

# JOURNAL

OF THE

# MADRAS UNIVERSITY

## Section A. Humanities

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# THE INTERNAL CHRONOLOGY OF THE REIGN OF RĀJĀDHIRĀJA I.\*

By

N. VENKATARAMANAYYA, M.A. PH.D.

The sources of information for a study of the history of the reign of Rājādhirāja I are mostly epigraphic. All the known facts of his reign are gathered exclusively from his own inscriptions. They are, no doubt, supplemented to some extent by the contemporary Cālukyan records and the Ceylonese chronicle *Mahāvamsā*; but the information furnished by these external sources is, indeed, scanty, and does not materially increase our knowledge of the events of the reign. The inscriptions of Rājādhirāja I, like those of his predecessors and successors, embody *praśastis*, or as they are more frequently called 'historical introductions' which describe in set phrases the events of the reign. "These official 'historical introductions,'" says Prof. K. A. Nilakanta Sastri, "are, in fact, an important aid to the discovery of the particular king to whose reign any given record belongs."<sup>1</sup> Moreover, they grew in length from year to year with the advance of the reign having been subjected to frequent revision by the incorporation of new events as they occurred from time to time. This feature, though generally helpful in fixing the internal chronology of the reigns of the Cōla monarchs has lost much of its value with regard to the inscriptions of Rājādhirāja I, owing to certain peculiarities presented by his *praśastis*; and as a consequence considerable uncertainty prevails about the sequence of events that happened during the course of his reign. A careful and analytical study of his *praśastis* may be helpful in solving the difficulties, and fixing the chronology of the events of his reign in a satisfactory manner. No less than four types of *praśastis* are met with in Rājādhirāja's inscriptions. They are:—

\*I offer my grateful thanks to Prof. K. A. Nilakanta Sastri, M.A. and Rao Saheb S. Vaiyapuri Pillai, B.A., B.L. from whom I received much valuable help in the preparation of this paper.

- (i) *Tingalēr-peṛa-vaḷar*
- (ii) *Vīra Pāṇḍyana-talaiyūm*
- (iii) *Tirukkōḍiyōḍu tyāgakkōḍi*, and
- (iv) *Tingalēr-taru*.

As the texts of all the inscriptions of the king have not yet been published, it is not possible to subject all the *praśastis* to a thorough and searching examination and formulate a definite scheme of internal chronology once for all. That, however, need not be considered a serious obstacle; for, the texts of the inscriptions that have been published so far are sufficiently representative and offer enough material for undertaking an investigation of the problem and arriving at results reasonably satisfactory.

(i) The *tingalēr-peṛa-vaḷar*, the first of these *praśastis* is brief; and it records, as stated by Prof. Nilakanta Sastri, "only the earlier achievements of the king, and seems to have been stereotyped about the twenty-sixth year of his rule, and repeated in that form in some of his later records."<sup>2</sup>

Probably it is the earliest of Rājādhirāja's *praśastis* and was obviously adopted by him during the life time of his father while he was still a junior partner in the government of the kingdom. The short introductory passage alluding briefly to Rājendra Cōla I's victories, coupled with the early regnal year twenty-six, which is actually the first year in which Rājādhirāja I assumed the supreme power over his ancestral kingdom, clearly indicates that the *praśasti* was first composed during the time of Rājendra Cōla I. The victories attributed to Rājādhirāja I in this *praśasti*, viz., the war with the Southern King Mānābarāṇan, the invasion of Vēṇāḍ and the consequent liberation of the ruler of Kūpaka as well as the destruction of ships at Kāndaḷūr-Śāḷaj,<sup>3</sup> must have actually taken place not during the reign of Rājādhirāja I himself, but earlier in the later years of the rule of his father when he was carrying on the administration of the kingdom as a junior monarch.

2. Colas I. P. 293.

3. 75 of 1893 (S. I. I. v. 633) Ec. X. Cb. 21, 492 of 1902 (S. I. I. viii. 82), E. C. IX. Nl. 25.

(ii) Next comes the second, the *Vīra Pāṇḍyana-talaiyūm*.<sup>3a</sup> Though this *prasasti*, like the *tingalēr-peṇā-vaḷar* is short, and opens with a brief allusion to certain incidents that took place in the time of Rājādhirāja's predecessor, Rājendra Cōla I, it shows a definite tendency to grow with the advance of his reign. It makes its appearance for the first time in the inscriptions of his twenty-sixth year (A. D. 1044)<sup>3b</sup> and alludes to his victory over Vīra Pāṇḍya and the destruction of ships at Kāndaḷūr-Śālai. In the records of later years, the *prasasti* grows longer, and new achievements, not mentioned in the early version, are added on to it. The conquest of Lankā is referred to for the first time in a record of the 28th (A. D. 1046) year;<sup>4</sup> and Śālai or Kāndaḷūr-Śālai, where he destroyed ships, is explicitly stated, in another record of the 30th year, (A. D. 1048) to have been a possession of the Cēra;<sup>5</sup> and in the later versions other achievements such as the subjugation of Raṭṭapāḍi seven-and-half-lakh country (31st yr.=A. D. 1049), and the sack of the city of Kalyāṇi (34th yr.=A. D. 1052) are mentioned.<sup>6</sup> The *prasasti* is thus seen to grow with the advance of Rājādhirāja's reign, and with its help it is possible to frame tentatively a chronological sequence of the events mentioned therein.

- |   |    |                   |
|---|----|-------------------|
| 1. Taking of the head of Vīra Pāṇḍya and the destruction of ships at Kāndaḷūr-Śālai belonging to the Cēraḷan  | .. | Before A.D. 1044. |
| 2. The conquest of Lankā  | .. | „ A.D. 1046.      |
| 3. The conquest of Irattappāḍi seven-and-half-lakh country  | .. | „ A.D. 1049.      |
| 4. The sack of Kalyāṇi, the planting of the Pillar of Victory, the performance <i>Vīrābhīṣēka</i> on the <i>Vīrasimhāsana</i> , and the assumption of the title Vijaya-rājendra | .. | „ A.D. 1052.      |

3a. 244 of 1929, 283 of 1904, 513 of 1912 (Colas I. P. 575), EC. X Ct. 30, 276 of 1902 (S. I. I. vii. 905), 239 of 1922, EC. IV. Gn. 93, X Mb. 106 (a), 245 of 1925 (Colas I. P. 582), EC. X. Kl. 112 (b).

3b. 244 of 1929.

4. 283 of 1904.

5. EC. X. Ct. 30.

6. 245 of 1925, EC. X. Kl. 112 (b).

(iii) The *tirukkoḍiyodu tyāgakkōḍi*, the third on our list is the least known of Rājādhirāja's *praśastis*. It occurs, so far as known at present, in only one record of the thirty-sixth year (A. D. 1054);<sup>7</sup> and it is not available for the purposes of study, as it still remains unpublished. The little that is known of it seems to indicate that this *praśasti* is not likely to be of much use in settling the chronology of the reign. According to Prof. Nilakanta Sastri who has had an opportunity to examine it, it gives 'no new information but confirms only some details of the Cāḷukyan wars found in other records'<sup>8</sup>

(iv) The most important of Rājādhirāja's *praśastis* is, of course, the last which opens with the words *tingalēr-taru*. It is the longest and by far the most common of his *praśastis*, and it gives a full account of his achievements year by year. Though rich in historical material and valuable as a source of information, it does not easily lend itself to consistent chronological treatment, owing to inherent peculiarities in its composition. Apart from small variations due mainly to scribal attempts at concise statement for saving space, the text of the *praśasti* presents marked differences which do not easily fit into a consistent scheme of chronology. In its fully developed form, the *tingalēr-taru* has come down to us in two recensions one of which differs from the other in important particulars. Although both the recensions begin with a description of the events of the early years of the reign terminating with the destruction of ships at Kāndaḷūr-Śālai, they soon diverge from the common course and follow new tracks which, notwithstanding their convergence at one point, viz., the Ceylonese war pursue independent paths, and reach destinations having no connection with each other. Of these recensions the more comprehensive which may for the sake of convenient reference be designated iv (a)<sup>9</sup> describes, like the other Cōḷa *praśastis*, the events gradually year by year, and increases in length with the

7. 244 of 1925.

8. Colas I. P. 294.

9. 90 of 1892 (S. I. I. iv. 537), 54 of 1893 (S.I.I. iv 867), 365 A of 1903 (S. I. I. viii, 675), 49 of 1928; A.R.E. 1928. Part II, 7 (Colas I. P. 574), 417 of 1902 (S. I. I. viii. 3), 215 of 1902 (S.I.I. vii. 842), E. C. IX. Dv. 75, 114 of 1896 (S.I.I. v. 978), 6 of 1892 (S. I. I. iii, 28), 602 of 1902. (S. I. I. viii, 199), 6 of 1890 (S. I. I. iv. 329), 107 of 1892 (S. I. I. iv, 555), 81 of 1895 (S. I. I. v, 641), 221 of 1894 (S. I. I. v. 520), 369 of 1903 (S. I. I. viii, 680).

advance of the reign. In certain places it seems to have become stereotyped in the 29th regnal year, and appears without any change in the records of later years. The tendency to develop does not, however, completely disappear; and it manifests itself in some of the 30th and 32nd year inscriptions which allude, for the first time, to certain incidents not mentioned elsewhere in the records of the reign. An analysis of the contents of the *praśasti*, as it is found in the inscriptions of the reign, is bound to be instructive; for, they present, the events as they occurred from time to time, in the order in which they were arranged by the contemporary *praśasti* writers.

