

AN ALCHEMICAL GHOST: THE RASARATNÂKARA BY NÂGÂRJUNA

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THE study of the history of Indian alchemy should naturally begin with a reading of the earliest available texts of the subject and, at the same time perhaps, a reading of the secondary literature for general orientation.¹ There are at least seventy or eighty primary Sanskrit works on alchemy. Approximately one fifth of these have been printed, few critically edited and none completely translated.² The main and almost only comprehensive secondary source for the subject is still P. C. Rây's two volume *History of Hindu chemistry*, now usually read in its later revised form as *The history of chemistry in ancient and mediaeval India*, edited by P. Rây, a pupil of P. C. Rây.³ There are several useful studies scattered in the specialist journals, but these are often dependent on Rây's work, or unreferenced. Some unpublished dissertations are more original.⁴ P. C. Rây charted the subject for us, remarkably fully, and for this we must be grateful. In a pioneering work of this kind some shortcomings are to be expected. It is unfortunate, however, that one of these concerns the text which Rây emphatically places at the very beginning of the Indian alchemical tradition, namely the *Rasaratnâkara* of Nâgârjuna.

Rây begins his *History* by arguing that an Indian alchemy involving a fairly elaborate use of mineral products, and not merely "herbs and simples and a few readily available products of the mineral kingdom,"⁵ began only after ca. 800 and came into its own with the rise of Tantra. After a long discourse on the rise of Mahâyâna Buddhism, its Tantric phase and the tales concerning Nâgârjuna,⁶ Rây describes with scarcely suppressed excitement how,

In the course of our search for MSS. of alchemical Tantras we have come upon a precious find in the shape of a Buddhist Tantra, with Nâgârjuna as its reputed author . . . The MS. in question is a mere fragment, but it is calculated to evoke all the zeal and enthusiasm of a Palaeontologist—of an Owen or a Marsh—in his efforts to restore an animal and assign to it its proper place in the economy of the laws of evolution, when he luckily chances upon a fossil impression of its tooth or claws. From this point of view *Rasaratnâkara*, for such is the name of our MS., is of uncommon interest.⁷

In the revised edition of Rây's work, his scattered references to Nâgârjuna are gathered together and condensed, and the *Rasaratnâkara* is given an even more prominent position at the beginning of the chapter on the Tantric period, where the earliest texts of a properly alchemical nature are discussed.⁸ The work is tentatively dated to the eighth century.⁹ Rây also gives an extract from the work, with translation.¹⁰ Clearly this is the very work one should like to read first in a study of the subject, and almost all authors who have discussed Indian alchemy since Rây have underlined the primacy of this text.¹¹

But Nâgârjuna did not write a work called the *Rasaratnâkara*.¹²

Fortunately it is possible to trace the confusion that led to Rây's mistake. Scholars writing on Indian alchemy up to the present time—with the notable exception of Cordier—seem to have looked no further than Rây, and have based all their remarks about

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Nâgârjuna on the very brief passages Rây quoted. It is important to stress at the outset that Rây was indeed quoting an alchemical text ascribed to Nâgârjuna which does exist. Now that this text has been correctly identified the way is clear for its proper study.

In brief, I shall show that the confusion arose from the conflation of three different texts: the *Rasaratnâkara* of Nityanâtha Siddha, the *Kakṣapūṭa* of Nâgârjuna Siddha and the *Rasendramāṅgala* also of Nâgârjuna Siddha. An analysis of these works, carried out almost entirely on the basis of the manuscripts of the first two works held in the valuable Sanskrit collection of the Wellcome Institute for the History of Medicine, will show how the confusion arose.¹³ The contents of these works are listed in full since there is no complete translation of any Indian alchemical work, nor any presentation of the full range of topics covered in such works.¹⁴

Let us, then, examine the contents of these three works in turn.

THE RASARATNÂKARA OF NITYANÂTHA SIDDHA

The *Rasaratnâkara* or "Ocean of Mercury" treats of what we would call alchemy, medicine and magic. The colophons of its numerous manuscripts unanimously ascribe it to Nityanâtha Siddha, the son of the goddess Pârvaṭī. Moreover, in verse 25 of the opening section the author declares himself unambiguously: "Whatever can be found elsewhere is here; what is here cannot be found elsewhere. This is an Ocean of Mercury, composed by Nityanâtha."¹⁵

The author also informs us that he has cast the work into five sections (*khaṇḍas*):

This discipline, beneficial and dear to aspirants, has five sections. It gives fame to doctors, it is beneficial to the sick. It is of great interest to theoreticians, and it perfects the bodies of the old. It makes the spells of magicians successful, causing many wonders.

Mercurial success (*rasasiddhi*) is generated for doctors in the *Rasa* section, for the sick in the *Rasendra* section, for theoreticians in the *Vâda* section, for the old in the *Rasâyana* section, and for magicians in the *Mantra* section.¹⁶

An examination of the manuscripts in which this work is transmitted shows that these five sections are preserved, but that they are not normally all transmitted in a single codex. The first two sections, *Rasa* and *Rasendra*, are often found together in one codex. The next two sections, *Vâda* and *Rasâyana*, are usually transmitted in separate codices and are rarer. The last section, on *Mantra*, is more common, and is also normally found separately; it is normally entitled the *Siddha* section in the manuscript colophons. The contents of these sections are as follows:¹⁷

A. The *Rasa* "Mercury" section has the following ten chapters (*upadeśas*):

1. *Rasapīṭhikā* "The pedestal of mercury"
2. *Rasāśodhanamāraṇam* "Purifying and killing mercury"
3. *Rasamāraṇādihikāraḥ* "On killing mercury"
4. *Rasamūrchanādihikāraḥ* "On the swooning of mercury"
5. *Vajravaikrāntamāraṇādihikāraḥ* "On killing diamond and *vaikrānta*"¹⁸
6. *Abhrakamāraṇam* "Killing mica"
7. *Sarvoparasânām śuddhisattvapātanam* "Purifying and extracting the essences of all the secondary *rasas*"¹⁹

8. *Tāmraśodhanasamudāyamāraṇam* "Purifying copper and killing the aggregate [of other metals?]"
9. *Kāntādikittamāraṇam* "Killing the rust of iron etc."
10. *Tailapātānādiviśaśodhanam* "Purifying poison and the extracting of oil etc."

