In this regard, it is also worth noting Rachel Berger's argument about the communalization of biomorality from the 1920s.²⁰ In Bengal, as we can see from Satyacharan's comments above, this communalization did not pit the Hindu against the Muslim. Rather, because of the entanglements between Baidya caste-politics and Ayurvedic modernization, what we see is the Baidya pitted against the Brahmin, Chandal and Muslim together. The community that underwrote this communalization therefore is not the homogenized 'Hindu' community, but rather the 'Baidya' caste community.

¹⁹ It is cogent to point out here that we do not use the word biomoral in the sense that Rachel Berger has recently used it as a self-consciously mobilized notion deployed by Orientalists, colonial officials and eventually Ayurvedic propagandists to designate "Ayurveda's moral features outstripping its biological components". Berger, *Ayurveda Made Modern*, 42-49. Instead, our usage is indebted to Joseph Alter's usage of the term as a heuristic term used to signify the much more thoroughgoing interpenetration of the biological and the moral. In Alter's usage there is no question of the 'moral' outpacing the 'biological', but rather a fundamental redefinition of the term 'biological' itself in a way so as to make inseparable from the 'moral'. For Alter's definition of biomorality, see Joseph Alter, *Gandhi's Body: Sex, Diet and the Politics of Nationalism*, Philadelphia: University of Pennsylvania Press, 2000, 155. For the difference in Alter's usage and the kind of self-conscious deployment that Berger is interested in see, Alter, *Yoga in Modern India*.

²⁰ Berger, *Ayurveda Made Modern*, 173.

Practice as Pharmacy

As small technologies came to replace the bodily practices of embodied diagnostic reasoning, a new figuration of ‘practice’ begun to emerge. The clichéd rhetoric about the need for both practical and textual learning now evolved in a new direction. At the most obvious level, discussions of ‘practical skill’ were relocated from the realm of diagnosis to that of treatment. Practice now gradually came to be equated with the knowledge and competence in pharmacy. A lengthy anonymous article published in the journal *Ayurveda* in 1329 BE (1922) which aimed to outline the qualities necessary in an ideal physician asserted that, “To be a good physician, it is not enough to have read the *shastras* or been well-instructed, nor is it enough to possess certain innate virtues. One must be an able pharmacist”.²¹ Harking back to a Golden Age, the author posited that the decline of Ayurveda had resulted from the decline in the practice of pharmacy. The lament around decline caused by the overly textual learning of Ayurvedists and their neglect of ‘practice’ goes all the way back to Wilson’s regrets. By the early 1920s this allegedly neglected form of ‘practice’ had been identified with the practice of pharmacy.

Our anonymous author was not alone in equating Wilson’s regrets with a decline in pharmaceutical practice. In fact, one of the leading Kavirajes of his day, Amritalal Gupta, writing in the same journal, *Ayurveda*, in 1916-17 had made an almost identical point. Having invoked Susruta’s famous chariot metaphor, Amritalal went on to explain with a list of examples what kind of *karma* or actions had been implied by *Susruta*. “The preparation of medicines etc. according to the proper rules and the proper alchemical processing (*jaran, maran, sodhan*) of metals like gold and semi-metals, [as well as] the making of [medicinal] oils (*taila*), butters (*ghrita*), confectionaries (*modak*), molasses (*gur*), distilled spirits (*asab*), fermented wines (*arista*), powders (*churna*), pills (*batika*) etc. according to the proper rules”, Amritalal clarified were the substantive instances of the kinds of practice insinuated by *Susruta*.²² In a similar vein, in the following year, Jogendrakishore Loh once again wrote a lengthy article in *Ayurveda* on the importance of practical training. While Loh nominally invoked a broader notion of ‘practice’ associated with clinical

²¹ Anon., “Baidya Chikitsa”, *Ayurveda*, 7:7, 1922-23 (1329 BE), 203.

²² Amritalal Gupta, “Baidya Britti”, *Ayurveda*, 1:12, 1916-17 (1323 BE), 541.

training and surgical skill, in effect like Amirtalal and others he focussed mainly upon pharmacy. Well over three of the four pages that Loh's essay ran into were devoted to the importance of the practice of pharmacy.²³ These authors were not atypical. Numerous others too developed this discourse of practice as pharmacy. For some of them, like Amritalal, Ayurvedic practice meant exclusively pharmacy, for others like Loh whilst practice notionally suggested a broader notion including clinical experience and surgery, in actuality it came down to pharmacy once again.

This redefinition of 'practice' allowed the modernizing Ayurvedists to appropriate the regret voiced by Orientalists like Wilson and mobilize it for their reformist ends without necessarily introducing any dramatic changes to Kaviraji customs. In any case, in the absence of any Ayurvedic colleges till 1916 which in turn ruled out clinical experience, the unavailability or distaste for cadaveric dissections that ruled out regular surgical or anatomical experience of any sort, meant that there were in effect very few forms of 'practice' that a modern Ayurvedist could undertake. Pharmacy was naturally one of the things he could realistically undertake and so recoding 'practice' as exclusively comprising of pharmacy allowed the modern Kaviraj to both focus upon what was realistically possible as well as present it as a radical reform that would reverse the alleged decline of Ayurveda.

This reorientation of practice as pharmacy also led to the ascendancy of a particular type of medicines known as *pachon*. The anonymous author who asserted the need for Kavirajes to be able pharmacists then went on in the same article to explain how this new 'practical' orientation would lead to a new emphasis on *pachons*. He explained that the pharmaceutical imagination (*bhesaj kalpana*) of Ayurveda comprised of a wide-range of different types of medicaments including oils, butters, fermented wines, ointments etc. By contrast *pachons* referred to "only one small limb of that vast body of medicines". Yet, despite its humble size, *pachons* the author reiterated were often more useful and valuable than the entire set of other Ayurvedic medicines.²⁴ In a similar vein, the enormously influential Kaviraj Satyacharan Sengupta, who served as an editor of the journal *Ayurveda* for many years, wrote that simple *pachons* frequently produce stunning results in whose

²³ Jogendrakishore Loh, "Chikitsaker Kartabya", *Ayurveda*, 2:12, 1917-18 (1324 BE), 492-96.