An analysis reveals certain interesting features which have been generally left unnoticed. As regards the early years of the reign up to the 29th year, the *praśasti* opens with a description of the war with the three allied kings of the south. From the 29th year onwards the *praśasti* appears with a preamble detailing the gifts and titles which Rājādhirāja bestowed upon his relatives. Rājādhirāja must have distributed gifts and titles among his relatives and propitiated them immediately after his assumption of supreme sovereignty in his 26th year (A. D. 1044), on the death of his father Rājendra Cōla I. It is not possible to account for the omission of this topic in the earlier records in a satisfactory manner. The *praśasti* writers did not probably attach much importance to it at first, but later when, during the course of the first three years, the king became lavish, they considered it desirable to proclaim to the world the kindness and liberality of their royal master. Another matter that has to be noticed in this connection is Rājādhirāja's war with Lankā. It is mentioned for the first time in the inscriptions of the 28th year; in which it is stated that Rājādhirājā took the heads of the king of Lankā, most probably Vikramabāhu who is mentioned in this context in later inscriptions, and of Vikrama Pāṇḍya who having lost his kingdom in South India sought asylum in Ceylon. The inscriptions dated in the 29th year (A.D. 1047) add the names of Vīra Śilāmēgan, the ruler of the people of Kannakucci, and Śrīvallaban Madanarājan of the lineage of Kannara to the list of princes slain by Rājādhirāja I in the island. The Ceylonese war obviously began in the 28th year or a little earlier and did not come to an end until the 29th year. The discrepancy in the accounts of the war apparent in the records of the 28th and 29th years must be attributed to the continuance of the war during the period. Again, the place of the *Aśvamēdha* sacrifice in the *praśasti* mentioned first in the

inscriptions of the 29th year (A.D. 1047) is continuously shifted. It is invariably relegated to the end of the *praśasti* without any regard for the events described therein. The reason for this disregard of chronology is not obvious. It was perhaps prompted by a desire to assign it to its proper place after the completion of the account of the *digvijayas* as enjoined by the *śāstras*. Lastly, certain inscriptions dated in the 30th (A.D. 1048), and 32nd (A.D. 1050) years of the reign mention an incident not alluded to anywhere else in accounts of the earlier part of the reign. As the incident is described almost at the very beginning of the *praśasti*, it must have occurred early in the career of Rājādhirāja. It is stated that he defeated a certain chief called Vikramanāraṇan who opposed his father, and assumed, in commemoration of his victory, the title of Būpēndra Cōla. The reason for omitting this incident from the earlier inscriptions of the king is not quite apparent. Probably it was not deemed sufficiently important to deserve mention in the *praśasti*; but for the fact that Vikramanāraṇan who was at the head of the forces of Āhavamallan came once again into conflict with Rājādhirāja in the 30th year of his reign he would not perhaps have found a place in the *praśasti* at all. When the Cōla *praśasti* writers had to record Rājādhirāja's victory over the Cālukyan army under his command, they seem to have recollected his earlier history and incorporated it in the *praśasti* to enhance the glory of their sovereign.

The events of the reign described in this recension of *tingaḷērtaru* may now be arranged in the order in which they appear to have occurred.

27th year—A. D. 1045.

1. The conferment by Rājādhirāja of estates and titles on his relatives.<sup>10</sup>
2. Victory over Vikramanāraṇan and the assumption by Rājādhirāja of the title of Būpēndra Cōla.<sup>11</sup>
3. War with the three allied kings of the south: Mānābaraṇan, Virakēraṇan and Sundara Pāṇḍyan.

10. Mentioned for the first time only in the inscriptions of the 29th year.

11. Mentioned for the first time only in the inscriptions of the 30th year.

## CHRONOLOGY OF THE REIGN OF RAJĀDHIRAJA I. 7

4. War with the ruler of Vēṇāḍ, the Three of Rāmakuḍa, and the Villavan; and the destruction of ships at Kāndaḷūr-Śālai.

5. First war with Ahavamallan; death of the Cālukya commanders Gaṇḍappayyan and Gangāḍaran; retreat of Vikki, Vijayādittan and Śāngamayyan; victory at Tannāḍa; and the burning of Kollippākkai.

### 28th year—A.D. 1046.

4. War with the rulers of Lankā; slaying of the king of Lankā, called Vakramabāhu,<sup>12</sup> Vikrama Pāṇḍyan, Vira Śilāmēgan of Kannakucci and Śrīvallaban Madanarājan\* of the lineage of Kannara.<sup>13</sup>

### 29th year—A.D. 1047.

5. Second war with Āhavamallan; defeat and flight of Gaṇḍara Dinakaran, Nāraṇan, Gaṇapati, and Madusūdanan; and the destruction of the palace of the Cālukyas at Kampili.

6. Performance of the *Aśvamēdha* or the horse sacrifice.<sup>14</sup>

### 30th year—A.D. 1048.

7. Third war with Āhavamallan: defeat of Cakravarti<sup>15</sup> Vikramanāraṇān who headed a large army in the battle at Pūṇḍur-kaṭaka-mānagara<sup>16</sup> on the banks of the Pērār, capture of the two younger brothers of Neḍuvaḍi Teḷunga Viccaya, Śilai Kaivuttarājan, Akkappayyan, Piḍaikai Cōlan, (Kondaiyarājan, Kuṇṣilai-Muñjan, Daṇḍanāyakan Danañjayan...Vira Māṇikan)<sup>17</sup> and Vākai Viccayan and his son and mother; the devasta-

12. Name mentioned from the 29th year onwards only.

13. The last two princes are mentioned only from the 29th year onwards.

14. Mentioned for the first time in the inscriptions of the 29th year.

15. The title occurs only in the inscriptions of the 32nd year.

16. 'Mānagar' is added only in the inscriptions of 32nd year.

17. Names enclosed in the brackets are found only in the records of the 32nd year.

tion of the Seven-and-half-lakh country;<sup>18</sup> the sack of Pūṇḍūr; the demolition of the palace at Maṇṇantippai; and the planting of the pillar of victory.<sup>19</sup>

The second recension of *Tingalēr-taru*,<sup>20</sup> though it begins like the first with an account of the events of the early years of the reign up to the destruction of ships at Kāndaḷūr-Śālai, takes a different course and describes a set of events not mentioned in other records. The exact time at which this recension actually took shape it is not possible to determine. It occurs, no doubt, in an inscription alleged to be of the 26th year.<sup>21</sup> The genuineness of this date is not, however, beyond question; for, in the first place, the first figure in the date is a tentative editorial restoration; and secondly, the internal evidence of the *praśasti* embodied in the record clearly suggests a much later date. The *praśasti*, as a matter of fact, takes up the account of an unfinished campaign against Āhavamalla mentioned in the inscriptions of the 33rd year and describes the later stages of the war up to the sack of Kalyāṇi. It is obvious that the record under consideration belongs to a period subsequent to the 33rd year; and it may be assigned to the 36th instead of the 26th year.

The contents of the *praśasti* may now be taken up for consideration.<sup>22</sup> Although the events of the early years are narrated in this recension as in the previous recension, they differ from each other both in form and in content. The language of the present recension, notwithstanding the repetition of a few phrases of the other here and there, is totally different. The narrative is brief in the extreme. It barely touches certain facts and omits others altogether. The events described in the recension may be arranged in the following order.

18. Referred to in the inscriptions of the 32nd year.

19. " " " " "

20. EC. IX. Dv. 76, 413 of 1902 (S. I. I. vii. 1046), 415 of 1902 (S. I. I. vii. 1048), 41 of 1888 (S. I. I. iv. 139), 92 of 1892 (S. I. I. iv. 539), 172 of 1894 (S. I. I. v. 465).

21. 172 of 1894, (S. I. I. v. 465).

22. EC. IX. Dv. 76, 413 of 1902 (S. I. I. vii. 1046), 415 of 1902 (S. I. I. vii. 1048), 41 of 1888 (S. I. I. iv. 139), 92 of 1892 (S. I. I. iv. 539), 172 of 1894 (S. I. I. v. 465).



*Before the 33rd year—A.D. 1051*

1. Conferment of titles and estates on his relatives.

2. War with the three allied kings of the south, the protectors of Kanni; two were despatched to heaven, and one was driven to the forests.

3. War with the Cēraḷan, and the destruction of ships at Kāndaḷūr-Sālai.

4. War with the rulers of Lankā: the king of the people of Lankā, Vallaban, and the ruler of the people of Kannakucci.

5. War with the Karṇāṭakas; acceptance of a *Paraṇi* poem in Tamil at Tannāḍa; victory over Niḍuvāl Viccayan at Pūṇḍūr, and the capture of his father and mother; the arrival of Āhavamalla's spies; their capture and expulsion with inscribed tablets proclaiming Āhavamalla's fear fastened on to their chests; crossing of the three rivers Siru-tuṛa, Perundura and Tayvi-Vimāraṣi; planting of the pillar of victory at Ēttagiri; playing the *caṇḍu* with the kings who submitted; fight with Nuḷamban, Kālidāsan, Cāmuṇḍan, Kommaiyan, and Villavarasan; offer of protection to the descendants of the Gūrjara King, Uppala, slain (formerly) by Tailappan; and the restoration to them of the crown of the former siezed and attached by the latter to his war-drum; and the devastation of the Raṭṭappāḍi seven-and-half-lakh country.

*Before the 36th year—A.D. 1054.*

Arrival of Āhavamalla's *perkaḍai* in the Cōla camp with a challenge for a fresh fight; episode of Āhavamallan and Āhavamalli; sack of Kalyāṇapuram; destruction of the royal palace in the city; assumption of the title, Vijayarājendra; and the performance of the *Virābhīṣēkam*.