B. The *Rasendra* "King of mercury" section has the following twenty chapters:

1. *Sarvarogasādhyāsādhyasādhāraṇalakṣaṇam* The general character of all curable and incurable disease"
2. *Atisārakitsā* "Curing diarrhoea"
3. *Trayodaśasannipātakitsā* "Curing the thirteen convergences [of the humours]"
4. *Dehaśodhanavamanavirekavastinasarasapathyâpathyavidhiḥ* "Rules about fit and unfit food, flavours [*rasa*], nasal remedies, enema, purges, emetics and bodily purification.
5. *Râjarogakitsā* "Curing consumption"
6. *Kâśasvâsahidhmânivâraṇam* "Averting cough, asthma, and hiccups"
7. *Pânḍuśobhananivâraṇam* "Averting jaundice and paleness [?]"
8. *Vâtavyâdhinivâraṇam* "Averting wind disease"
9. *Aśmarîmûtrakṣcchranidânanivâraṇam* "Averting the symptoms of bladder-stone and strangury"
10. *Sarvakusṭhanidânanivâraṇam* "Averting the symptoms of all skin diseases"
11. *Visarpinivâraṇam* "Averting skin eruptions"
12. *Mehacikitsā* "Curing urine [illnesses]"
13. *Udarâdiśûlacikitsā* "Curing colics such as swollen belly"
14. *Bhagandarâdigañḍalûâtâdinivâraṇam* "Averting fistulas etc., and goitre, spider swellings [?] etc."
15. *Arśonivâraṇam* "Averting haemorrhoids"
16. *Grahaṇîcikitsā* "Curing chronic indigestion"
- 17-19. Not known at present (see bibliographical appendix 1B).
20. *Viśacikitsā* "Poison remedies"

C. The *Vâda* "Theory" section has the following twenty chapters:

1. *Paribhâṣârasadikṣâdivivaraṇam* "Explanation of initiation into mercury, its conventions etc."
2. *Vargasâdhanâdirasaśodhanântaḥ* "From preparing the categories [of substance] to the purifying of mercury"
3. *Vajraśodhanâdihâtumâraṇam* "From purifying diamond to killing metals"
4. *Vajraśodhanâditâraṇaṇam* "From purifying diamond to dyeing silver"
5. *Varṇotkarṣaṇavarṇavivardhanaḥ* "The enhancement and augmentation of colour"
6. *Raṇjanâdicandrârâkavedhanam* "From dyeing to transmuting the sun and the moon"
7. *Druṭasûtaprayogaḥ* "Methods with liquid mercury"
8. *Vaṅgastambhanâdidalakaraṇam* "From fixing tin to making leaf"
9. *Vajrayogena hemakaraṇam* "Making gold by the diamond method"
10. *Pakvabîjavargasâdhanam* "Preparing the categories [of substances] with ripened seed"

11. *Svedanâdyanuvâsanântasamskâranavakam* "The nine operations, from sweating to perfuming [or oiling]"
12. *Gandhakâbhrakemarajatajâraṇam* "Exhausting sulphur, mica, gold and silver"
13. *Abhrakâdisatvapâtanâdyabhiṣekântam* "From extracting the essence of mica etc., to sprinkling"
14. *Dvandvasattvâdibhijajâraṇam hemajâraṇam hematâraṇam* "From the essence of the couple to exhausting the seed, exhausting gold, making gold and silver"
15. *Jâraṇâdigarbhadrâvaṇam* "Exhausting etc., and internal liquefaction [*i.e.* dissolving one substance in another *e.g.* mercury]"
16. *Bhûnâgasattvâdisiddhayogaiḥ svarṇakaraṇam* "Making gold by the successful methods using the essence of earthworms"
17. *Drutikaraṇam* "Liquefaction"
18. *Drutivajraratnajâraṇakrameṇa pâṣâṇavedhaparyantam vedhavidhiḥ* "Methods of transmuting, from liquid, diamond, gems, and exhaustion respectively, ending with the transmutation of stone"
19. *Dhanavardhanam* "Increasing wealth"
20. No title (On fixing mercury etc.)

D. The *Rasâyana* "elixir" section has the following eight chapters:

1. *Rasamâraṇam* "Killing mercury"
2. *Dīvyarasair dehasâdhanam* "Perfecting the body with divine *rasas*"
3. *Guṭikârasâyanaṁ* "Elixirs in pill form"
4. *Nânârasâyanaṁ* "Assorted elixirs"
5. *Udvarṭanakeśarañjanâdhikâraḥ* "On shampooing and dyeing the hair"
6. *Vīryavardhanam* "Augmenting potency"
7. *Vīryastambhanalīṅgavardhanam* "Reinforcing potency and enlarging the penis"
8. *Śrīparvatasâdhanam* "Rites practiced on the Śrī mountain"

E. The *Siddha* section has the following seven chapters with subdivisions which are given for reasons which will become clear below:

1. *Sarvaśyâdīpatiśyâṁ* "From the subjugation of all creatures to the subjugation of one's husband"
 - 1.a. *Sarvaśyâṁ* "Subjugating all creatures"
 - 1.b. *Râjâśyâṁ* "Subjugating the King"
 - 1.c. *Strīśyâṁ* "Subjugating women"
 - 1.d. *Līṅgalepaṇam* "Anointing the penis"
 - 1.e. *Strīdrâvaṇam* "Luring women"
 - 1.f. *Patīśyâṁ* "Subjugating one's husband"
2. *Âkarṣaṇâdistambhanam* "From attraction to immobilization"
 - 2.a. *Âkarṣaṇam* "Attraction"
 - 2.b. *Stambhanam* "Immobilization"
 - 2.c. *Agnistambhaḥ* "Immobilizing fire"
 - 2.d. *Jalastambhanam* "Immobilizing water"