²⁴ "Baidya Chikitsa", 205.

comparison the effect of more expensive formulations would pale into oblivion. Sengupta too thus sort to exhort modern Kavirajes to make greater use of *pachons*.²⁵ Indubhushan Sengupta, a *Bhisagratna* (a qualification indicating specialization in pharmacy), argued that *pachons* acted much faster than other types of medicines. He also cited scriptural authority to suggest that the ancient seers had always acknowledged the vast superiority of *pachons* over other forms of pharmacy. Unfortunately, Indubhushan felt, Kavirajes tended to avoid *pachons* as they were relatively more difficult to make while patients disliked the bitter/astringent taste. Yet he urged all Kavirajes who sincerely wanted to uplift Ayurveda to take up *pachons* as their main instrument of cure and also convince patients about its powers.²⁶

Whilst these authors did not propose any all encompassing definition of *pachons*, they did insist that the term included within it two other popularly known categories of medicines known as *mushitijog* and *totkas*. Technically speaking, *pachon* was defined in an important 13th century text, the *Sarangadhar-samhita*, as “that which causes the digestion of the chyme (*aam*) but does not light the [digestive] fire”.²⁷ They could contain from one to numerous ingredients, so long as the total weight of the entire mixture was 2 *tolas*. The proportions of individual ingredients were expressed in terms of this 2 *tola* weight.²⁸ This technical definition of *pachon* however, was seldom adhered to. Contemporary Bengali to English dictionaries describe it as either “a digestive, gastrive” or a “medicinal decoction”.²⁹ The Rev. Lal Behari Dey described *pachons* as “aperient mixtures” in his 1874 novel, *Govinda Samanta*.³⁰ This gradual blurring of the names for digestive medicines and medicinal preparations in general is interesting in itself and might well be related to the wide-spread belief in the central role of digestion in pathogenesis. In most cases they comprised of secret recipes that were passed along lines of discipleship and were crucial to the reputation of the physician. Dey’s novel mentioned for example, that, “That [the

²⁵ Sengupta, “Chikitsaker Katha”, 90.

²⁶ Indubhushan Sengupta, “Ayurveder Banaushadhi”, *Ayurveda*, 8: 10/11, 1923-24 (1330 BE), 251.

²⁷ Sarangadhar (Peary Mohan Sengupta ed.), *Sarangadhar-samhita*, Calcutta: Benimadhab Dey & Co., 1889, 20.

²⁸ Binodlal Sen, *Arya Grihachikitsa*, Calcutta: n.p., 1879, (1285 BE), 5.

²⁹ Sailendra Biswas, *Samsad Bengali – English Dictionary*, 3rd edn., Calcutta: Sahitya Samsad, 2000, 633.

³⁰ Rev. Lal Behari Dey, *Govinda Samanta*, London: Macmillan and Co., 1874, 250.

particular Kaviraj] had a collection of the best and rarest medicines was a fact admitted by everyone in the village”.³¹ Though Dey’s tone was sarcastic, the link between possession of these lists and a physician’s reputation was clear. Another unsympathetic observer, Herbert Hope Risley, recorded the mode in which *pachons* were administered. “A *pat* or *pachan*”, he wrote, “that comprises of from nine to sixty ingredients is considered a [good] alternative tonic. The patient being given twenty-one powders made of a jumble of herbs, takes one daily and boils it in a seer of water until only a quarter remains; then straining and putting aside the sediment, he drinks the decoction. After the twenty-one days have expired, all the sediments are taken, and the decoction drunk for eleven days longer. Finally, the sediment is put into boiling water and with it the patient takes a vapour bath (*bhapra*)”.³² Most importantly, *pachons* in these descriptions were usually not to be found in canonical Ayurvedic texts. Their very value and their connection to the physician’s reputation arose from their unique and secret nature.

From the mid 1890s, a number of collections of *pachons* were published. Most of these claimed to be disclosing secret medicinal recipes passed on for generations through familial or apprenticeship chains. The authors of these *pachon* collections included some of the most eminent modern Ayurvedists of the day. Debendranath, Upendranath and Nagendranath Sengupta for instance all published their own respective collections of *pachons*. Whereas Debendranath and Upendranath emphasised the esoteric familial provenance of the recipes, Nagendranath combined these with prescriptions culled eclectically from canonical Sanskrit sources. In Nagendranath’s collection therefore the non-canonical, secretive and familial origins ceased to define *pachons*.

Nagendranath emphasized a new and alternative definition of *pachon*. He confessed that formerly the term *pachon* was reserved for astringent digestives (*paripaker janya prajukta kashaye*). But this older meaning was no longer in vogue according to Nagendranath. Instead, any astringent (*kashaye*) had come to be called *pachon*. This broader set of *pachons* could be divided into five constituent categories, viz. *Swarash*, *Kalka*, *Shrita-kashaye*, *Shitha-kashaye* and *Phanta*. *Swarash* was the name given to the essential juice or extract wrung from any material. *Kalka* was the juice extracted by pasting or grinding the material with

³¹ Dey, *Govinda Samanta*, 249.

³² Risley, vol. I, 364-65.

a stone mortar and pestle. *Shrita-kashaye* was the juice extracted by boiling the material. *Shita-kashaye* was the extract obtained by leaving the material immersed in water overnight. *Phanta* was the extract obtained by first immersing the material in warm water and then pasting it in a mortar.³³ The five types were progressively more and more easily digestible. Thus the *swarash* took the longest time to be digested, whilst the *phanta* took the least time.

Nagendranath's definition seems to have caught on. In 1920, just nine years after the first publication of *Pachon O Mushtijog*, his book was in its fourth edition.³⁴ Moreover, in 1927 Ashwinikumar Chattopadhyay wrote another book on *pachons* that was essentially a paraphrasing of much of the material presented in Nagendranath.³⁵

Even as these new definitions begun to take root, the importance of *pachons* continued to grow within modern Ayurvedic pharmacy. Besides the regular columns that begun appearing in the various Ayurvedic periodicals, the numerous advertisements for Ayurvedic products in the general press attested to the rising pre-eminence of *pachons* as the main form of medicine. In the early to mid 1890s, Kaviraj Lakshminarayan Ray's *Bharat Ayurveda Aushadhalya* was one of the most regular advertisers of Ayurvedic pharmaceuticals in the *Amrita Bazar Patrika*—the leading Indian daily newspaper of its time—their advertisements listed a number of their leading products but none of these were advertised as *pachons*.³⁶ Bijoyratna Sen's much more eminent firm which also advertised its leading products regularly in the *Amrita Bazar Patrika* in the 1890s, also avoided *pachons* altogether. Their focus instead was on pills, oils and musks.³⁷ Around a decade later, in 1904 however, we find new advertisers focussing almost exclusively on *pachons*. Thus Srischandra Dutta's *Peacock Chemical Works* advertised five products and all five were explicitly described as *pachons* or *kashayes*.³⁸ Around the same time, the eminent Kaviraj Binodlal Sen's *Adi Ayurveda Aushadhalaya*, one of the most successful firms of its

³³ Nagendranath Sengupta, *Pachon o Mushtijog*, Calcutta: Nagendra Steam Printing Works, 1911, 2.