A comparison of the contents of all the *praśastis* of Rājādhirāja analysed above is bound to help us in finally fixing the internal chronology of his reign.

No.	Reg. year.	Christian year.	I. <i>Tingalêr peṛa-vaḷar.</i>	II. <i>Vira Pāṇḍyana-talaiyūn</i>	IV. (a) <i>Tingalêr-taru.</i>	IV. (b) <i>Tingalêr-taru.</i>
1.	26th year.	A.D. 1044.	(1) War with the Southern (king) Mānābarāṇan. (2) War with the king of Vēṇāḍ, the liberation of the ruler of Kūpaka; and the destruction of ships at Kāndaḷūr-Śālai.	(1) Taking of the head of Vira-Pāṇḍyan. (2) Destruction of ships at Kāndaḷūr-Śālai.		
2.	27th year.	A.D. 1045.			(1) Conferment of titles and estates. (2) Victory over Vikramanāraṇan, and the assumption of the title of Būpēndra Cōḷa. (3) War with the three allied kings of the south: Mānābarāṇan, Vira-kēraḷan and Sundara Pāṇḍyan. (4) War with the ruler of Vēṇāḍ, the Three of Rāmakuḍa, and the Villavan and the destruc-	

3. 28th year. A.D. 1046.	..	<p>(1) Taking of the head of Vīra-Pāṇḍyan.</p> <p>(2) The conquest of the Cēra.</p> <p>(3) The conquest of Lankā.</p>	<p>tion of ships at Kānda-lūr-Śālai.</p> <p>(5) First war with Āhava-mallan; death of the Cālukya commanders, Gaṇḍappayan and Gangā-daran; retreat of Vikki, Vijayādittan, and Śāngamayyan; victory at Tannāḍa; and the burning of Koḷlippākkai.</p> <p>War with the rulers of Lankā: taking of the heads of (a) the king or the people of Lankā, and (b) Vikrama Pāṇḍyan.</p>
4. 29th year. A.D. 1047.	..	..	<p>(1) War with the rulers of Lankā: the slaying of (a) Vikramabāhu, the king of the people of Lankā, (b) Vikrama Paṇḍyan, (c) Vīra Śilāmēgan, the ruler of the people of Kannakucci; and (d)</p>

No. Reg. year.	Christian year.	I. <i>Tingalêr pera-valar.</i>	II. <i>Vîra Pāṇḍyana-talaiyuvî</i>	IV. (a) <i>Tingalêr-taru.</i>	IV. (b) <i>Tingalêr-taru.</i>
5.	30th year. A.D. 1048.	..	..	<p>Śrīvallabhan Madanarājan of the lineage of Kannara.</p> <p>(2) Second war with Āhavamallan; defeat of Gaṇḍara Dinakaran, Nāraṇan, Gaṇapati, and Madusūdanan; and the burning of the palace of the Cālukyas at Kampili.</p> <p>(3) Performance of *the <i>Aśvamēdha</i> or the horse-sacrifice.</p>	<p>Third war with Āhavamallan; defeat of Cakravarti Vikramanāraṇan at the battle of Pūṇḍurkaṭaka-mānagara on the bank of the Pērār; the capture of the two younger brothers of Niḍuvaḍi Telunga Viccaya, Śilai Kaivuttarājan, Akkappayyan,</p>

Piḍaikai Cōlan, Koṅ-  
ḍaiyarājan, Kuṇṣiṣil  
Muñjan, Daṇḍanāyakan  
Danañjayan, Vīra Mānik-  
kan, Vāgai Viccayan, his  
mother and son.

The devastation of the  
Seven-and-half lakh  
country, the sack of  
Pūṇḍūr; the destruction  
of the palace at  
Maṇṇantippai; and the  
setting up of a pillar of  
victory.

6. 31st year. A.D. 1049. .. The conquest of  
Ira [tṭapādi.]

7. 33rd year. A.D. 1051. ..

War with the Karnāṭakas:  
(The fourth war with  
Ahavamallan): Accept-  
ance of a *Paraṇi* poem in  
Tamil at Tannāḍa; vic-  
tory over Niḍuvāl  
Viccayan at Pūṇḍūr,  
and the capture of his  
father and mother; arri-  
val of Ahavamalla's spies;  
their capture and expul-

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No. Reg. year.	Christian year.	I. <i>Tingalēr pera-vaḷar.</i>	II. <i>Ṽira Pāndyana-talaiyūṁ</i>	IV. (a) <i>Tingalēr-taru.</i>	IV. (b) <i>Tingalēr-taru.</i>
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sion with inscribed tablets proclaiming the fear of Ahavamallan fastened on to their chests; crossing of the three rivers, Siru-tura, Perundura and Tayvi-vīmāsi, planting of the pillar of victory at Ēttagiri; the playing of *caṇḍu* with kings who submitted; fight with Nuḷamban, Kālidāsan Cāmuṇḍan, Kommayyan, and Villavarājan; offer of protection to the descendants of the Gūrjara King Uppala, slain (formerly) by Tailappan; and the restoration (to them) of the crown of the former seized and attached by the latter to his war-drum. Subjugation of the Raṭṭappāḍi seven-and-half-lakh country.

8. 34th year A.D. 1052.

..

Sack of Kalyāni; the planting of a pillar of victory; performance of *Vīrabhisēka* seated on *Vīrasimhāsana*; and the assumption of the title, Vijayarājendra.

9.(?)36th year. A.D. 1054.

..

Arrival of Āhavamalla's *perkaḍai* in the Cōla camp; episode of Āhavamallan and Āhavamalli; sack of Kalyānapura; destruction of the royal palace; assumption of the title Vijayarājendra and the performance of the *Vīrabhisēkam*.

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The contents of Rājādhirāja's *praśastis*, as shown in the foregoing schedule, give a clear indication as to the time when the events described in them took place. While attempting to arrange them in their proper chronological order, two important considerations must be borne in mind. In the first place, incidents mentioned in a record, dated with reference to any given regnal year, must be understood as having taken place either during that year itself or sometime earlier. Secondly, the order in which they are narrated in the *praśastis* must be regarded as chronological, unless there are strong grounds suggesting the contrary. The *Aśvamēdha* sacrifice, for instance, though placed invariably, as noticed already, at the end of the *praśasti* in all the inscriptions without regard to the chronology of the incidents detailed in them, is mentioned for the first time in the records of the 29th year. It would not be reasonable to shift the time of the performance of the sacrifice from year to year according to its changing position in the *praśastis* of later records. The sacrifice must have been performed either during the 29th year or a little earlier. Keeping these considerations in view, we may now proceed to arrange the events mentioned in the records of the reign of Rājādhirāja in their chronological order.

Some of the early victories referred to in Rājādhirāja's inscriptions must be assigned to the later years of the reign of his father, when he was participating in the governance of the empire as the junior monarch. The *Tingaḷēr-peṛa-valar* and the *Vira Pāṇḍyana-talaiyūm* appear to have had their origin while Rājēndra I was still on the throne. This is clearly seen from the preamble of the former which opens with a brief statement of Rājēndra's victories in the four cardinal points; moreover, the early date (26th year) of the records in which this as well as the other *praśasti*, *Vira Pāṇḍyana-talaiyūm* are mentioned for the first time point in the same direction. As Rājēndra I died in the 26th year of Rājādhirāja I, the incidents narrated in the inscriptions of that year viz., the taking of the head of Vira Pāṇḍayan, the war with the Southern King, Mānābaraṇan, and the ruler of Vēṇāḍ, the liberation of the chief of Kūpaka and the destruction of ships at Kāndaḷūr-Śālai, must have certainly taken place during the concluding years of the former's reign. The *Tingaḷēr-taru* gives more interesting information about these incidents, and adds much to our knowledge of the subject. It is stated that Rājādhirāja was engaged in a war with the three allied Kings of the South, Mānābaraṇan, Virakēraḷan, and Sundara Pāṇḍyan who were the protectors of Kanni (i.e., the Pāṇḍyas), and that he attacked the ruler of Vēṇāḍ and put him to flight; next, that he proceeded against the three



## CHRONOLOGY OF THE REIGN OF RAJADHIRAJA I. 17

confederate chiefs of Rāmakuḍa and vanquished them; and that he completed his campaign by inflicting a crushing defeat on the Villavan or Cēraḷan, and destroying the ships which obviously belonged to him, at Kāndaḷūr-Sālai. Two other events mentioned in the later records of the reign must also be considered here, as they appear to have happened about this time. Inscriptions of the 30th year allude to a victory which Rājādhirāja won over a certain chief called Vikramanāraṇa. Since this victory, is placed as noticed already, at the very commencement of the *praśasti*, it is reasonable to suppose that Rājādhirāja' came into conflict with Vikramanāraṇa even before he embarked on his war with the southern and the western kings. This is directly corroborated by the evidence of the *praśasti* in which it is explicitly stated that Vikramanāraṇa had opposed his (Rājādhirāja's) father.<sup>23</sup> The first campaign against Āhavamalla also probably took place either in the last year of Rājendra I or immediately after his death. No doubt, it is not referred to in the *tingalēr peṇa-vaḷar*, and the *Vīra Pāṇḍyana-talaiyum* embodied in the inscriptions of the 26th year; but this need not be considered an objection. For, these *praśastis* are brief, and allude to few incidents. The former, which had become stereotyped even before Rājādhirāja assumed the supreme sovereignty does not mention the events of his reign; and the latter though progressive, does not notice anything which is not of outstanding importance. The *tingalēr-taru* of the 27th year, however, describes the campaign at some length; and as this is the first dated record in which this *praśasti* makes its appearance, it is not unlikely that the campaign was conducted immediately after the death of Rājendra I, if not actually during the last years of his life.