3. *Mohanâdigṛhakleśanivâraṇam* "From bewildering to averting evils from the house"
 - 3.a. *Mohanam* "Bewildering"
 - 3.b. *Uccâṭanam* "Extirpating"
 - 3.c. *Mâraṇam* "Killing"
 - 3.d. *Vidveṣaṇam* "Causing dissension"
 - 3.e. *Vyâdhikaraṇam* "Causing illness"
 - 3.f. *Unmattâkaraṇam* "Causing derangement"
 - 3.g. *Ṣaṇḍhakaraṇam* "Causing impotence"
 - 3.h. *Bhagabandhanam* "Sealing the vagina"
 - 3.i. *Gṛhakleśanivâraṇam* "Averting evils from the house"
4. *Kautûhalâni* "Conjuring tricks"
5. *Yakṣiṇîsâdhanam* "Acquiring a heavenly nymph"
6. *Añjanâdîpâdukâsâdhanam* "From [magic] ointments to acquiring [magic] shoes"
 - 6.a. *Añjanam* "Ointment"
 - 6.b. *Adṛśyam* "Invisibility"
 - 6.c. *Pâdukâsâdhanam* "Acquiring [magic] shoes"
7. *Mṛtasamjîvanâdikakṣapuṭî* "From raising the dead to [the end of] the *Loincloth* [see below]"
 - 7.a. *Mṛtasamjîvanam* "Raising the dead"
 - 7.b. *Nirâhâram* "Fasting"
 - 7.c. *Sâṅgopâṅgaprakâreṇa kakṣapuṭî* "The *Loincloth* [see below] in all its main and subsidiary parts"

From this synopsis of contents one may see that parts A, C and D of Nityanâtha's *Rasaratnâkara* are concerned with various chemical manipulations of mercury, mica etc., or alchemy in the central meaning of the word. Part B is purely medical and may well, on closer study, turn out to be a series of extracts from the basic Âyurvedic works such as the *Carakasamhitâ*, the *Suśrutasaṃhitâ* or the *Aṣṭâṅgahṛdayasaṃhitâ*. A close link such as this between alchemy proper and medicine is characteristic of the Indian alchemical literature.²⁰ The final section, E, is a collection of purely magical spells, incantations and practices. It is centrally concerned with the so-called Six Acts (*ṣaṭ karman*), which are the basic forms of magical operation in Indian magic. These are normally pacification (*śānti*), subjugation (*vaśīkaraṇa*), immobilization (*staṃbhana*), extirpation (*uccāṭana*), sowing dissension (*vidveṣaṇa*), and killing (*mâraṇa*), thought lists may vary.²¹

It should be stressed at this point that section E, the *Siddhakhaṇḍa*, is transmitted in independent manuscripts, but is always, to my knowledge, attributed clearly to Nityanâtha Siddha in each of the chapter colophons, and called a part of the *Rasaratnâkara*. Although usually called the *Siddhakhaṇḍa*, the name *Mantrakhaṇḍa* "Section on spells" sometimes occurs. It is referred to by this name in the *Vâda* section,²² and in the introduction, as mentioned above. This name may be no more than a general term, meaning just "the section which deals with spells", rather than an alternative title. The section is also occasionally said to be an extract (*uddhâra*) giving the essentials about spells (*mantrasâra*).²³

THE KAKṢAPUṬA OF NÂGÂRJUNA SIDDHA

The *Siddha* section of the *Rasaratnâkara* is indeed an extract, as its colophons tell us. It is taken from the *Kakṣapuṭa* by NâgâRJuna Siddha.²⁴ And here we see, in part, the origin of our ghost. For the *Kakṣapuṭa* is a work on magic in twenty chapters (*paṭalas*), covering precisely the same topics as the *Siddha* section of the *Rasaratnâkara*. The *Kakṣapuṭa*'s chapters are:

1. *Mantrasâdhanam* "The use of spells"
2. *Sarvavaśīkaraṇam* "Subjugating all creatures"
3. *Rājavaśyam* "Subjugating the King"
4. *Strīvaśyâdīdrāvanāntaḥ* "From subjugating to luring women"
5. *Patīvaśyam* "Subjugating one's husband"
6. *Ākarṣaṇam* "Attraction"
7. *Gatyâdistambhanam* "Immobilising movements etc."
8. *Senâstambhanam* "Immobilizing armies"
9. *Mohanoccātanam* "Bewildering and extirpating [enemies]"
10. *Māraṇam* "Killing"
11. *Vidveṣaṇam* "Causing dissension"
12. *Unmanīkaraṇam* "Maddening"
13. *Indrajâlavidhânam* "How to do magic tricks"
14. *Yakṣiṇīsâdhanam* "Acquiring a heavenly nymph"
15. *Sarvânjanasâdhanam* "Preparing all ointments"
16. *Nidhigrahaṇam* "Finding treasure"
17. *Adṛśyakaraṇam* "Becoming invisible"
18. *Pâdukâsâdhanam* "Acquiring [magic] shoes"
19. *Mṛtasamjīvanī* "Raising the dead"
20. *Atyâhâra[nīrâhâra]sânngopâṅgapâṅgakakṣapuṭīsâdhanam* "Overeating, fasting and the achievements of the *Loincloth* with all its main and subsidiary parts"

A comparison of these chapters with those of section E of the *Rasaratnâkara*, the *Siddhakhaṇḍa*, immediately shows their common subject matter, and even their common arrangement. In fact, the likeness goes further than this. A reading of the texts reveals that the compiler of the *Siddha* section has simply gone through the *Kakṣapuṭa* and copied out certain verses and spells, in most cases without even changing their order. The *Siddhakhaṇḍa* of Nityanâtha's *Rasaratnâkara* is an epitome of the *Kakṣapuṭa* by NâgâRJuna, amounting to about one third of its length.²⁵ The works have the same two introductory stanzas, and (in at least several manuscripts) the same last half stanza.²⁶ Thus a reader could easily confuse the two works, if he did not pay careful attention to the individual chapter colophons. All the chapter colophons of the *Kakṣapuṭa* agree in attributing it to a NâgâRJuna Siddha. If one believed this work to be the fifth part of the *Rasaratnâkara*, the outcome would be a non-existent *Rasaratnâkara* by NâgâRJuna.

The matter does not, however, end here. Rây, being a scrupulous scholar, was not content just to name the work which he considered of such importance. He gave us fifteen pages of extracts in Sanskrit, with translation.²⁷ The passages he exhibits, which do not appear in either of the two works we have examined above, present some difficulties. First, they are not continuous: there are lacunae, marked by asterisks. It is not clear whether these are gaps in Rây's manuscript or passages Rây has himself omitted as being of no interest.