³⁴ Nagendranath Sengupta, *Pachon o Mushtijog*, 4th edn., Calcutta: Nagendranath Sengupta, 1920.

³⁵ Ashwinikumar Chattopadhyay, *Pachon o Tahar Byabohar Sikshya*, Calcutta: AK Chatterjee, 1927.

³⁶ Advertisement, "Bharat Ayurveda Aushadhalaya", *Amrita Bazar Patrika*, 8th January 1893, 3.

³⁷ Advertisement, "Bijoy Ratna Sen Kaviranjan's Ayurvedic Aushadhalya", *Amrita Bazar Patrika*, 29th June 1894, 8.

³⁸ Advertisement, "Peacock Chemical Works", *Amrita Bazar Patrika*, 19th December 1904, 9.

day, regularly published full-page advertisements in the *Bankura Darpan* highlighting its flagship products amongst which the majority (four out of six) were *pachons* or *kashayes*.³⁹

The earliest collections of *pachons* had also begun to appear from around the mid 1890s but their popularity only grew in the 1910s. Debendranath and Upendranath Sengupta's co-authored collection appeared in 1895.⁴⁰ Thereafter it took almost a decade for the next collection, that of Kaliprasanna Bidyaratna, to appear in 1906.⁴¹ In fact, despite the Sengupta brothers having been one of the most widely read Ayurvedic authors of the time, their *pachon* collection remains one of their least successful works. Thus, while some of their other works remain in print till this day, their *pachon* collection is virtually entirely forgotten. The first edition is difficult to find today even in the better-stocked libraries and it is usually the third edition, published in 1911—incidentally the same year as Nagendranath's collection first appeared, that remains more easily accessible. Both the enormous success of Nagendranath's collection in the 1910s as well as the numerous journals that carried columns on *pachons* clearly shows that it was from the second decade of the 20th century that *pachons* came to dominate modern Ayurvedic pharmacy.

In fact, so dramatic was the shift that its reverberations were even felt in the religious culture of the day. For instance the iconic representations of the mythic Dhanwantari, whom the medical Orientalists had called the 'Hindu Aesculapius' and who in Bengal was also revered as a mythic ancestor of the Baidya caste, were radically transformed precisely at this time. Whereas in 19th century lithographs and woodcuts Dhanwantari had usually appeared in conspicuously mythic time, in the 1920s he appeared as a pharmacist surrounded by bottled medicines. Perhaps the most popular visual trope in the 19th century was one that had showed him as emerging from the cosmic oceans during their churning [*samudramanathan*] by the gods and demons [Fig. 11]. Such images showed him surrounded by a host of others divine and supernatural beings and emphasized his divine and exalted status. By contrast, a woodcut included as a frontispiece in a Hindi edition of the *Caraka-samhita* dating from the early 1920s shows him as a pharmacist surrounded by innumerable bottles displayed in glass-fronted almirahs [Fig. 12]. Though he is still shown engaged in *nadiparikshya*, it is clear that the

³⁹ Advertisement, "Adi Ayurveda Aushadhalaya", *Bankura Darpan*, 8th November 1903, 1.

⁴⁰ Debendranath Sengupta & Upendranath Sengupta, *Pachon-samgraha*, Calcutta: n.p., 1895.

⁴¹ Kaliprasanna Bidyaratna, *Pachon-samgraha o Kaviraji Sikshya*, Calcutta: n.p., 1906.

bottles, the almirahs and the other accoutrements of pharmacy such as the mortar and pestle, now dominated the iconography.



Fig 11: Dhanwantari Emerging from the Cosmic Oceans

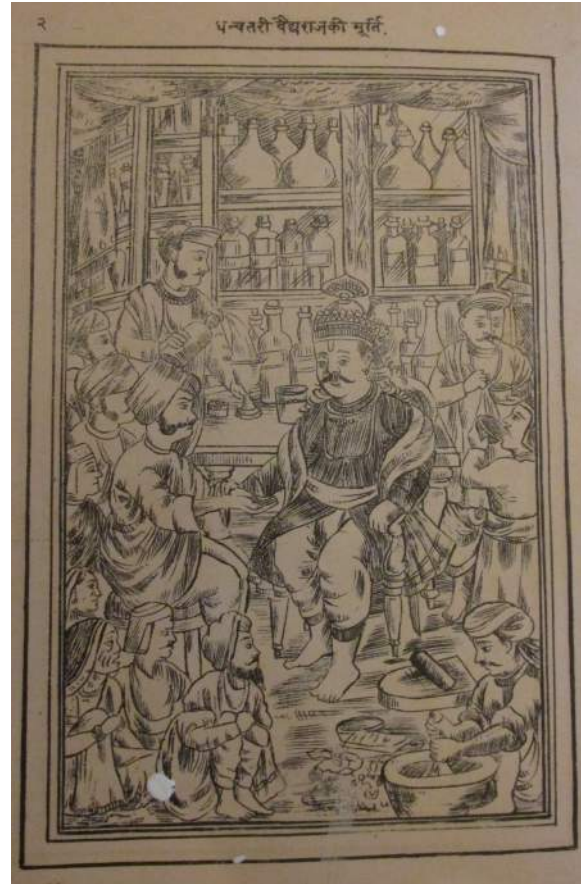


Fig 12: Dhanwantari as Pharmacist

What these signposts confirm is precisely what we can surmise from the various articles in the journal *Ayurveda* that equated practice with pharmacy, viz. that *pachons* were not always equally important to Bengali Ayurvedic pharmacy. Their importance is a relatively modern phenomenon and seemed to peak in the second and third decades of the 20th century.

By the 1910s ‘practice’ had come to be equated with the knowledge of *pachons*. And these extracts or astringents were beginning to displace all other types of pharmaceuticals. Naturally, it is important to ask why *pachons* emerged as the dominant form of Ayurvedic medicine at the time?