The next point of interest is the Ceylonese War. The chronology of this war is involved in some doubt. It is said that the events of this war narrated in the *praśastis* of Rājādhirāja were 'spread over several years and apparently connected with more than one campaign'; and that they were 'grouped together' for the sake of convenience.<sup>24</sup> This statement is not quite in agreement with Cōla inscriptions; it needs a certain amount of modification. The Ceylonese War is referred to for the first time in the inscriptions of the 28th year. Both the *Vīra Pāṇḍyana-talaiyum* and the *tingalēr-taru* notice the war. The former roundly asserts that in

23. S. I. I. v. 520. u. 15-16 'tātai mun-vanda pōtalar Vikramanāraṇan',

24. Colas I. P. 297.

addition to his victories over Vīra Pāṇḍya and the Cēraḷa, Rājādhirāja also effected the conquest of Lankā.<sup>25</sup> The latter describes it in greater detail. Rājādhirāja is said to have killed a king of Lankā, and a certain Vikrama Pāṇḍya who took refuge in the island having lost his kingdom in South India.<sup>26</sup>

The inscriptions of the next year add much new information. The king of Lankā slain by Rājādhirāja is here called Vikramabāhu; and besides Vikrama Pāṇḍya, two other chiefs, Vīra Śilāmēgan, the ruler of the people Kannakucci, and Śrīvallaban Madanarājan of the lineage of Kannara are said to have suffered death at his hands in this war. In the light of the information furnished by these inscriptions, it is not unreasonable to conclude that Rājādhirāja was at war with the Ceylonese rulers during his 28th and 29th years.

Rājādhirāja's second and third wars with Āhavamalla do not offer any chronological difficulties. The former is noticed for the first time in the inscriptions of the 29th year; it appears to have been of short duration; and after his return to the capital Rājādhirāja seems to have celebrated the famous *Aśvamēdha* sacrifice, in order to proclaim his suzerainty over the whole of South India. The latter which is described in the records of the 30th year appears to have followed the former almost immediately; and as it is not alluded to in the records of the previous year, it should have taken place during the 30th year itself.

The date of Rājādhirāja's fourth war with the Cālukyas which ultimately terminated in the sack of Kalyāṇi cannot, however, be ascertained so easily. The second version of the *tingalēr-taru*, which appears for the first time in the inscriptions of the 33rd year, places it immediately after the war with Ceylon. As the events which, according to the other recension of the *praśasti*, happened subsequent to the Ceylonese War, are not noticed in this, it would appear as if this war had broken out immediately after the close of the war with Ceylon. Two other facts which also seem to suggest an early date for the Fourth Cālukya War must be taken into consideration in this connection. In the first place, it is

25. Ibid. P. 575.

26. 417 of 1902, S. I. I. viii. 3. "Iṅgāiyarḷ-īraivan alaṅgal muḍi yarindu mun-ṛanak-kuḍaiṅdu ten-ṛamiṅmaṅḍalamuḷvadum ilinda-v-ēḷkaḍal-īlam-pukku Iṅgēśan-ākiya Vikkīrama Pāṇḍiyan parumani muḍi tadiṅḍu."

described in a record said to be dated in the 26th year. Secondly, Rājādhirāja is said to have set out on the expedition from his camp at Tannāḍa, where he accepted a *Parani* in Tamil. Now, a *Parani* is an eulogistic poem praising the military exploits of a hero in whose honour it is written; and as Rājādhirāja I is the hero of the *Parani* under consideration, it is possible to argue that the poem was devoted to a description of his victory over some enemy whom he vanquished very probably at Tannāḍa itself. It may be remembered in this connection that, according to the inscriptions of his 27th year, Rājādhirāja won a victory over the Cālukyas at Tannāḍa during the course of his Koḷḷippākkai campaign. If it be assumed that Rājādhirāja's victory at Tannāḍa, and the acceptance of the *Parani* at that place occurred at the same time, then the war against Āhavamalla described in the second recension of *tingalēr-taru* must be assigned to a period anterior to the 26th year. Such an early date for the record, however, is highly improbable. The dubious character of the date of the record alleged to be of the 26th year has already been noted. Apart from the fact that its first figure is an editorial restoration, the internal evidence of the record distinctly indicates a much later date. The fact that Rājādhirāja accepted a *Parani* in his camp at Tannāḍa need not necessarily imply an early date for the war. Rājādhirāja, no doubt, won a victory over the Western Cālukya army at Tannāḍa while he was advancing upon Koḷḷippākkai; but that could not have been the only occasion, when he visited the place. Tannāḍa, i.e., the present Dhannāḍa in the Jammulamadugu taluk of the Cuddapah District, was situated on the direct route of the Cōḷa armies which were advancing against the Western Cālukya dominions; and it must have served as a convenient base for operations against Koḷḷippākkai in the north-east as well as Pūṇḍūr and Ēttagiri in the north-west. It is not, therefore, unlikely that Rājādhirāja had to encamp in the village on more than one occasion. As the present recension of the *praśasti* unlike the other refers only to the acceptance of the *Parani* and not actually to the victory which was the subject of its eulogy, it must have been composed on a later occasion and dedicated to the king appropriately enough at Tannāḍa, when he was camping in the place on a later occasion. Therefore, the campaign against Pūṇḍūr, Ēttagiri and Kalyāṇi described in this recension of the *praśasti* cannot be assigned to a date earlier than the 33rd year of the reign.

The final phase of this war, though described in the dubiously dated record assigned above to the 36th year, appears to have

actually come to an end before 34th year; for the performance of the *Virābhiṣēka* or the anointment of the heroes which was the last act of the victorious campaign is mentioned in the *Virā Pāṇḍyana-talaiyum* of that year. It may therefore be concluded that this war which commenced in the 33rd year came to an end in the next year.

The contentious problems in the chronology of Rājādhirāja's reign being thus settled, the events narrated in his *praśastis* may now be arranged in their proper order.

*Before 26th year=A.D. 1044.*

1. Victory over Vikramanāraṇan; and the assumption of the title Būpēndra Cōla.
2. War with the three allied kings of the South, Mānābaraṇan, Virakēraṇan, and Sundara Pāṇḍyan, who were the protectors of Kanni. (Virā Pāṇḍya whose death is referred to in the *Virā Pāṇḍyana-talaiyum* must have forfeited his head during this war).
3. War with the ruler of Vēṇāḍ, the liberation the chief of Kūpaka; the campaign against the Three of Rāmakuḍa and the Villavan; and the destruction of the latter's fleet at Kāndaḷūr-Śālai.

*Between the 26th and the 27th years=(A.D. 1044-45).*

4. First war with Āhavamallan; and the death of the Cālukyan commanders, Gaṇḍappayyan and Gangāḍaran; retreat of Vikki, Vijayādittan, and Śāngamayyan; victory at Tannāḍa; and the burning of Kollippākkai.

*28th year=A.D. 1046.*

- 5a. War with the rulers of Lankā: the slaying of (a) the king of the people of Lankā (i.e., Vikramabāhu), and (b) Vikrama Pāṇḍya who having lost his kingdom in South India took refuge in the island.

*29th year=A.D. 1047.*

- 5b. War with Lankā continued: the slaying of Virā Śilāmēgan, the ruler of the people of Kannakucci and of Śrī-vallaban Madanarājan of the lineage of Kannara,

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6. Second war with Āhavamallan: defeat of Gaṇḍara Dīnākarān, Nāraṇan, Gaṇapati, and Madusūdanān, and the burning of the palace of the Cālūkyas at Kāmpili.

7. Performance of the *Aśvamēdha* or the horse-sacrifice.

30th year=A.D. 1048.

8. Third war with Āhavamallan: the defeat of Cakravartī Vikramanāraṇan at the battle of Pūṇḍūr-kaṭaka-mānagara on the banks of the Pērār; the capture of the two younger brothers of Niḍuvaḍi (Niḍuvāl) Telunga Viccaya, Śilai Kaivuttarājan, Akkappayyan, Piḍaikkai Cōlan, Koṇḍaiyarājan, Kuṇiśil Muñjan, Daṇḍanāyakan Danañjayan, Vīra Mānikkan, Vāgai Viccayan and of his mother and his son.

The devastation of the Seven-and-half-lakh country, the sack of Pūṇḍūr; the destruction of the palace at Maṇṇantippai, and the setting up of a pillar of victory.

33rd year=A.D. 1051.

9. War with the Karnāṭakas: (Fourth war with Āhavamallan):—Acceptance of a *Paraṇi* poem in Tamil at Tannāḍa, victory over Niḍuvāl Viccayan at Pūṇḍūr and the capture of his father and his mother; arrival of Āhavamalla's spies at Rājādhirāja's camp; their capture and expulsion with inscribed tablets proclaiming the fear of Āhavamallan fastened on to their chests; crossing of the three rivers, Sirutūra, Perundūra and Tayvi-Vīmarasi; planting of the pillar of victory at Ēttagiri; the playing of the game of *caṇḍu* with the kings that submitted; fight with Nuḷamban, Kālidāsan, Cāmuṇḍan, Kōmmayyan and Villavarājan; offer of protection to the descendants of the Gūrjara King Uppala, slain (formerly) by Tailappan and the restoration (to them) of the crown of the former, seized and attached by the latter to his war-drum, and the subjugation of the Raṭṭappāḍi seven-and-half-lakh country.

34th year=A.D. 1052.