Secondly, the passages attribute themselves to no less than three different works. There is a colophon claiming to be the end of chapter 2 of the *Rasaratnākara* of Nāgārjuna.²⁸ A few pages later, another passage states that the author, who is not named, will declare the *Kakṣāpuṭa* (sic).²⁹ Finally, there is a section on alchemical apparatus called the *Rasendramaṅgalāni yantravidhiḥ*, an ungrammatical phrase meaning roughly “how to use apparatus according to (or mentioned in) the *Rasendramaṅgala*”.³⁰ This section, and the whole text quoted by Rây, ends with the statement, “Here ends the *Rasendramaṅgala*”.³¹

That Rây was not unaware of these difficulties is clear from some of the footnotes to his translation. Given that the references in his manuscript to the *Kakṣāpuṭa* and the *Rasendramaṅgala* are unclear, Rây was perhaps justified in following the chapter colophon, which at least offered a reasonably definite statement of title and authorship. It is simply bad luck that the only manuscript to which Rây had access was corrupt. For although none of Rây’s passages occur in the *Kakṣāpuṭa*, and no *Rasaratnākara* by Nāgārjuna is traceable, there is a rare alchemical work called the *Rasendramaṅgala*, and all Rây’s passages occur in it word for word.³²

THE RASENDRAMAṅGALA OF NĀGĀRJUNA SIDDHA

Explicit notice of the *Rasendramaṅgala* was first given by Cordier in an important paper presented to the Congress of Orientalists at Hanoi in 1902 and printed in *Le Museon* the next year.³³ In this paper Cordier draws attention to the confusion with Rây’s so-called *Rasaratnākara*, without actually solving the problem, and continues with several valuable remarks on the text:

Le Rasendramaṅgala de Siddha Nāgārjuna, comprenant 8 adhikāras, desquels nous ne possédons que les 4 premiers, accompagnés d’une tippaṇī anonyme, se confond avec le *Rasaratnākara* récemment utilisé par le Prof. P. C. Rây pour son Histoire de la chimie indienne, d’après une copie mutilée de la Bibliothèque de Jammu. Notre Ms., le second connu, est à la fois plus correct et mieux conservé: le chapitre 4 mérite tout spécialement d’attirer l’attention, car, entre autres circonstances inédites, il nous montre Nāgārjuna le Siddha, sur la montagne Çrī Çaila (ou Çrīparvata: Wassilieff, Bouddh., p. 203, 326), exposant les doctrines alchimiques à 50 personnages, au nombre desquels il nomme Ratnaghōṣa et Çûrasēna (Cf. *Rasaratnasamuccaya*),—évoquant à l’aide des formules traditionnelles une Vaṭayakṣinī,—s’entretenant enfin avec le roi Çālivāhana, qui déclare sacrifier au grand art “son or, ses bijoux, ses trésors, sa propre personne, et son épouse royale, Madasundarī”.

Plus loin est relatée la légende de Māṇḍavya, qui réussit à préparer de l’or au moyen de cuivre rouge, de fer, de plomb, et de cuivre jaune,—et par qui Vaçiṣṭa est mis au courant des manipulations métallurgiques; après un compte-rendu abrégé du çāstra intitulé Vaçiṣṭamāṇḍavya et du traité de Mārkaṇḍēya, l’adhikāra se termine sous la forme d’un dialogue entre Nāgārjuna et Ratnaghōṣa. Il est donc évident que la paternité du Rasendramaṅgala ne peut être raisonnablement octroyée à Nāgārjuna lui-même; l’oeuvre, dont le samskārtā est encore ignoré, offre une allure franchement bouddhique (“maitrīkaruṇā’pēksā sarvasattvēsu”; “uṣṇīsaraksābalih . . .” etc.), et mentionne le docteur Nāgābuddhi (V. *Rasaratnasaṅg*, et Wassilieff, loc. cit.).—Si l’on veut bien se souvenir que le tantra dénommé Subāhupariṣṭhasūtra, analysé par Wassilieff (p. 190–199), comprend dans les huit siddhis, la formation de l’or et la transmutation de la terre en or,—et qu’une traduction chinoise de ce texte fut exécutée entre 265 et 316 A.D. (Nanjio. col. 25, No, 49), il faudra confesser que les origines et le développement de l’alchimie indienne remontent sans conteste

beaucoup plus haut qu'on l'admettait généralement avant la publication du travail de P. C. Rây.³⁴

Cordier says that Rây's manuscript comes from Jammu, and this is confirmed in a brief passage where Rây says:

Of this last work [the *Rasaratnâkara* by Nâgârjuna] we have been able to obtain as yet only a fragment from the Kâśmîr Library. . . .³⁵

The context makes it plain that Rây is referring to the Raghunâtha Temple Library in Jammu. And in Stein's catalogue of this library we do indeed find a work called the *Rasaratnâkara* by Nâgârjuna.³⁶ This is almost certainly the manuscript Rây found, and in choosing what to call the text he had found he would certainly have been influenced by Stein's choice.³⁷

Cordier's manuscript of the work is now in the Bibliothèque Nationale in Paris. It is a copy made in 1899 by the scribe Purohita Dînanâtha of an original in the king's library in Vikramapura. There are several Vikramapurās, but this reference is probably to the modern Bîkâner.³⁸ Further manuscripts have come to light in recent times in libraries in Bombay and Ahmedabad. One dates from 1680.³⁹ Another, which includes a commentary, was copied by the scribe Sukharâma, son of Kherârâma at Hamîrapura in 1780.⁴⁰ A third, like the Paris manuscript, contains only four chapters; it also includes a commentary which is attributed in the colophon to one Govindacandra.⁴¹

Having now established that the important early work by Nâgârjuna to which Rây drew attention was in fact the *Rasendramaṅgala*, let us look again at the opening verses of the *Rasaratnâkara* where previous authorities are cited. Nityanâtha Siddha says:

I have studied what was said of old by Śambhu in the *Rasârṇava*, which deals with rasa; what was stated by Nâgârjuna for the good of the sick, and in praise of rasa, in the *Dîpikârasamaṅgala*; what was said by Carpaṭi Siddha in the *Svargavaidyakapâlîka*, and in many other treatises and traditions about alchemy, in Vâgbhaṭa's system and in Suśruta's oceanic medical work. I have rejected whatever is impossible and whatever medicines are unobtainable, and I have extracted the essentials.⁴²

Several of the works Nityanâtha mentions here are well known: the *Rasârṇava* was critically edited by Rây himself, and the treatises of Vâgbhaṭa and Suśruta are famous. The *Svargavaidyakapâlîka* by Carpaṭi Siddha is nowhere listed or known, although Carpaṭi's name is ubiquitous in Indian alchemical literature as that of an ancient authority. With the knowledge we have now gained concerning Nâgârjuna's alchemical work, we can conjecture that the expression *Dîpikâ-rasamaṅgala* refers to the *Rasendramaṅgala*.⁴³ Thus we see that Nâgârjuna's *Rasendramaṅgala* was an important and acknowledged source for Nityanâtha's *Rasaratnâkara*.