The Liquefaction of Modern Ayurveda

Satyacharan Sengupta provides a partial answer to this conundrum. Contrasting contemporary practice with a dimly remembered prior era, Satyacharan wrote that, “the medicines of yore were neither stored in stoppered phials nor neatly displayed in glass almirahs. Kavirajes did not usually keep prepared medicines with them. They wrote out a list of ingredients (*phordo*) [and instructed the patient’s family to prepare it]. In the rare cases where Kavirajes did keep ready-made medicines, they were stored in a carpetbag (*puntli*) or an earthen pot (*handi*). But today a Kaviraj who fetches his medicines out of a carpetbag will hardly be respected”.⁴² In an almost identical mocking tone, another Kaviraj commented on how modern Kavirajes felt it was enough to “display medicines of many colours in bottles that were arrayed in glass-fronted almirahs”.⁴³ Bottled medicines thus had come to represent modernity and respectability. Kavirajes who refused to deal in bottled medicines or carried carpetbags were not considered respectable.

Medicine bottles despite being perhaps the most iconic material form in which people in the nineteenth century saw and handled medicines have remained utterly neglected in medical history. Whilst representing old medicine seems to almost instinctively call to mind old medicine bottles, they are seldom engaged with either as material objects or as modern packaging technology. Thus Kavita Sivaramakrishnan’s excellent history of Ayurvedic modernization in the Punjab for instance is called *Old Potions, New Bottles* and yet does not really talk about bottles at all. This is of course not at all unusual. Very little attention has been paid to this humble medical packaging technology. Yet, as is clear from Satyacharan’s comments the bottles were in themselves important signifiers of modernity.

William Ward, the Baptist missionary, writing over a century before Satyacharan had stated that, “When a Hindoo doctor goes to see a patient, he takes with him, wrapped up in a cloth, a number of doses in cloth or paper. He has no use for bottles, every medicine being in a state of powder and paste, liquids, when used, are made in the

⁴² Sengupta, “Chikitsaker Katha”, 91.

⁴³ Pramathanath Tarkabhusan, “Ayurveder Unnati ki Abanati?”, *Ayurveda*, 1:11, 1916-17 (1323 BE), 476.

patient's own house".⁴⁴ Though Ward's tone is only mildly critical, it is clear that the absence of medicine bottles were already becoming a signifier of lack in Kaviraji medicine. More than half a century later, Shibchandra Basu in 1883 still reported that the Bengali Kaviraj carries with him "different kinds of pills and powders, wrapped up in a paper, in small doses...he seldom uses phials; liquids, when required, are made in the patient's own house".⁴⁵

It is difficult to accurately pin down when Kavirajes begun to adopt bottling as a medical packaging technology. By 1887 however, at least one regular advertiser in the *Amrita Bazar Patrika* had adopted bottles.⁴⁶ GN Roy's *Kalpataru Suda*, regularly advertised in the newspaper, was sold in glass phials. Yet this was most likely a precocious and pioneering effort. For the bottle was still conspicuous enough for Roy to actually adopt it as his brand-mark. His advertisements thus always carried the image of a bottle prominently across the top with the name GN ROY'S written on the image.⁴⁷



Invaluable remedies of different diseases

PREPARED STRICTLY ACCORDING TO THE
FORMULÆ OF AYURVEDA &c.

Kalpatarusuda.—The wonderful blood purifier &c. 1
Phial Rs. 2.

Kandarparasa.—A sure cure for impotency &c. 1 Phial
Rs. 3-8.

Jarantakatsub.—The best anti-malarious mixture &c.
1 Phial Rs. 1-3

Chitaronjan Oil.—Specific of fits and Brain-diseases
&c. 1 Phial Rs. 1.

Hair Vigor.—It restores grey hair to its natural color
&c. 1 Phial Rs. 1-12.

All the above preparations are harmless.

Sir Raja Radha Kant Deb's Rajbari, SOVABAZAR.

⁴⁴ William Ward, *History, Religion and Literature of the Hindoos*, vol. 4, London: Black, Kingsbury, Parbury and Allen, 1820, 341.

⁴⁵ Shib Chunder Basu, *The Hindoos As They Are*, 2nd edn., Calcutta: Thacker, Spink & Co., 1883, 217.

⁴⁶ A fascinating recent book on the advertising culture of Calcutta also strongly suggests that the first bottled perfumes, hair oils and medicines begun to appear by the late 1880s. Krishnapriya Dasgupta, *Botolera Nanaprokar Kautuk ba Purana Kolkatar Dokandari ar Ponya Pasarar Bigyapan: Oushudh-Atar-Tailadi*, Calcutta: Gangchil, 2012.

⁴⁷ Advertisement, "GN Roy's Kalpataru Suda", *Amrita Bazar Patrika*, 7th July 1887, 3.

Fig. 13: GN Roy's Advertisement

That Roy's move was precocious is also suggested by the fact that other regular advertisers, including the well-known firm of CK Sen & Co., which was headed by Debendranath Sengupta, was still advertising medicines exclusively in the form of pills and sold by weight in paper packets.⁴⁸ Even in the early 1890s, while some companies such as Roy & Co. had switched to predominantly liquid medicines sold in glass phials, others such as B Basu & Co. continued to deal exclusively in pills sold in packets.⁴⁹ Over the next decade and a half, the use of bottles continued to grow in Ayurveda. Yet bottled medicines formed only a small part of the medicinal repertoire of Ayurveda. Usually only medicated hair oils, blood purifiers and a handful of other, more generally used, drugs were sold in bottles. Everything else remained in non-liquid form.

Remarkably, the demand for medicine bottles peaked at exactly the same time that Ayurvedists began to emphasize *pachons* as the dominant form of medicine. Thus in 1911 when Nagendranath's important collection of *pachons* was published and Debendranath's forgotten collection republished, a new company called the Upper India Glass Works was opened up in Ambala to manufacture glass bottles for medicines in India. The nationalist newspaper, *Amrita Bazar Patrika*, welcomed the new effort by pointing out that India annually imported glass bottles in large numbers from Germany and Japan and hence constantly drained wealth to these countries. The "drain of wealth" has emerged as a major ideological plank of early nationalism and anything that required money to leave the country was seen to be hurtful to the nation. The new company however, lacked the know-how to produce glass bottles and had to bring in an Austrian glassblower as the director of the process whilst at the same time apprenticing several Indian youth under the Austrian to learn the process.⁵⁰ By 1920, Calcutta had become the biggest market for medicine bottles in all of British India. But bottles still had to be brought in from up-country. Most bottle manufacturers were located in Allahabad and the freightage and breakage added considerably to bottling costs. During the Great War however, Calcutta suffered a bottle crisis. Companies such as Shaw & Bros. who used to manufacture a well-

⁴⁸ Advertisement, "CK Sen & Co.", *Amrita Bazar Patrika*, 18th August 1887, 3.