10. The arrival of Āhavamallan's *perkaḍai* to offer a challenge for a fresh battle; the episode of Āhavamallan and Āhavamalli; the sack of Kalyāṇi; the demolition of the royal palace in the city; the erection of a pillar of victory; the performance of the *Virābhīṣeka* on the *Virasimhāsana*; and the assumption of the title of Vijayarājendra.

Another event of the reign of Rājādhirāja remains yet to be noticed. No account of his last war with Āhavamallan is given in the inscriptions of his reign, owing to his death at Koppam during its course while leading the forces against the enemy. As the incidents of this war are fully described in the records of his younger brother and successor, Rājendra II, who accompanied the army and assumed the command after the former fell in battle, the date of the campaign can be ascertained without difficulty. The earliest reference to this war is found in a record of Tirunāgēśvaram dated in the 2nd year (A.D. 1054) of Rājendra's reign.<sup>27</sup> The incidents are briefly narrated in the short *prasasti* beginning with *Irattappādi*. It does not mention Rājādhirāja, and attributes, curiously enough, all the victories to Rājendra himself, though he did not actively participate in the battle until the death of his brother.<sup>28</sup> According to this *prasasti* the events of the campaign which happened before the battle of Koppam are (1) the conquest of Rattappādi, and (2) the planting of the pillar of victory at Kollāpuram. As Rājādhirāja who was leading the van against the Cālukya forces at Koppam is definitely stated to have been mortally wounded and to have gone 'up into the sky and become a sojourner in the country of Indra, where he was welcomed by the women of the sky',<sup>29</sup> the conquest of Rattappādi and the erection at Kollāpura of a pillar of victory which happened before the battle must be attributed to him and not to Rājendra II whose only justification for taking credit for the achievements of his elder brother seems to have been the death of the latter and his own presence with the invading army. The events of the war and his death during the course of it may therefore be assigned to the 36th or the last year of his reign.

36th year=A.D. 1054.

11. The fifth war with Āhavamallan: the conquest of the Rattappādi seven-and-half-lakh country; the planting of a pillar victory at Kollāpuram; the battle of Koppam; and the death in the battle of Rājādhirāja I.

27. 214 of 1911.

28. (S. I. I. iii. 55) *Irattappādi ēlarai ilakkamum-kondu tann-ānaiyil munn-ānai cella munnān tavirttuk-Kollāpurattu jayastambam nāṭṭi etir-amar perādu endicai nikaḷa paraiyadu karaṅga āṅgaḍu kēṭṭu Pērārriṅgaraiḱ=Koppattu vand-edir poruta Āhavamallanañji etc.*

29. 87 of 1895, 270 of 1915 Colas I. P. 308.

# ANTHROPO-GEOGRAPHY OF VEDIC INDIA\*

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## I. *Territorial Divisions:*

The earliest literature in which mention of the earth is made is the R̥g Veda Samhita. Reference is made in it to the earth (pṛthivi) as being very broad, though unfortunately its extent is not given.<sup>1</sup> It is significant that the Vedic hymns are completely silent on the route of the so-called Aryan invasion of India. It is also significant that the Vedic hymns contain no reference whatever to the nine-fold division of the earth later on adumbrated in the Purāṇas or the three-fold division of India, called then Bhāratavarsha. It is only in later Vedic literature that we meet with these three broad divisions—Brahmavarta or Aryavarta, Madhyadeśa and Dakṣiṇāpatha. But there is a very important expression in the R̥g Veda,<sup>2</sup> dakṣiṇāpada, evidently a reference to the Deccan and perhaps South India. It is said there that it was then a home for those banished from the land. This then gives an indication that the ancient Aryavarta stopped with the Vindhyas on the south. This political or geographical division continued till the time of the Kausītaki Upaniṣad<sup>3</sup> and the Mānava Dharmaśāstra.<sup>4</sup> In the last two books we have further references to the Madhyadeśa. But if we are to believe the Aitareya Brāhmaṇa,<sup>5</sup> which refers to madhyamapraṭiṣṭhadis, 'the country of the middle recently established,' then this geographical division of the Madhyadeśa should have been effected before the composition of the Aitareya Brāhmaṇa. This new kingdom was peopled by the Kurus, Pancalas, Vasas and Uśīnaras. As the authors of the

\*Paper read at the Eleventh All India Oriental Conference, Hyderabad.

1. RV. vii, 7. 2. 5: 99. 3, etc.
2. X, 61. 8.
3. II. 13.
4. See Bau. Dh. Sūtra, I, 1. 2. 13.
5. VIII, 14. 3.

Vedic Index observe, the Vasas and Uśīnaras slowly disappeared from the scene and the Madhyadeśa became practically the country of the Kuru-Pāncālas.<sup>6</sup> The boundaries of this Madhyadeśa shifted from time to time. In the Jātakas we often meet with the term Majjhimadeśa where learning is said to have been in evidence and in which were the Videha country and the Arañjaragiri.<sup>7</sup> According to the Divyāvadāna, Uśīragiri formed the northern boundary of this territorial division. Perhaps this is connected with Uśīnaras of the Aitareya Brāhmaṇa. The Buddhist texts give an indication that the Middle Country extended in the north upto the lower Himalayas, and in the south upto Avanti. Rhys Davids who has examined this question in extenso believes that by the Middle Country the Buddhists meant the whole of Aryan North India. This seems to me to be begging the question. For if the whole of North India is computed as the Middle Country, there must necessarily be some territory north of this middle country, recognised as being a part of the Indian continent. Therefore, it could not have been the whole of North India but definitely a portion of North India as also a portion of South India.<sup>8</sup>

Though Madhyadeśa formed a part of the Aryavarta, still there was the Aryavarta proper, which was the original home of the Aryans. I shall not discuss here the several unproved theories and hypotheses as to the first home of the Aryans. Suffice it to say that the internal evidence of the Ṛg Veda does not give any clue to an invasion of India by the Aryans. The whole difficulty is due to the acceptance of the fantastic theory of separate Aryan and Dravidian races, which is not historically a fact. According to the Mahābhāṣya of Patānjali the western boundary of Aryavarta consisted of the Adarsa mountains.<sup>9</sup> But it is rather difficult to locate the exact dividing lines between these ancient territorial divisions.

## II. Rivers:

In the Vedic literature a number of rivers are mentioned. The Ṛg Veda has a Nadi-stuti or a sūkta in praise of rivers.<sup>10</sup> Ārjikiya, Urñavati, Krumu (modern Kurum), Gomati

6. II, p. 126.

7. III, 115, 116: 364: 463.

8. JRAS 1904, p. 91.

9. Pāṇini, 2. 4. 10.

10. X. 75-6.



(identified with Gomāl), Tr̥ṣṭāmā (unidentified), Paruṣṇi (Ravi?) in connection with the battle of the Ten Kings, Marudvṛdhā, Mehatnu, Yamunā (Jamna) on whose banks lived the Śālvas, Vitastā (the Hydaspes of Greeks and Bidaspes of Ptolemy), Śutudrī (Sutlej and Śatadru of the post-Vedic period), Śvetyā, Silamāvati, Suṣomā (modern Suwan?), Susartu, are among the rivers referred to in the above sūkta. The above streams must generally be treated as tributaries of the Indus, though it is difficult to identify many of them.

The other rivers which are mentioned but though not in the Nadi-stuti are also interesting to a student of Vedic geography. The following are not yet identified: Amītabhā,<sup>11</sup> Yavyāvati,<sup>12</sup> Vibāli,<sup>13</sup> Siphā,<sup>14</sup> Sudāman.<sup>15</sup>

The river Rasā is believed to have been "originally the Araxes, or Jaxartes, because the Vendidad mentions the Ranhā, the Avestan form of Rasā."<sup>16</sup> There is the stream Vipas<sup>17</sup> which is certainly the modern Beas (the Bipasis of the Greeks). This is known as Vipāsā in later Indian literature. It is one of the several Indian rivers which have changed their original course to a considerable extent.<sup>18</sup> Then we have rivers of much importance, the Sarayū, Sarasvatī and Sindhu.<sup>19</sup> The Sarayū, the modern Sarju in Oudh played a glorious part in the days of Rāmāyaṇa as the sacred stream of the Ikṣvākus. One is amazed at finding that these three sacred streams are not mentioned in the Nadi-stuti. Sarasvatī was a holy stream on whose banks several sacrifices were conducted.<sup>20</sup> One view is that with the Dr̥ṣadvatī, this river formed the western boundary of the Brahmāvarta country.<sup>21</sup> Its divinity is hymned in more than one place in the Vedic texts,<sup>22</sup> and it is mentioned again as a river of the five tribes. For example, we call the

11. RV. 5. 53. 9.

12. Ibid. VI. 27. 6.

13. RV. IV. 30. 12.

14. RV. I. 104. 3.

15. Pañca Br. XXII, 18. 1.

16. V.I. ii, p. 209.

17. RV. IV, 30. 11.

18. Imp. Gaz. of India, VII, 138.

19. R.V. X, 64. 9.

20. Āśva. Śrauta Sūtra, XII, 6. 2. 3.

21. V.I. II, p. 435.

22. RV. II, 41. 16.

Kāverī as the river of the Cholas. There has been a considerable and vague discussion on the identification and location of this stream. No final decision seems to have been evolved. From the Oxus down to the modern Sarsuti, the stream has been traced, without caring for the tradition which alone seems to be correct. It was neither the Indus nor a mythical river. It was a real stream in the Vedic times and gradually it mingled with the Jumna as an under-current. This means that the stream has now changed its original course and that it had at a certain period merged itself with the Yamunā, by the side of which it must have been originally flowing. Equally important was the Sindhu or the Indus to the Vedic citizen.