The Paris and, with minor differences, Bombay manuscripts of the *Rasendramaṅgala* have the following four chapters:

1. *Rasoparasaśodhanâdhikâraḥ* "On purifying *rasa* and the secondary *rasas*"
2. *Vajramâraṇasatvapâtana-abhṛakâdidrutidrâvaṇalohamâraṇâdhikâraḥ* "On killing diamond, extracting essences, liquefaction of mica etc., and killing metals"
3. *Bhasmasûtakaḥ* "Calcining mercury"

4. *Guṭikâsatvadrutijalûkâmâraṇâdirasabandhanam* "Binding *rasa*, the killing etc. of leeches, and liquefying the essences of pills"

The text itself says in its introductory stanzas that the work as a whole has eight chapters.⁴⁴ They are listed as:

1. *Rasoparasalohasâdhanam* "Perfecting *rasa* and the secondary *rasas*"
2. *Vajramâraṇadhâtudrâvaṇam* "Killing diamond and liquefying metals"
3. *Rasabandhanam* "Binding *rasa*"
4. *Guṭikâvidhiḥ* "Methods with pills"
5. *Vâtâdisarvarogacikitsâ* "The curing of all illnesses such as [those caused by] wind"
6. *Citragandhayuktyâdyañjanam* "Ointments and the preparation of variegated perfumes"
7. *Viṣatantram* "The system of poisons"
8. *Gaṇaḥ* "The list [of alchemical substances]"

Although these chapter titles give the impression of being solely about alchemy and medicine, there is, as Cordier pointed out, much of historical interest in this work and many ancient authorities are cited as interlocutors. The work is of particular importance for the synchronism it gives for the lives of Nâgârjuna and the Śâlivâhana king, whether or not this is ultimately valid, and for its mention of the goddess Prajñâpâramitâ appearing to Nâgârjuna. The author of the *Rasendramaṅgala* may also be a strong candidate for the Nâgârjuna mentioned by Al Bîrûnî (fl. 973–1048) as a resident at fort Daihak, near Somanâtha, in the tenth century.⁴⁵ However, all these questions and further fruitful study of this work must await the critical edition and reconstruction of the whole text. In a sense we have come full circle, and may feel again the excitement Rây expressed on discovering the work.

NOTES

1. "The problem does not differ in kind from that of deciphering the dead terminology of ancient technology, for instance, or semantics . . . one begins from a basic familiarity with classical Chinese [or Sanskrit] and reads the sources of one period or school together closely and repeatedly, each time beginning from a new level of understanding, until their content has fallen into place". Nathan Sivin, *Chinese Alchemy: Preliminary Studies*, Cambridge: Harvard University Press, 1968, p. 12. Quoted by Walter, *The role of alchemy*, p. 7 (see note 4 below).
2. Figures estimated from Theodor Aufrecht's *Catalogues catalogorum, an alphabetical register of Sanskrit works and authors*, 3 volumes, Leipzig: Brockhaus, 1891–1903, and Prana Natha and Jitendra Bimala Chaudhuri's *Catalogue of the library of the India Office*, volume II, 4 parts, London: HMSO, 1938–1957.
3. Praphulla Chandra Rây, *A history of Hindu chemistry from the earliest times to the middle of the sixteenth century A.D., with Sanskrit texts, variants, translation and illustrations*, 2 vols., 2nd ed., London: Williams and Norgate, 1907, 1909. P. Rây, *History of chemistry in ancient and mediaeval India, incorporating the History of Hindu chemistry by Acharya Prafulla Chandra Rây*, Calcutta: Indian Chemical Society, 1956. I have normally referred to the earlier work, since the revised edition has lost most of the detailed references to Sanskrit literature and footnote materials. Reference to Rây means P.C. Rây.
4. For example: Edward Todd Fenner, *Rasayana siddhi: medicine and alchemy in the Buddhist tantras*, University of Wisconsin, Ph.D., 1979, consulted in a facsimile print, London: University Microfilms International, 1982; Michael L. Walter, *The role of alchemy and medicine in Indo-Tibetan tantrism*, Indiana University, Ph.D., 1980, consulted in a facsimile print, London: University Microfilms International, 1980.
5. P. C. Rây, *ibid.*, vol. I, p. liv.