⁴⁹ Advertisement, "B Basu & Co. and Roy & Co.", *Amrita Bazar Patrika*, 12th February 1893, 3.

⁵⁰ Anon., "News of the Day", *Amrita Bazar Patrika*, 10th October 1911, 9.

known brand of hair oil found it difficult to procure bottles for their products. As a result, Birendrakumar Shaw started the first bottle manufacturing concern in Belgachhia near Calcutta. Soon they found that production costs were much lower in Calcutta and the business blossomed. In May of 1920, the glass company of Birendrakumar was turned into a public limited concern with a total capital of Rs. 15,00,000/-.⁵¹ The Calcutta Glass and Silicate Company Limited continued to thrive and, with the commencement of the Gandhian national movement begun to position itself as a “national” concern.⁵²

As supply and demand for medicine bottles both grew in Calcutta the number and range of bottled medicines grew manifold. Instead of simply a small range of general purifiers and hair oils, we now see a whole host of vegetable extracts being sold in stoppered glass phials. In 1911 for instance, the famous Sanskrit scholar, EJ Lazarus, was advertising the “essence of chiretta”—a classic *pachon*—at Rs. 1.8, Rs. 2.8 and Rs. 4 per bottle.⁵³ The year before PM Bagchi advertised a “brain tonic” made of the essence of several exquisite flowers.⁵⁴ About a decade hence CC Ghosh advertised a range of remedies including one containing the essences of neem, gulancha, etc.⁵⁵

These new organic essences naturally required a fairly professional knowledge of chemistry for their distillation. Brahmananda Gupta has outlined the number of chemists who went on to found successful early Ayurvedic pharmaceutical firms. Mathuramohan Chakrabarty, a poor chemistry teacher at a school for instance, founded the hugely successful Sakti Aushadhalaya of Dhaka in 1901. Later, Jogeshchandra Ghosh, yet another chemistry teacher, this time from Bhagalpur, followed suit and established the Sadhana Ashadhalaya.⁵⁶ There were also obvious overlaps with the powerful discourse on ‘indigenous drugs’ and through it with organic chemistry once again. In fact, 1910s was precisely when the discourse on ‘indigenous drugs’ was most prominently subverted by the creation of a common pharmacopeia applicable throughout the British Empire.⁵⁷ It

⁵¹ Advertisement, “The Calcutta Glass & Silicate Company, Limited”, *Amrita Bazar Patrika*, 28th May 1920, 4.

⁵² Advertisement, “Support Home Industry”, *Amrita Bazar Patrika*, 13th January 1922, 1.

⁵³ Advertisement, “Essence of Chiretta”, *Amrita Bazar Patrika*, 27th September 1911, 12.

⁵⁴ Advertisement, “Pushpasar”, *Amrita Bazar Patrika*, 4th May 1910, 1.

⁵⁵ Advertisement, “Three Sovereign Remedies”, *Amrita Bazar Patrika*, 22nd July 1922, 1.

⁵⁶ Gupta, “Indigenous Medicine”, 374.

⁵⁷ Stuart Anderson, “Pharmacy and Empire: The ‘British Pharmacopoeia’ as an Instrument of Imperialism, 1864-1932”, *Pharmacy in History*, 52:3/4, 2010, 112-21.

would therefore make perfect historical sense to expect modernizing Ayurvedists to become more strident in their efforts to assert the indigeneity of their ‘indigenous plants’ in the face of the imperial centralization.

Yet to focus on these larger scientific entanglements with chemistry, indigenous drugs etc. is to overlook the role of much humbler, more everyday forms of small technologies such as medicine bottles in engendering therapeutic change. The growing importance of *pachons* amongst modern Ayurvedists, we will argue, was at least partially the result of the fact that medicine bottles had become iconic signs of medical modernity. As a result, the old pills, pastes and powders, bundled into a carpetbag came to be seen as backward and unrespectable. The shift towards *pachons* enabled the adoption of medicine bottles and thus the articulation of a certain medical modernity. Yet, this shift could not have taken place without the parallel redefinition of the meaning of ‘practice’. Together the recoding of practice as pharmacy and then the narrowing of pharmacy further to *pachons* dovetailed into the simple and conspicuous fact that Ayurvedic medicines were now readymade and bottled.

This shift towards liquid *pachons* sold in bottles naturally required a parallel recalibration of the Kaviraj’s embodied skills. His body, as before, remained a crucial technology in the therapeutic regime, but now needed a range of new capacities. These new bodily capacities were only obliquely hinted at in the *pachon* collections that were published. Not only did the Kavirajes have to learn a number of formal aspects of *pachon*-making, but they also had to develop new types of tacit knowledge.

On the more formal side, most importantly they had to remember elaborate substitution schemas that told them which ingredient could be substituted by which other ingredient under what specific conditions. They also had to learn the qualities of specific plants growing under specific conditions and an entire complicated system of weights and measures. Finally, the formulas in published collections as a rule did not mention what part of a herb was to be used and so the Kaviraj had to know what part of the plant was to be used in which preparation.

Besides this formal knowledge with its emphasis on memorization there were also new embodied capacities that had to be developed. The lowest weights for instance could not actually be measured. The smallest unit of measurement was the speck of dust one

can observe in a beam of sunlight coming through a crack in the window. The higher weights gradually built upon this basic unit of weight called *bangshi*. In actuality it was clearly impossible to measure a speck of dust seen in a beam of sunlight. Neither therefore were the units immediately above the *bangshi*, such as the *marichi* (made of 6 *bangshis*) or *rajikas* (made of 6 *marichis*).⁵⁸ Clearly then such measures when required would need a tacit visual sense on the part of the *pachon*-making Kaviraj. Similarly, since a number of the *pachons* required heating and since there is no indication of thermometers being integrated into *pachon*-making at this stage, the temperature at which something is to be taken of the boil or something else added to relied on the physician's *andaj* (conjecture/ surmise).⁵⁹ Once again however, this surmise could only be based on an embodied tactile and visual apparatus. Finally, the much more elaborate use of various ferments ranging from sugarcane juice, to molasses and boiled rice all required a delicate sense of timing that relied largely on visual and gustatory estimation.