Yet another river of the R̥g Veda is Suvāstu,<sup>23</sup> corresponding to the Swat, which is a tributary of the Kabul river (known as Kubha). This was of course the Soastos of Arrian. I must now mention two rivers which are not mentioned in the Samhitas but which are referred to in the Śatapatha Brāhmaṇa. One is the Reva,<sup>24</sup> apparently the Narmadā. It is regarded in later literature as a stream of great importance. The other is Sadānīra.<sup>25</sup> The very expression implies that it was a perennial stream. Its geographical importance lay in the fact that it formed the boundary between the Kosala and the Videha countries. Its identification with the modern Gandaki may be accepted.

### III. *Mountains:*

If we turn our attention to the mountain system as given in the Vedic texts, we are amazed to find that even important mountains like the Himalayas, Meru and Vindhya are not mentioned in the R̥g Veda or early Vedic literature. In the Atharva Veda however Himavant is referred to in more than one place.<sup>26</sup> According to the Aitareya Brāhmaṇa the Uttara Kurus and Uttara Madras are said to have had their home beyond the mountain.<sup>27</sup> When we come to the Puranic cosmogony we find the Mahāmeru or Meru, generally regarded as a mythical mountain, forming the centre of the universe. The Taittirīya Āraṇyaka

23. VII. 19. 37.

24. XII. 8. 1. 17.

25. Ibid. 1. 4. 1. 14-15.

26. VI. 95. 3, etc.

27. VIII. 14. 3.

refers to it in one place.<sup>28</sup> Though the term Parvata meaning a hill occurs in the Vedic literature, and though there is an unmistakable reference to the plants and products of the mountain including the minerals,<sup>29</sup> still the mountains are not named as such. For example the Kausītaki Upaniṣad alludes to the mountains of the north and the south,<sup>30</sup> but one wonders whether it is a reference to the Himalayas and the Vindhya or to the mountain ranges in general.

Other mountains which are mentioned in the later Vedic literature are the Krauñca<sup>31</sup> which is associated in the Puranic literature with God Skanda, Trikakud or the modern Trikota in the Himalayas,<sup>32</sup> Mūjavant or Munjavant of the Mahābhārata<sup>33</sup> a mountain of the Himalayan ranges, and Mainaka of the Himalayas.<sup>34</sup> Again the Baudhāyana Dharma Sūtra puts the Pāriyātra (also Pāripatra) hills as the southern boundary of the Aryavarta.<sup>35</sup> It appears the Pāriyātra hills form a part of the Vindhya ranges. This only shows that even in the time of Āśvalāyana the author of Baudhāyana Dharma Sūtra who flourished about the 6th century B.C. the Deccan was still considered for geographical purposes different from Aryavarta or North India. But it is really strange that the Vindhya are not at all mentioned in early Vedic literature. This shows not that they did not exist then but that the penetration of Aryan culture into the Deccan and South India had not then become a *fait accompli*.

#### IV. Seasons:

Seasons of course form a part of geography. The Vedic Indian knew four seasons—summer (naidāgha),<sup>36</sup> rainy season (prāvṛṣa, also varṣa)<sup>37</sup> winter or cold weather (hima or hemanta)<sup>38</sup> and autumn (śārada).<sup>39</sup> He had a conception of the good and the

28. 1. 7. 1. 3.

29. RV. x. 69. 6; AV. xix. 44. 6.

30. II. 13.

31. Taitt. Ar. 1. 31. 2.

32. AV. iv. 9. 8.

33. Nirukta. IX. 8.

34. Taitt. Ar. 1. 31. 2.

35. I. 2. 9.

36. AV. ix. 5. 31.

37. RV. viii. 103. 3. 9.

38. RV. i. 116. 8, etc; AV. xii. 1. 11.

39. RV. vii. 101. 6.

bad seasons, the latter being designated pāpasama, and the former puṇyasama.<sup>40</sup>

#### V. *Kingdoms and Tribes:*

The cardinal point about the Vedic countries and tribes hinges on an important text in the Śatapatha Brāhmaṇa<sup>41</sup> from which European scholars read a legend of the Aryan migration towards the east of India.<sup>42</sup> On the assumption of this migration to the East, the thesis is propounded that originally the Kuru-Pāncāla country was the great centre of Brahmanical culture, and that this spread to the Kāsis, Kosalas and Videhas these being a corporate group, for social and political purposes.<sup>43</sup> We are here interested in the geographical position of these countries. No doubt if the sacred theory of culture flowing always from the West to the East, whether it be from one country to another, or from one part of the country to another, is correct the thesis is sound. The Kosalas and the Videhas are geographically and traditionally older than the Kurus, if not the Pāñcalas. Tradition strongly supports the theory that the events of the Rāmāyaṇa occurred centuries prior to those narrated in the other interesting epic Mahābhārata. The Ikṣvaku line to which Rāma belonged had Ayodhyā as its capital, and this was the heart of the Kosala country. At that time the Videhas were equally flourishing and therefore matrimonial alliances were often entered into between the Kosalas and Videhas. Historically speaking, the Kurus and Pāñcalas became prominent at the time of the Mahābhārata War when the capital was shifted from Ayodhyā to Kurukṣetra, near about modern Delhi. Naturally the Kuru-Pāñcala kingdoms attained prominence in the Mahābhārata period. From this it is to be inferred that the Brahmanical culture, to use the term of the orientalist, flowed from Kosala-Videha to Kuru-Pāñcāla. But it would be more reasonable to take the view that in the Vedic period, the Vedic culture was flourishing both in the West and in the East of India. The Punjab was probably the original home of this culture which first spread towards the East and later towards the South.

With this background let us turn to the peoples of Vedic India. Among the Ṛg Vedic peoples we find Ajas, Anus, Alinas.

40. Taitt. S. III. 3. 8. 4.

41. I. 4. 1. 10 ff.

42. JRAS 1908, pp. 831, 837, 1138, 1143

43. V. I. i, pp. 154-5.

Kikatas, Vaikarnas, Gandharis, Cedis, Turvasus, Yadus, Trshtus, Druhyus, Pakthas, Visânins, Vricivants, Vaikaranas, Sigrus, Sivas, Parśus, Pr̥thus, Pārvasas, Pūrus, Bharatas, Bhalānas, Matsyas, Yakşus, and so on. It is rather difficult after this length of time to locate the geographical position occupied by these tribes but it is safe to say that these peoples belonged to North India. A study of these tribes in the R̥g Veda Samhita shows that most of them united themselves in a confederation against an inimical confederacy. For example the Ajas, named perhaps after their totem sheep, are mentioned together with Yakşus and Sigrus.<sup>44</sup> We hear of the Yakşus again in another place.<sup>45</sup> Apart from the fact that they were not friendly to the Trshtus, we cannot postulate anything about these tribes. To venture a conjecture the Yakşus were perhaps the primitive Yakşa tribes so much heard of in the epic and Purana literature of the later days. Similarly we find a confederation of Anus, Yadus, Turvaśas, Druhyus and Pūrus.<sup>46</sup> Luckily for us there is a clue to indicate that the Anus had their home on the banks of the river Paruṣṇī<sup>47</sup> Of these the Yadus were the predecessors of the Yadu or Yadava tribe that played a glorious part in the days of Kṛṣṇa and the Pāṇḍavas, and had its capital at the modern Muttra. We are told that the Yadus sent an expedition across the Sarayu river.<sup>48</sup> This means that they spread to different places in the country, and became a powerful ruling tribe in the epoch of the epic Mahābhārata. In one place, the Yadus figure with Turvaśas,<sup>49</sup> and these Turvaśas were noted for their horses. We have to infer that the Turvasa kingdom was celebrated for its excellent breed of horses. We are on firmer ground about the Druhyas and the geographical position occupied by them. That they were one of the tribes on the North-western frontier, and that they lived very near the Gandhara country are evident from some indications in the Samhita itself.<sup>50</sup> And the Pūrus are mentioned as being resident on the banks of the Sarasvatī.<sup>51</sup> It is reasonable to equate these tribes with the later Paurvas who established a powerful and glorious dynasty.

44. RV. vii, 18. 19.

45. VII, 8. 6. 19.

46. RV. I. 108. 8; VII 18. 14; VII. 10. 5.

47. VIII. 74. 15.

48. RV. I. 174. 9.

49. RV. VII. 19. 8.

50. RV. I. 108. 8.

51. RV. VII. 96. 2.

Here one may recall the tradition embedded in the Purāṇas that an ancient king Yayāti had five sons, Yadu, Turvasu, Druhyu, Anu and Pūru.<sup>52</sup> Each of these princes founded independent kingdoms and their descendants were the Yadus, Turvasus, Druhyus, Anus and Pūrus. The Vedic reference to these tribes undoubtedly has reference to their Puranic tradition, for we have a significant statement in the Vāyu Purāṇa that the Purāṇa was much older than the Vedic literature. The conclusion is irresistible that Yayāti and Uśanaṣ Śukra flourished long before the composition of the Ṛg Vedic saṃhita, thus pushing back the antiquity of Vedic India.