6. P. C. Rây, *op. cit.*, vol. II, pp. i-xxxvii. See also vol. I, pp. xcii-xcv. In this essay I shall not discuss any of the questions concerning the identity of Nâgârjuna. For recent outlines of the issues and bibliographies see David Seyfort Ruegg, *The literature of the Madhyamaka school of philosophy in India*, vol. VII, fasc. 1, of *A history of Indian literature*, edited by Jan Gonda, Wiesbaden: Harrassowitz, 1981, pp. 1ff., 104ff., and Joseph Needham, Ho Ping-Yü and Lu Gwei-Djen, *Science and civilization in China*, vol. 5, pt. III, Cambridge: C.U.P., 1976, pp. 161-164.
7. *Ibid.*, vol. II, pp. xxxviii f. Cf. *Ibid.*, vol. I, p. lxxxiv, and Fenner, *op. cit.*, pp. 11-13.
8. P. Rây, *op. cit.*, pp. 116-118.
9. *Ibid.*, p. 118.
10. P. C. Rây, *op. cit.*, vol. II, pp. 1-9, texts pp. 3-17; P. Rây, *op. cit.*, pp. 129-134, 311-320.
11. Amongst those who have stressed the importance of a *Rasaratnâkara* by Nâgârjuna are: George Sarton, *Introduction to the history of science*, vol. I, Baltimore: Carnegie Institution, 1927, p. 316; G. P. Srivastava, *History of Indian pharmacy . . . volume I*, 2 ed., Calcutta: Pindars, 1954, p. 89; Jean Filliozat, *The classical doctrine of Indian medicine*, Delhi: Munshiram Manoharlal, 1964, pp. 12f., and *Yogaśataka . . .*, Pondichery: Institut Français, 1979, pp. viii, xiii; O. P. Jaggi, *Scientists of ancient India and their achievements*, Delhi: Atma Ram, 1966, pp. 188f., and *History of science technology and medicine in India*, vol. V, *Yogic and Tantric medicine*, 2 ed., Delhi: Atma Ram, 1979, pp. 139f.; Arun Kumar Biswas, *Science in India*, Calcutta: K. L. Mukhopadhyay, 1969, p. 14; D. M. Bose, S. N. Sen and B. V. Subbarayappa, *A concise history of science in India*, Delhi: I.N.S.A., 1971, p. 314; Maurice Winternitz, *A history of Indian literature*, 2 ed., Delhi: Munshiram Manoharlal, 1972, vol. II, p. 343; P. Kutumbiah, "The Siddha and Rasa Siddha schools of Indian medicine", *Indian J. Hist. Med.*, 18, 1973, pp. 28, 32; Girindranath Mukhopadhyaya, *History of Indian medicine*, 2 ed., Delhi: Oriental Books Repr. Corp., 1974, pp. 825ff.; K. R. Srikanta Murthy, "Alchemy in India through the ages", *Nagarjun* vol. XXI, no. 11, July 1978, p. 16; Mircea Eliade, *The forge and the crucible*, 2 ed., Chicago, London: Univ. of Chicago, 1978, pp. 132, 134; A. Rahman et al., *Science and technology in medieval India—a bibliography of source materials in Sanskrit, Arabic and Persian*, Delhi: I.N.S.A., 1982, p. 450 (but see p. 153). The *Rasaratnâkara* is cited as "probably the oldest surviving Sanskrit alchemical book" in Needham et al., *op. cit.*, p. 161.
12. I am not the first to have encountered this difficulty. See Fenner, *op. cit.*, pp. 108-109, who describes how he had hoped to base his Ph.D. work on the *Rasaratnâkara* by Nâgârjuna, because of the emphasis laid upon this text by Rây, but after a long and frustrating search he was unable to find the work.
13. There are some printed vulgates of parts of these works but they are very hard to find and textually unreliable. See bibliographical appendix.
14. Rây gave only small extracts from the texts he discussed. The more recent work of Mira Roy and B. V. Subbarayappa, *Rasârṇavakalpa (manifold powers of the ocean of rasa), text edited and translated into English*, New Delhi: Indian National Science Academy, 1975, is also seriously flawed in that it systematically excludes all passages—both in Sanskrit and English—which do not fit with the editors' idea of the contents proper to an alchemical work. See, for attempted justification, preface, para. 3. For further critique see Fenner, *op. cit.*, p. 15. Bhudeb Mookerji's Sanskrit compilation *The Rasa-jala-nidhi, or ocean of Indian chemistry and alchemy*, 5 vols., Calcutta: The author, 1926-38, translated by its author, is more representative of the spectrum of Indian alchemical concerns, but even this work, written in the twentieth century, is strongly apologetic and excludes much of the religious and magical material present in most ancient and mediaeval Indian alchemical texts. However, it is quite wrong of Eliade to characterize it as worthless: see Mircea Eliade, *Yoga, immortality and freedom*, translated from the French by Willard Trask, 2 ed., Princeton University Press: Princeton, 1970, p. 416.
15. *yad anyatra tad atrâsti yad atrâsti na tat kvacit /
rasaratnâkaraḥ so'yaṃ nityanâthena nirmitaḥ // 25 //*
— p. 5 of 1909 ed. See bibliographical appendix 1A.
16. *vaidyânâṃ yaśase 'rthâya vyâdhitânâṃ hitâya ca
vâdinâṃ kautukârthâya vṛddhânâṃ dehasiddhaye // 3 //
mantrinâṃ mantrasiddhyartham vividhâścâryakâraṇam /
pañcakhaṇḍam idam śâstram sâdhakânâṃ hitam priyam // 4 //
rasakhaṇḍe tu vaidyânâṃ vyâdhitânâṃ rasendrake
vâdinâṃ vâdakhande ca vṛddhânâṃ ca rasâyane // 5 //
mantrinâṃ mantrakhaṇḍe ca rasasiddhiḥ prajāyate*
— p. 2 of 1909 ed. See bibliographical appendix 1A.