Even more strikingly, *pachon*-making invoked a range a biomoral aspects of the physician's body. Ritual purity, or *shuchi*, that had once been important to make the right diagnosis, was now deemed necessary to ensure the potency of the *pachon*. Loh pointed out for instance, that if there is any kind of *ashuchi* (ritual impurity) anywhere in the body at the time of the making of a medicine, not only is its potency lost, but its taste and smell too become perverted. In fact, according to Loh such consequences would follow even if the mere shadow of a person who was *ashuchi* were allowed to fall upon the medicine whilst under preparation.⁶⁰ In a statement strongly reminiscent of the injunctions against *nadiparikshya* without having cleaned one's bowels, Loh mockingly said that, "in the past physicians used to collect herbs respectfully and after the performance of appropriate ritual prayers, whereas today he collect herbs on his way back from the toilet".⁶¹ Nagendranath's collection of *pachons* also recommended appropriate ritual rules for the collection and preparation of the *pachons*. It was clear that, not only was the physician's mindful body an important technological device for the production of the *pachon*, but that this device was in itself a potent biomoral entity rather than simply being a material tool.

⁵⁸ Sengupta, *Pachon O Mushtijog*, 15.

⁵⁹ Chattopadhyay, *Pachon o Tahar Byabohar*, 3.

⁶⁰ Jogendrakishore Loh, "Chikitsaker Kartabya", *Ayurveda*, 2:12, 1917-18 (1324 BE), 493-94.

⁶¹ Loh, "Chikitsaker Kartabya", 494.

Interestingly, such considerations call to mind Langwick's observation made in the context of Tanzanian healers that, "The efficacy of therapies often depends on the location of the healer's body in time and space as she is collecting and preparing a remedy".⁶²

In short then, the liquefaction of the modern Ayurvedic therapeutic repertoire did not erase the technological function of the physician's mindful body. Instead, it recalibrated it and developed new capacities that were both reflexively inculcated as well as inscribed into the realm of instincts, while also reconstructing the biomoral valences of the physician's active body.

Maestro to Gem Collector

Each of the foregoing *physiograms* have been concerned with the way the body of the patient was been therapeutically understood or operationalized. In this chapter however, we have turned the lens in the opposite direction and engaged instead with the body of the physician. We have argued not only that the physicians' body was in itself a technology of crucial importance to Ayurvedic therapeutics, but also that it was changes in the technological function of the physician's body that resulted in dramatic shifts in the actual treatment regimes of modern Ayurveda.

Broadly speaking, the practical deployments of the physician's mindful and biomorally constituted body moved from being essentially a diagnostic technology to a pharmaceutical technology. Precolonial Ayurveda privileged the physician's practical skills in the arena of diagnosis. *Nadiparikshya* in particular was a 'practice' that required complex and yet subtle deployments of the physicians' body. By the 1910s however, this had shifted. As the body's powers of embodied reasoning in the realm of diagnostics was gradually undermined by a new figuration that saw the body as a mere medium for the collection of sensory datum, the physician's body lost much of its diagnostic import. Instead, 'practice' now increasingly came to be redefined as pharmacy and pharmacy in turn was narrowly understood in terms of *pachons*. The physician's body thus came to

⁶² Langwick, *Bodies, Politics and African Healing*, p. 113.

acquire new and growing powers in the pharmaceutical realm. It was now a potent and still biomorally constituted device for the preparation of liquefied *pachons*.

The transformations of the physician's body and the shifts in its technological function from diagnosis to liquid pharmacy were book-ended by two contrasting *physiograms*. In the *nadiparikshya* texts, which repeatedly invoke the technological function of the physician's body and the need to deploy it properly, we repeatedly find the physician's body being compared to that of a musical maestro. Thus Pandit Salimuddin Bidyabinod in his versified *nadiparikshya* text wrote that, "Just as all tunes are expressed with a *Veena* in hand/ All diseases are revealed most certainly with the *nadi* in hand".⁶³ The patient's body is rendered as a *Veena* and in order for it to express itself properly the maestro must know how to play it.

This image of the physician as a *Veena* player was not a nineteenth-century invention. It derives from a text known as the *Yogaratnakar* that discusses *nadiparikshya* at length. While there is lack of consensus amongst scholars on the actual dating of the *Yogaratnakar*, it was most certainly written around the mid-eighteenth century, if not slightly earlier.⁶⁴ The *Yogaratnakar* had mentioned that, just "as the instrument made of by [sic.] the union of fine wires emits out the various melodic tunes when it is stroked" similarly the *nadi* is able to express the various diseases of the body.⁶⁵

Interestingly, the *Yogaratnakar* was not alone in comparing the patient's body to a musical instrument and the physician to a maestro. Another equally well-known and possibly even more important text for *nadiparikshya* was the *Nadi-vigyan* of Kanad. The *Nadi-vigyan* which unfortunately remains undated figured the body of the patient as a *mridanga*, i.e. a type of earthen drum whose surface is held together by a number of tightly wrought leather straps.⁶⁶ The *Nadi-vigyan* and the *Yogaratnakar*—two of the most important texts in Ayurvedic *nadiparikshya* both therefore conceptualized the physician as a maestro.

Even more interesting is the evolution of *Yogaratnakar's* imagery in later, modern texts. Whereas the image of the *mridanga* in Kanada was a concrete image, the *Yogaratnakara* by merely speaking of a string instrument left enough ambiguity for later

⁶³ Bidyabinod, *Padye Nadi-gyan*, 7.

⁶⁴ Upadhyay, *Nadi Vijnana*, 58.

⁶⁵ Upadhyay, *Nadi Vijnana*, 62-63.

⁶⁶ Upadhyay, *Nadi Vijnana*, 64.

authors to develop it as they wished. Bidyabinod as we have seen chose to think of the stringed instrument as a *veena*. While Haralal Gupta, one of the most successful authors of a *nadiparikshya* text at the end of the nineteenth century had also thought of it as a *veena*.⁶⁷ Binodbihari Ray of Rajshahi, whom we have repeatedly met in the earlier chapters however, thought of the instrument as a *violin*.⁶⁸ Sarva Dev Upadhyay, a contemporary Ayurvedic physician and historian on the other hand interpreted the image as a *sitar*.⁶⁹

Whilst the concrete musical referent changed in keeping with the historically fashioned musical tastes of individual authors, the basic image remained remarkably stable and widespread. Notable in this image was the explicit articulations of embodied skill, technique, and the importance of *abhyas* or habituation by repeated practice. As Ray put it, “One can know everything by adding *abhyas*.../ No harm is caused by not [being able to] see the *nadis*/ Just as you play the *sitar* with its notched strings/ So can you play the *violin* with un-notched strings”.⁷⁰ ‘Practice’ in this case is tied to the perfection of embodied skill and technique through habituation and putatively connected to the act of diagnosis.