We have another group of tribes in Ṛg Veda—the Alinas Pakthas, Bhalānas, Śivas and Viṣāṇins.<sup>53</sup> Some of the old Indologists who tried to fix the probable geographical position occupied by some of the Vedic tribes, assigned the Alinas to the north-east of Kafiristan.<sup>54</sup> The same authorities hold that the Pakthas had their home in the modern Pakthura in East Afghanistan,<sup>55</sup> and that the Bhalānas were the peoples of the Bolan pass. This is conjectural. The Viṣāṇins must be another tribe of the North-west frontier. The Śivas were probably the inhabitants of the Śivapura, mentioned by the grammarian Pāṇini.<sup>56</sup> F. E. Pargiter identifies these Śivas with Śivis descended from Śivi Ausinara who was the son of Usīnara. Śiva Ausinara figures as one among the sixteen celebrated kings (ṣoḍaśa-rājika) of old.<sup>57</sup> He is said to have conquered the whole of the Punjab, then in possession of the Druhyus, with the aid of his four sons who in their turn became founders of four royal dynasties—Vṛṣadarbhas, Madras, Kekayas and Suviras.<sup>58</sup> It is assumed that the Druhyu king defeated by Śivi, occupied the north-west corner which came to be known as Gandhara, after him.<sup>59</sup> The Alinas were to venture a guess, the Ailas to which tribe the great Yayāti belonged. The Gandharis can be identified with the residents of the Gandhakar kingdom founded by the Druhyu

52. Vāyu Purāṇa, 93. 15-17.

53. RV. VII, 18. 7.

54. Alt. Leben. 431.

55. Ibid.

56. IV. 2. 109.

57. MHB. VII. 55, III, 197.

58. An. Ind. Hist. Tradition, p. 264.

59. Ibid.

king. According to Ṛg Veda Samhita this kingdom was noted for wool<sup>60</sup> and was on the southern bank of Kubha, the Kabul river.

Among other peoples the Cedis<sup>61</sup> and the Matsyas<sup>62</sup> may be now taken up for examination. In the Mahābhārata both figure together and are treated as friendly neighbours. The Matsyas were occupying at least in the epic times the modern states of Alwar, Jaipur and Bharatpur.<sup>63</sup> Both the Cedis and the Matsyas traced their descent to their illustrious ancestor Vasu, perhaps a very ancient Vedic king and not exactly to Sudhanvan, son of Kuru found in the Puranas.<sup>64</sup> We know how the fame of these dynasties was revived in the days of the Mahābhārata. For, the Kurus and Pāñcālas come into prominence in the Brāhmaṇa literature, which is later than the Ṛg Veda Samhita in chronology.<sup>65</sup> We are in the realm of speculation when we take the Vaikarṇas<sup>66</sup> to have belonged to an original tribe from which the Kurus or Ṛṣṭu Bharatas emerged. It may be noted in passing that the Vaikarṇas are to be located on the banks of the Sindhu (Indus) and Asiknī rivers. According to one authority the Madhyadeśa was the home of the Ṛṣṭu Bharatas. The exact location of the Bharatas is again difficult to ascertain though we see them lords of Kāsis and worshippers of Ganga and Yamuna in the Śatapatha Brāhmaṇa.<sup>67</sup> The Ṛg Veda Samhita mentions the Ṛṣṭus together with the Śṛñjayas, and as allies of Sudas in his war against the ten kings. Their geographical position was contiguous to the Sarasvati. The Śṛñjayas who were occupying the North Pāñcāla kingdom, i.e., the territory north of the Ganges, were an old Vedic people contemporaneous with Sudāsa.

While this was the position with regard to the various tribes in the epoch of the Ṛg Veda, subsequently we hear of more tribes coming into prominence. This was so in the time of the Atharva Veda and the Brāhmaṇa literature. For example, mention is made

60. I. 126. 7.

61. RV. VIII. 5. 37. 9.

62. VII. 18. 6.

63. V. A. Smith, ZDMG, 56, 675; Dikshitar, *Matsya Purana, A Study*, p. 20.

64. Va. 99. 217-28.

65. Ait. Br. VIII. 14.

66. RV. VII. 18. 11.

67. 135. 4. 11-21.

of the Angas who are not referred to at all in the Ṛg Veda Samhita but occur in the Atharva Veda.<sup>68</sup> The Angas were the people of the Angadeśa, which lay next to the Magadha, the modern Bihar. From the fact that they were a tribe belonging to East India and that they are not mentioned in the earlier Samhita literature, Pargiter comes to the conclusion that they must have been non-Aryan and must have crossed to India over the seas.<sup>69</sup> This is again begging the question of the race theory and race conflicts. I think scholars of the present day would not attach much value to this theory. There is nothing to indicate that they were alien to the Indian soil and that they came to India from over the seas. But according to Indian tradition embedded in the Puranas, they were the people of Angadeśa founded by a son of Bali. Further we have Anga Aurava, the celebrated author of Ṛg Veda X. 138. Pargiter is not inclined to connect this Anga either with the country of that name or with its people. Still I feel this is an unmistakable reference to Aurava who hailed from Angadeśa. If this interpretation be accepted—I do not see any reason why it should not be—then Anga at the time of the Ṛg Veda was a flourishing country full of reputed sages like Aurava. This would knock the bottom out of the theory of a non-Aryan tribe migrating from abroad to East India.

In the Brāhmaṇas we hear of Udīcyas, literally people of the north.<sup>70</sup> These are said to have been in close touch with the Kurupāñcālas who figure again prominently in the epoch of the Brāhmaṇas.<sup>71</sup> We are told that these Udīcyas who were generally treated as belonging to Gandhara and Kashmir spoke pure Samskrit language. Already mention has been made of the Kurus and the Pancalas who were the people of the Madhyadeśa which can be inferred from contact with the Udīcyas mentioned with some prominence. Apparently the Kurus and the Pāñcālas were friendly neighbours and formed a group of allies. Among the Kurus the Aitareya Brāhmaṇa refers to a tribe of the Uttara Kurus.<sup>72</sup> It may be mentioned in passing that the reputed author of the Śilappadikāram refers to the constant delights of the Uttara Kuru country, in the opening canto. Whether it is a

68. V. 22. 14.

69. JRAS 1908, p. 852.

70. Sat. Br. XI, 4. 1. 1.

71. Ib. VI. 2. 3. 15.

72. VIII. 14 and 23.



reference to the happy vale of Kashmir or to a kingdom beyond the Himalayas we cannot say definitely on the strength of the available information. It was considered to be the home of the gods (devakṣetra). In the same manner we have to treat the other tribe, the Uttara Madras occurring in the Aitareya Brāhmaṇa. Zimmer opines that they occupied a place not far from the country of the Kambhojas.<sup>73</sup> Another point to be noted in this connection is that the Kuru-Pāñcālas are mentioned together with the Vasas and Uśīnaras, and the three are all geographically grouped as peoples of the Madhyadeśa.<sup>74</sup> The Uśīnaras were a later branch of the Anava line. For the Puranas record a tradition that Uśīnara was a son of Mahāmanas who is considered by Pargiter among the successors of Anu,<sup>75</sup> as the seventh of that name. It is also said that Titikṣu, brother of Uśīnara founded a kingdom in the Angadesa or east Bihar. Weber is of opinion that these Uśīnaras were the forefathers of the later Kāsis and Videhas.<sup>76</sup> There is no clue whatsoever to identify the tribe Vasas. Reference has been made above to the Kambhojas who for the first time are mentioned in Yāskā's Nirukta.<sup>77</sup> They had not become prominent even in the age of the Brāhmaṇas.

Yet another tradition furnished by the Aitareya Brāhmaṇa is that Viśvāmitra the sage adopted Sunahśepa as his son to the chagrin of his natural sons. The fifty sons of the sage refused to recognise the adoption of Sunahśepa. On this the sage in wrath is said to have cursed his own sons to become outcastes. These sons left their home and made Dekhan their home, and were responsible for several groups of people who were deemed un-Aryan. There were the Andhras, Puṇḍras, Sabaras, Pulindas, Mūtibas.<sup>78</sup> This shows that the degraded Brahmans and Kṣatriyas probably settled in countries below the Vindhya and entered into matrimonial alliances with the women of the south. This is probably the origin of some of these tribes. Most of them like their compatriots, the Niṣādhas who occur in Taittirīya Samhita,<sup>79</sup> and who are supposed to have sprung from the first king Pṛthu,

73. op. cit., p. 102.

74. Ait. Br. VIII. 14.

75. Ind. Hist. Tradition, p. 87.

76. Baudh. Śrauta Sūtra, 21. 13—Ind. Studien, I, pp. 212-13

77. II. 2.

78. Ait. Br., VII. 18.

79. IV. 5. 4. 2; Ait. Br. VIII. 11.

were aboriginals with whom the civilised man came into contact and established marriage relationships. Thus arose a number of mixed castes to which the Mānavadharmasāstra devotes a special section (ch. 10). Evidently these tribes were still in the lower stage of culture and attained a status in the Aryan fold only after contact with them extending over ages. The Puṇḍras however got their name from Puṇḍra, one of the sons of Bali, and a brother of Anga. If this tradition is correct, the Puṇḍra kingdom should have been one of the eastern kingdoms rather than one of the southern. The Aitareya Brāhmaṇa mentions the Prāciyas, literally the people of the east, evidently a reference to the kingdoms corresponding to the modern Bengal and Bihar. The origin of Vanga (Bengal) is again to be traced to Vanga, son of Bali, as also of Magadha famous for its bards who were requisitioned by the kings of ancient India for singing their deeds of glory day after day. Ambaṣṭhas<sup>80</sup> and the Kāraskaras<sup>81</sup> are other tribes; the former is mentioned in the Brāhmaṇas and the latter in the Dharmasūtras of Āpastamba and Baudhāyana. The Ambaṣṭhas were probably of the Uśinara line as is evident from the Brahmāṇḍa, Vāyu and other Purāṇas, and had their kingdom along the eastern boundary of the Panjab. About the Kāraskaras we have no other evidence as to their habitation.