17. There is some fluctuation in the manuscripts and editions. The titles given are normalized versions, without being critical editions of the chapter colophons. The term *rasa* "essence" means many things in the alchemical context, in particular, of course, "mercury". It is left untranslated here when it may mean the "essence" of some other substance as well as "mercury". Many assumptions and decisions have to be made even in so apparently simple a task as translating these titles. The reader is warned not to draw too many conclusions from these translations. There is no escaping the necessity of reading the text as a whole and inwardly digesting its total content.
18. The identity of *vaikrānta* is not certain: see P. C. Rây, *op. cit.*, vol. I, pp. 136f., and Richard Garbe, *Die Indischen Mineralien, ihre Namen und die ihnen zugeschriebenen Kräfte: Narahari's Râganighaṇṭu varga XIII, Sanskrit und Deutsch...*, Leipzig: Hirzel, 1882, pp. 89f.
19. The secondary *rasas* (*uparasas*) are a group of substances which share one or other of the properties of mercury. See, e.g. Mookerji, *op. cit.*, vol. II, p. 3. For an enumeration of the basic eight see *Rasârṇava*, ed. P. C. Rây, Calcutta: Asiatic society of Bengal, 1908–1910, p. 108, verse 56.
20. In Indian alchemy, medical and religious concerns equal, and sometimes outweigh, interest in the transmutation of base metals or the metallurgy of mercury. Indeed, it is interesting to note that mercury does not seem to occur naturally in the Indian subcontinent in significant quantities. See, e.g., George Watt, *The commercial products of India*, London: John Murray, 1908; Joseph E. Schwartzberg (ed.), *A historical atlas of South Asia*, Chicago and London: University of Chicago Press, 1978, p. 130.
21. This subject has been excellently studied by Teun Goudriaan in his *Mâyā divine and human, a study of magic and its religious foundations in Sanskrit texts...* Delhi: Motilal Banarsidass, 1978, chapter 6, pp. 251–412.
22. In verse 139 of chapter 19 (see bibliographical appendix 1C).
23. On this title as a typical tantric colophon see Teun Goudriaan, and Sanjukta Gupta, *Hindu tantric and śākta literature*, Wiesbaden: Harrassowitz, 1981, p. 24.
24. On the *Kakṣaputa* see Goudriaan and Gupta, *op. cit.*, pp. 117f. The title means "Loincloth" or "Jockstrap". The reason for this name is opaque to these authors and to me.
25. This estimate is based on the relative length of two manuscripts in the Wellcome collection, 87(i) and 88 which are by the same scribe.
26. The first stanza is.
yah śāntaḥ paramālayaḥ paraśivaḥ kaṅkālakālāntako
dhyānātīta anādīnityanicayaḥ saṅkalpasāṅkocakah /
ābhāsāntarabhāsakah samarasah sarvātmanā bodhakah
so 'yam śarma dadātu nityajagatām vidyādisiddhyastakam / /
 — 1915 edition, p. 264. See bibliographical appendix 2.
27. Rây gives verses 1–6, 9–14, 23–25, 25a–38, 50–52, 54, 55, 1, 4, 30–32, 62–65, 84–86, then 30 unnumbered verses. See note 10 above for references.
28. P. C. Rây, *op. cit.*, vol. II, texts p. 10: *iti nāgārjunaviracite rasaratnākare vajra . . . māraṇādhikāro nama dvitīyaḥ /*
29. *Ibid.*, texts, p. 12: *praṇipatya sarbbabuddhān (sadbodhān) sakaladoṣanirmuktān / vaksye sarbbahitārthaṁ kakṣāpuṭaṁ sarbbasidhikaram /*
30. *Ibid.*, texts, p. 15.
31. *Ibid.*, texts, p. 17: *iti rasendramaṅgalaṁ samāptam /*
 Important footnotes and asides to this section of P. C. Rây's work have been omitted in P. Rây's revision. See especially P. C. Rây, *op. cit.*, vol. II, p. 6, where he refers to the *Kakṣaputa* and p. 9 where he refers to the *Rasendramaṅgala*. Both references are brief and inconclusive.
32. This statement is based on a line-by-line comparison of Rây's text quotations and the Paris manuscript of Nāgārjuna's *Rasendramaṅgala* (see bibliographical appendix 3).
33. Palmyr Cordier, "Récents découvertes de MSS. médicaux sanskrits dans l'Inde (1898–1902). Mémoire présenté au Congrès des orientalistes de Hanoï (1902)", *Le Muséon*, 1903, N.S. 4, pp. 321–352. This paper contains much that is still of importance.
34. Cordier, *op. cit.*, pp. 347f.
35. P. C. Rây, *op. cit.*, vol. I, p. lxxxiv. This crucial information was excised from P. Rây's revised edition.
36. Marc Aurel Stein, *Catalogue of the Sanskrit manuscripts in the Raghunatha temple library of his highness the Maharaja of Jammu and Kashmir*, Bombay etc.: Nirṇaya-Sāgara Press etc., 1894, p. 187, no. 3153 (serial no. 3536).
37. Judging from Rây's extracts and Cordier's comments I would guess that the Jammu manuscript may be a mixture of leaves from more than one work.

38. The catalogue of the Anup Sanskrit Library in Bikāner does list a copy of the Rasendramāṅgala and this would seem to be the exemplar of Cordier's copy. See the *Catalogue of the Anup Sanskrit Library [housed in the Bikaner Fort]*, prepared by C. Kunhan Raja and K. Madhava Krishna Sarma, Fasciculus IV, Bikaner: (Govt. Press), 1948, p. 328, no. 4281.
39. See the *Catalogue of Sanskrit and Prakrit manuscripts, Munirāja Śrī Puṇyavijaya's collection*, 3v., Ahmedabad: L. D. Institute, 1963–1968, no. 6498.
40. See the *Catalogue of Sanskrit and Prakrit manuscripts, Āc. Vijayasevasūri's and Āc. Kṣāntisūri's collections*, part 5, Ahmedabad: L.D. Institute, 1968, no. 1258.
41. See Hari Damodar Velankar (compiler), *A descriptive catalogue of Samskr̥ta and Prākṛta manuscripts in the library of the Bombay branch of the Royal Asiatic Society*, vols, III–IV, *Jain and vernacular literature*, appendix B, Bombay: B.B.R.A.S., 1930, p. 494.
42. *yad uktam sambhunā pūrvam rasakhaṇḍe rasārnave /
rasasya vandanārthe ca dīpikārasamaṅgale / / 16 / /
vyādhitānām hitārthāya proktaṁ nāgārjunena yat /
uktaṁ carpaṭisiddhena svargavaidyakaṇḍike / / 17 / /
anekarasaśāstreṣu samhitāsu āgameṣu ca /
yad uktam vāgbhaṭe tantre suśrute vaidyasāgare / / 18 / /
anyaiś ca bahubhiḥ siddhair yad uktam ca vilokya tat /
tatra yad yad asādhyaṁ syād yad yad durlabham auśadham / / 19 / /
tat tat sarvaṁ parityajya sārabhūtaṁ samuddhṛtaṁ /*
— p. 4 of 1909 ed. See bibliographical appendix 1A. These verses were translated by Rāy, *op. cit.*, vol. II, p. lxii, but not having clearly identified the *Rasendramāṅgala* as Nāgārjuna's work, he was unable to use this information to clarify his translation.
43. Or perhaps two works: a *Rasendrāmaṅgala* and a *Dīpikā*?
44. *rasoparasalohānām rasāḍau sādhanam tataḥ /
vajrāḍau māraṇam vaks[ya]ḥ drāvaṇam sarvadhātusū / 3 /
trīṭhe rasabandham ca caturthe gutikāvidhiḥ /
vātāḍau sarvarogeṣu cikitsā pañca[me]<dhā> matā / 4 /
citram gandhayuktyādi añjanam śaṣṭhame ['pi]<ṣu> ca /
saptaṁ viśatantram ca aṣṭamam gaṇasañjñakam / 5 /*
—Paris manuscript, verses 3–5. See bibliographical appendix 3.
45. "A famous representative of this art [alchemy] was Nāgārjuna, a native of fort Daihak, near Somanāth. He excelled in it, and composed a book which contains the substance of the whole literature on this subject, and is very rare. He lived nearly a hundred years before our time".—from Edward C. Sachau (tr.), *Alberuni's India*, 2 vols., London: Trubner, 1888, vol. 1, p. 189. N. B. Daihak, near Somanāth, is not identified. (Caveat lector: *rasa* does not mean "gold".)