By contrast, the image of the physician that emerges once ‘practice’ has been relocated to the realm of pharmacy and narrowed to *pachon*-making, is one of a gem collector. In a rather elaborate deployment of the image, Shitalchandra Chattopadhyay compared the Ayurvedic materia medica to a treasure trove. Each of the medicinal ingredients known to Ayurveda he said was a gem and their total number so large that it was beyond anyone’s capability to count them. These gems, he alleged, were scattered everywhere and often secreted away by individuals unwilling to share it. The physician who made *pachons* had to collect both the ingredients as well as the knowledge about them. For Shitalchandra, the medieval Ayurvedic author, *Chakradatta*, who compiled a large number of new prescriptions, was above all a talented gem collector.⁷¹ Once again, this comparison of medicinal ingredients to gems was far from being unique or idiosyncratic.

⁶⁷ Gupta, *Nadigyan Sikshya*, 15.

⁶⁸ Ray, *Padye Ayurveda Sikshya*, 10.

⁶⁹ Upadhyay, *Nadi Vijnana*, 63.

⁷⁰ Ray, *Padye Ayurveda Sikshya*, 10.

⁷¹ Sitalchandra Chattopadhyay, “Ayurveder Kashaye Mahatmya”, *Ayurveda*, 1:9, 1916-17 (1323 BE), 409.

Precolonial texts such as Gobindadas' *Bhaisajaratnabali* had already established the association of 'gems' (*ratna*) and materia medica (*bhesaj*) in the popular parlance. Authors such as Shitalchandra continued to sustain and nourish that older usage. But the older image had stopped by comparing medicines to gems, in its modern form, because the image was deployed within a larger context devoted to the redefinition of 'practice', the emphasis shifted to the act of collecting.

Nagendranath's famous *pachon* collection introduced itself to readers by saying that "God has scattered all the medicines for all illnesses all around us. If only we know of them and undertake the slight trouble needed to collect them, we could avoid disease altogether".⁷² An editorial in the journal *Ayurveda Hitaishini* lamented that, "Owing to our neglect we have lost many of the invaluable gems we possessed. If we do not undertake the slight labour to collect the few that are left, soon all will be lost".⁷³ Nabinchandra Dey, in a letter to the journal *Ayurveda Bikash*, stated that, "readers [of the journal] should all attempt to collect the divine medicines scattered all around us and establish medicinal gardens".⁷⁴

Interestingly, this emphasis on collection seamlessly conflated the actual collection of the herb with the collection of knowledge about its identity, therapeutic value etc. By thus collapsing the physical object and its knowledge into a single indivisible 'gem', the act of collection became less of a physical act and more an act of social observation. As a result the act of collection almost never dwelt upon the actual physical act of collecting the herb. Rather, it became an act of ethnographic voyeurism. Nabinchandra Dey, who urged his readers to establish medicinal gardens, in his own turn spoke of how he had acquired his knowledge of medicinal plants by observing cowherds.⁷⁵ An anonymous reporter writing in *Ayurveda Bikash* similarly mentioned how he had discovered a new therapeutic use for a well-known local weed by observing a poor Muslim fakir collecting the plant. In another incident mentioned by the same author, a gentleman friend of his discovered a medicinal plant when he, upon instructing the gentleman's upcountry manservant to cut down an unwanted plant growing in his garden, had found the

⁷² Sengupta, *Pachon o Mushtijog*, 1.

⁷³ Anon., "Prastabana", *Ayurveda Hitaishini*, 2:4, 1912 (1319 BE), 152.

⁷⁴ Nabinchandra Dey, "Drabya Parichay", *Ayurveda Bikash*, 2:2, 1914-15 (1321 BE), 61.

⁷⁵ Dey, "Drabya Parichay", 61.

manservant hesitating. Upon enquiring, the servant revealed that the plant was actually a hard-to-find upcountry medicinal.⁷⁶ Nagendranath said it was mainly old women who had possessed the knowledge of herbs.⁷⁷ It was clear that the social locations from which the modern Kaviraj had to salvage these gems were outside his usual domain. The gems lay scattered in the hands of old women, Muslim fakirs and upcountry manservants. One author colourfully wrote that the poor herbs were embarrassed from “being in the hands of lower class people” and therefore were trying to “hide their faces in shame”.⁷⁸

This generalized Othering of women, Muslims and non-Bengalis would seem to fit neatly into the Hindu revivalist cultural project that many historians have identified in late-nineteenth and early-twentieth century Bengal. What complicated this seamless Hindu-ness was the strident caste politics of the Baidya Kavirajes. Their identities were seldom devoid of caste-markings. As a result, the same ethnographic gaze that represented women, Muslims and non-Bengalis as Othered and subordinated, also represented a smaller number of Brahmins as such. Like in the case of old women, the representation of Brahmins was much more respectful and appreciative, but the articulations of Otherness were still difficult to miss.

It is clear that the ethnographic discourse through which the practice of collection was presented was an important site for fashioning the social identity of the physician. It would be wrong however, to conclude that this identity was simply an unmarked Hindu *bhadralok* identity. Though admittedly rare, occasional collections attributed to Brahmins or even Baidya ancestors were not unknown. A serialized list of medicinal prescriptions, including one for making an amulet, published in *Ayurveda* for instance were attributed to a departed Brahmin Kaviraj and *yogi* from north Bengal, Jairam Lahiri.⁷⁹ The following year, an eminent Calcutta Kaviraj, Indubhushan Sengupta, published some prescriptions in the *Ayurveda* that he attributed to his ancestor, Ishwarchandra Sengupta Shiromani.⁸⁰ The social identity of the physician that was represented in these narratives was neither

⁷⁶ Anon., “Nababiskrita Desiya Bhesaj O Tahar Prayog”, *Ayurveda Bikash*, 3:1, 1915-16 (1322 BE), 9-12.

⁷⁷ Sengupta, *Pachon O Mushtijog*, 1.

⁷⁸ Anon., “Prastabana”, 151.

⁷⁹ Kshitishchandra Lahiri, “Prachin Chikitsaker Totka o Mushtijog”, *Ayurveda*, 4:3, 1919-20 (1326), 141-42.

⁸⁰ Indubhushan Sengupta, “Prachin Chikitsaker Parikshita Mushtijog”, *Ayurveda*, 6:11, 1921-22 (1327), 407-08.

stable nor monolithic. It had always had a degree of ambiguity and was a work-in-progress. In each narrative of ‘gem collection’ the social identity of the collector was inchoately worked out through the actual details of the action described. The proverbial devil was indeed in the details of the socially situated action itself. There was no set template for elaborating a stable identity of the physician.