BIBLIOGRAPHICAL APPENDIX

The sources on which the above textual analysis is based are:

1. *Rasaratnākara* by Nityanātha SiddhaA. *Rasakhaṇḍa*

Manuscript:

London, WIHM β359. Leaves 1–116: paper; 14 × 28 cm.—Covers *rasakhaṇḍa*, upadeśas 1–10 and *rasendrakhāṇḍa*, upadeśas 1–15, beginning of 16.—Devanāgarī script.

Edition:

Śālagrāmā Vaiśya (ed.), *Siddhanityanāthapraṇītaḥ Rasaratnākaraḥ (samastarasagranthānām śīrobhūsanam . . . bhāṣā śikāvivhūṣitaḥ)*, Bombay: Śrīveṅkaṭeśvara Steam Press, 1909, pp. 1–88.

This is a vulgate edition. After the *Rasakhaṇḍa* ends on p. 88; the text departs completely from any of the manuscripts of the *Rasaratnākara* that I have examined. It

resembles, and may follow: Jivānanda Vidyāsāgara Bhaṭṭācārya (ed.), *Rasendracintāmaṇiḥ . . . ŚrīRāmacendrena saṃkalitah tathā Rasaratnākaraḥ ŚrīNityānanda- siddhāntaviracitaḥ . . .*, Calcutta: The editor, 1878.

B. *Rasendrakhaṇḍa*

Manuscript:

London, WIHM β359. See 1A above for description.

This manuscript breaks off after ch. 15. The title of ch. 20 is taken from the colophon quoted by Klaus L. Janert and N. Narasimhan Poti, *Indische und Nepalische Handschriften*, volume 2, part 2, of the *Verzeichnis der Orientalischen Handschriften in Deutschland*, ed. by Wolfgang Voigt, Wiesbaden: Steiner, 1970, no. 953.

Edition:

The Bombay edition referred to by Y. T. Ācārya (*op. cit.* below, introduction) was not available to me. The 1874 Calcutta edition of this and the previous section referred to by J. Kālidāsa Śāstrin (*op. cit.* below, p. 3) is probably the 1878 edition by J. V. Bhaṭṭācārya referred to above.

C. *Vādakhaṇḍa*

Edition:

Jīvarāma Kālidāsa Śāstrin (ed.) *Śrī PārvatīputraNityānāthasiddhāvīracita-Rasaratnākaraṃtargataś caturtho [sic] Rddhikhaṇḍaḥ—Vādikhaṇḍaḥ*, Goṇḍala: Rasasālā Auśadhāśrama, 1940.

D. *Rasāyanakhaṇḍa*

Edition:

Trivikrama Yādavaśarman Ācārya (ed.), *ŚrīNityānāthasiddhāvīracito Rasaratnākaraṃtargataś caturtho Rasāyanakhaṇḍaḥ*, Bombay: The editor, 1913.

E. *Siddhakhaṇḍa*

Manuscripts:

London, WIHM α423 (xii). Leaves 23 v–26 v: paper; guṭikā 22 × 16 cm.—Covers siddhakhaṇḍa, ch. 1 and start of ch. 2 only.—Devanāgarī script.

London, WIHM α862 (v). Leaves 23 v–66: paper; guṭikā 22 × 16 cm.—Covers siddhakhaṇḍa, chs. 1–7.—Śāradā script.

London, WIHM δ7 (i). Leaves 1–25 r: Paper; 9 × 31 cm.—Covers siddhakhaṇḍa, chs. 1–7.—Nepālī script.

Edition:

The edition by Jīvarāma Kālidāsa Śāstrin (see *op. cit.*, p. 4) was not available to me.

2. *Kakṣapuṭa*

Manuscripts:

London, WIHM α899. Leaves [i–iv], 1–70, [i–iv]: machine-made paper; 11 × 24 cm.—Covers patalas 1–10 and part of 11.—Devanāgarī script.

London, WIHM α900. Leaves 1–49, 63–74: paper; 13 × 25 cm.—Covers patalas 1–11, 11a, 16–20.—Devanāgarī script.

London, WIHM β363. Leaves 1, 1a–69, 69a–86, 88–93: paper; 10 × 27 cm.—Covers patalas 1–20.—Devanāgarī script with Nepālī/Bengālī features.

London, WIHM δ8. Leaves 1–52, 52a–60, 62–80: paper; 9 × 31 cm.—Covers patalas 1–20.—Nepālī script.

Edition:

Aśubodha Vidyābhūṣaṇa Bhaṭṭācārya and Nityabodha Vidyāratna Bhaṭṭācārya (eds.), *Indrajālavidyāsāṅgraha Tatra (Indrajālasāstram + Kāmaratnam + Dattātreyatantram + Śaṭkarmmadīpikā + Siddhanāgārjunakakṣapuṭam.)*, 3 ed., Kalikātā [Calcutta]: The editors, 1915.

3. *Rasendramaṅgala* by Nâgârjuna

Manuscript:

Paris, Bibliothèque Nationale, fonds Sanscrit, no. 1222. Leaves 1–39: paper; 15 × 32 cm.—Covers chs. 1–4; leaves 30–39 have a ṭippaṇa.—Devanâgarî script.

Edition:

Atrideva Vidyâraṅkâra, in his *Âyurveda kâ brhat itihâsa*, Vârâṇasî, 1960, p. 400, says that an edition of *Rasendramaṅgala* by Jivarâma Kâlidâsa Sâstrin was published in Goṇḍala in 1924. This was not available to me, but Pushpendra Kumar, in his *Nagarjuna's Yogaratnamala*, Delhi: Nag, 1980, p. 20, says that this is “the same as Rasaratnâkara. It is different only in name. Either by the oversight of the scribe or by the author Nagarjuna another appellation has been appended to this treatise”. It is, as ever, not clear which text is meant by Rasaratnâkara; cf. note 11 above.