This partial and performative nature of the physician’s social identity had two very significant consequences. On the one hand, while sharing a large repertoire of images, tropes and sentiments with the Hindu revivalist cultural project of period, modern Ayurveda maintained a degree of what is at best described as an anxious intimacy with the politics of Hindu revival. The seamless Hindu identity championed by the revivalists often revealed their cracks in practice. Thus for instance, many of the Baidyas spoke passionately of a ‘Hindu medicine’ and a glorious ‘Hindu past’, those very Baidyas then equally passionately recalled and defended precolonial textual injunctions against all non-Baidya castes, including Brahmins, from preparing or dispensing medicines.⁸¹ In this regard it is also worth pointing out that one of the most ardent promoters of the Baidya monopoly, Satyacharan Sengupta, was in fact the editor of the leading journal, *Ayurveda*, and often contributed over a third of the articles published in it in a year. The argument that Baidya’s alone have the right or ability to make proper Ayurvedic medicines was therefore far from being a marginal argument. At least one of its most vocal proponents was at the heart of the modernizing project. It was in the practical elaboration of social identity through *pachon*-making therefore that the politics of caste that animated modern Ayurveda in Bengal becomes visible once more.

Interestingly, this is a complementary instance to Joseph Alter’s study of the modern braiding of Yoga, science and right-wing Hinduism. In Alter’s account, what interrupts the smooth assimilation of Yoga into a seamless Hindu nationalist project, is the articulation of a broader, post-Western universalism by scientists like Dr Kumar Pal of Delhi who insist that Yoga is not just Hindu.⁸² In our case, too we find a tension between the seamless Hindu identity and the project of Ayurvedic modernity that unfolds, as Alter suggests, precisely around the body. Yet in our case the tension arises not from the

⁸¹ Sengupta, “Chikitsaker Katha”, 92.

⁸² Alter, *Yoga in Modern India*, 142-80.

broader universalism of the Yogic body, but from the narrower parochialism of the Baidya's caste-body and the pan-Indian agenda of the Hindu nationalists.

On the other hand, it is once again this performative and ever-inchoate aspect of the physician's bodily identity that allows for a constant synchronization of the different strands that constitute therapeutic change. Rosenberg, let us remind ourselves, had defined 'therapeutics' expansively as "a complex interactive system, centring on the doctor-patient relationship but incorporating the specific physiological activity of the drugs, social relationships at the bedside, and the expectations of the participants as well as the views concerning the nature of the human body and the physiological basis of health and disease".⁸³ So long as we had focussed on the bedside interactions and the body of the patient in the foregoing chapters, the interaction of these with the actual regimes of therapy had remained obscure. But the moment we accept that the most important technology in the therapeutic milieu is in fact the physicians' own body and turn towards it, the disparate strands come together. The politics of caste, the liquefaction of the Ayurvedic repertoire, and the transformation of maestros into gem collectors, altogether engender a dynamic, evolving and inchoate physiogram that doubles up as the hub that holds the entire 'complex interactive system' in place.

Yet the very fact that we have to turn the lens around and focus on the body of the physician, rather than that of the patient, to be able to see the hub that holds the system together is in itself not unworthy of note. It signposts an alternative figuration of Ayurvedic modernity. Like the 'Gandhian modernity' described by Dipesh Chakrabarty in *Habitations of Modernity*, this Ayurvedic modernity complicates the stable division between the private and the public that organizes the hegemonic versions of 'western modernity'.⁸⁴ There is no stable interiority here called the 'doctor's mind' that can fully objectify the patient's body while reducing itself to a pure, disembodied, rationality. Despite all attempts to reduce the body to a mere medium for processing sensory datum, the Baidya's body constantly gets explicitly implicated in the embedded and interactive milieu within which therapeutics unfolds. It was perhaps befitting that under the contradictory pulls towards abstract, disembodiment and trenchant embodied reasoning,

⁸³ Rosenberg, "The Therapeutic Revolution", 9.

⁸⁴ Dipesh Chakrabarty, *Habitations of Modernity: Essays in the wake of Subaltern Studies*, Chicago: University of Chicago Press, 2002, 51-64.

acting moralizing etc., the very notion of ‘therapeutics’—its etymology, its history, and its conceptual coherence, all begun to come undone. Unless an unmoved Baidya held it in place.

Writing in the *Ayurveda* in 1921-22, the eminent romantic historian, Dineshchandra Sen, who was also a Baidya by birth, asserted that, the word ‘therapeutics’ was a testament to the long interactions between ‘east’ and ‘west’ and had come into classical Greek from the Pali word ‘thera’ (as in ‘theravada’). The word ‘thera’, Dineshchandra claimed, had derived from the Sanskrit term *sthavira* meaning ‘unmoved’. It is worth pointing out here that Dineshchandra was no Hindu chauvinist. His argument should not be confused with the Hindu revivalist arguments about Europe’s debt to India. Ideologically, he is perhaps best described as a romantic Bengali cosmopolitan.⁸⁵ Pride of place in his account of ‘therapeutics’ was reserved for the Buddhist king Ashoka. The word *mahasthavira* or the ‘great unmoved’ referred to the Buddha himself. According to Dineshchandra, it was this word that in Pali and Prakrit had been vernacularized as ‘thera’. It had travelled to Europe with Ashoka’s Buddhist missionaries who had also taken with them classical Ayurvedic medicine. Hence, argued Dineshchandra, in Europe the medicine had come to be known as the medicine of the ‘thera-put’ (‘sons of Buddha’). The supremely impersonal medical rationality of the ‘west’ was thus rendered as a wilful forgetting of the historical embodiment of Buddha’s sons. Dineshchandra lamented that by rejecting Ayurveda, European therapeutics was acting like an ungrateful son who turned his back on his father, while still carrying the latter’s name.⁸⁶ The disembodied, abstract medical rationality of European therapeutics, in the hands of the romantic Baidya, had become embodied, post-Western universalism that rejected abstraction in the name of bodily kinship.

⁸⁵ For an excellent discussion on Sen’s romanticism and politics see, Dipesh Chakrabarty, “Romantic Archives: Literature and the Politics of Identity in Bengal”, *Critical Inquiry*, 30:3, 2004, 654-83.

⁸⁶ Dineshchandra Sen, “Therapeutics”, *Ayurveda*, 6:2, 1921-22 (1328 BE), 57-58.