The Atharva Veda refers to a number of new tribes like the Bālhikas, Mūjavants, Mahāvarṣas or Mahavṛṣas, Mucipas, Mūtibas, Muvipas, most of whom were perhaps peoples of Iran and barbarians in the eyes of the followers of the Aryan culture.<sup>82</sup> Added to this are the Bahikas of the Śatapatha Brahmāṇa<sup>83</sup> and the Śabaras of the Aitareya Brāhmaṇa.<sup>84</sup> Some of these were mountain tribes and foresters. It is difficult to locate them with any certainty. I shall close this section with a passing reference to the term Pañcajana occurring in the Vedic literature.<sup>85</sup> These five peoples are generally taken to be Anus, Druhyus, Turvasus, Yadus and Pūrus, all located more or less near the river Sarasvatī. The interpretation offered by Sāyana, the celebrated commentator, is

80. Ait. Br. VIII, 21.

81. Ap. Dh. sutra, 22. 6. 8.

82. V. 22. 4. 5. 7. 8. 9.

83. I. 7. 38.

84. VII. 18. 2.

85. Ait. Br. III, 31; R. V. VIII. 9. 2, etc.

that they represented the four castes and the Niṣādhas.<sup>86</sup> This is not improbable because there were so many peoples in Vedic India and there is no point in picking out only these five tribes for mention. Perhaps as I have said elsewhere these five, represented the peoples of those days grouped according to the geographical division of the land, and resembled the peoples of the Pālai, Mullai, Kurinji, Neydal and Marudam regions of the ancient Tamil land

#### VI. *Some place names:*

We have some interesting place names in the Vedic texts. The Pañcavamsa Brāhmaṇa mentions Plakṣa Prāśravana as a place at a distance of 44 days' journey from the locality where the Sarasvatī disappears.<sup>87</sup> The latter was known as Vinaśana, in the modern Patiala district. The Taittiriya Brāhmaṇa mentions a certain Dayyāmpāti of Plakṣa.<sup>88</sup> Originally the locality must be Plakṣa and later on Prāśravana was added. We have a place Triplakṣa where the Dṛṣadvatī is said to have disappeared.<sup>89</sup>

A second place name is Maṣṇāra where a Kuru king is said to have fought and won a victory.<sup>90</sup> The Pañcavamsa Brāhmaṇa refers to a place Munimaraṇa<sup>91</sup> which was apparently the home of the Vaikhānasas, a group of ancient sages. It is said that these were slain by one Rahasyu Devamālin.

According to the Chandogya Upaniṣad there was a town Raikva-Parna in the kingdom of the Mahāvṛṣas.<sup>92</sup> And the term Raikva often occurs in that Upaniṣad as the name of a man of some note. Apparently the locality was christened after him. Other place names occurring in the Aitareya Brāhmaṇa are Śāciguṇa and Sarva-caru.<sup>93</sup> The former is to be located perhaps in the country of the Bharatas.

We have similar place names whose identification defies even astute scholars. Urjayanti is said to be a castle town, the capital

86. RV. 1. 7. 9.

87. XXV. 10. 16. 22.

88. III. 10. 9. 3. 5.

89. Pana. Br. XXV. 13. 47.

90. VIII. 23. 3; Ait. Br. (cf. Bha. P. V. 13. 26 ff.).

91. XIV. 4. 7.

92. IV. 2. 5.

93. VIII. 23. 4; VI. 1. 1.

of Nārinaya. Beyond this nothing is known about it.<sup>94</sup> The Yajur Veda Samhita mentions the city Kāmpila<sup>95</sup> perhaps the later Kāmpilya of the Pāñcāla country. There is Kāra-pacava on the river Yamuna.<sup>96</sup> There is again Karoti where Tura Kāvāṣeya performed a sacrifice.<sup>97</sup> The Brāhmanas mention the celebrated Kurukṣetra sacred on account of a number of streams and lakes. From the boundaries mentioned in the Taittirīya Āraṇyaka, the authors of the *Vedic Index* are inclined to locate the Kurukṣetra proper in the modern Sirhind.<sup>98</sup> The Āraṇyaka places Tūrghna to the north of Kurukṣetra. Kauśāmbi, another famous city, is mentioned in a reference to Kauśāmbeya in the Śatapatha Brāhmaṇa<sup>99</sup> This work again mentions a certain Nāḍapit as the native place of Bharata.<sup>100</sup> From the paucity of names, we have to judge that these were some of the prominent towns, capitals of some kingdoms, while the bulk of India was primarily a land of villages designated as grāma, a position true even at the present day.

#### VII. Occupations and Professions:

We shall now pass on to examine the occupation of the people. India has been through the ages the land of occupational castes and groups. Among the occupations we find smith (karmāra),<sup>101</sup> ploughmen (kṛṣṭi), potter (mrtpaca), herdsman (paśupa), carpenter (takṣan), fisherman (puñjiṣṭha), barber (vapṛ), boatman (nāvaja), jeweller (maṇikārs), basketmaker (biḍālākara), washerman (malaga), dyer (rājayatri), ropemaker (rajjusarja) and weaver (vayitri).<sup>102</sup> The large variety and number of occupations show at once the advanced nature of the culture and civilisation of Vedic peoples. It is wrong to call them peoples still in the stage of pastoral culture. That they were agricultural (kṛṣṭi), and used ploughshare (langala), sickle (dātra), threshing floor (khala), and measuring vessel (urdara), is evident from the numerous references in Vedic literature.

94. RV. II. 13. 8.

95. Taitt. S. VII. 4. 19. 1.

96. Panca Br. XXV. 10. 23.

97. Śat. Br. IX. 5. 2. 15.

98. I. p. 170.

99. XII. 2. 2. 13.

100. XIII. 5. 4. 13.

101. RV. X. 72. 2.

102. Pan. Br. I. 8. 9. The term suggests these were largely women.

The grains cultivated included rice (vr̥hi), wheat (godhuma), barley (yava), and sesamum (tila).<sup>103</sup> In the matter of clothing they used embroidered (peśas), as well as plain garments (paridhāna, paṇḍva).<sup>104</sup> Wool (avi),<sup>105</sup> silk<sup>106</sup> and skin (ajina)<sup>107</sup> were generally used as materials. In addition to these occupational groups, we meet with priests (ṛtviks), merchants (vaṇiks), and royal officials including soldiers. They had a sound knowledge of almost all metals, gold, silver (rajata), copper (loha), lead (sīsa), and iron (ayas) and the ornaments and implements mentioned show that there were experts who could work on these different metals. They knew shipbuilding (nau plava) among other industries and carried on trade both by land and by sea (samudra).

103. For details see V. I., i, pp. 181-82.

104. RV. II. 3. 6.

105. RV. IX. 109. 16.

106. AV. 18. 4. 31.

107. AV. V. 21. 7.

## INDIA'S POSITION VIS-A-VIS INTERNATIONAL CURRENCY PLANS

By

C. W. B. ZACHARIAS

There is undoubtedly a large measure of similarity in the purposes and objectives of the British and American currency plans. Both are designed to expand foreign trade, to maintain stable rates of exchange and to provide adequate quantities of media of payment. Both contemplate the restoration of the gold standard in member states immediately the war is over. But behind these similarities exist fundamental differences in technique and the mode of approach.

The British approach is characteristically that of a debtor country which in the post-war period will have to import large quantities of goods for which it cannot pay with exports or with gold, and which for its existence and continued prosperity will require a growing volume of foreign trade. The American approach, on the other hand, is that of a large creditor country self-sufficient for the most part, to which foreign trade is a luxury, yet none the less desired as an outlet for its surplus goods and as an instrument of power to do good or evil to the rest of the world. This difference in approach is unmistakably evident in the provisions of the plans. The American plan gives international applicability to a known and mastered technique under which the creditor country will immediately get paid for all its exports in its own currency. There is no need therefore for the creditor to wait for payment or to import unwanted goods, to lower its tariff or to lend abroad. The onus of adjustment is thrown almost entirely on the debtors. No doubt provisions exist calling upon creditors to adopt corrective measures if the Fund's holdings of their currencies should go below 20% of their quotas (according to the revised version of the plan), but the decision in the matter would appear to rest entirely with the creditors themselves. Scarce currencies will be rationed, and in order that the export trade of those countries may not suffer, special measures will be taken by the Fund to increase its holdings of such currencies.

Under the British plan, however, what the creditor country receives for its export surplus is a bancor credit balance with the Union, convertible neither into gold nor into local currency and useful only for effecting international payments. Self-interest and the necessity to avoid the penalties under the plan will compel the creditor country to liquidate the balance as quickly as possible either by importing goods or by lending abroad. The British plan is obviously based on the principle that international equilibrium can be attained only by throwing the responsibility of adjustment equally on debtor and creditor. Both debtors and creditors are subject to penalties and may be called upon to adopt specified corrective measures.

The Bancor of the British plan is an international currency designed to take its place alongside of gold as an alternative means of payment. There is little in common between it and the Unitas. The latter is merely a unit of account for the purpose of keeping the accounts of the Fund. It does not supplant or supplement existing means of payment and is wholly unnecessary for the working of the plan. It was invented, perhaps, to evade the problem of choosing between the dollar and the pound and possibly to dispel the suspicion that any one country had a predominant voice in the management of the Fund. The Bancor is truly bank money, created by the Union to facilitate international payment. It has a gold value given to it, a concession to monetary orthodoxy and perhaps to the gold interest, but has no gold backing to fix and sustain that value. The British plan is a novel experiment, an attempt indeed to effect a compromise in the international field between the principles of the gold standard and the principles of managed currency.

The British scheme is manifestly expansionist. The bancor creations of the Clearing Union estimated at £9000 million if all countries participate in it or £6000 million if only the United and Allied nations join it,<sup>1</sup> will be a clear addition to world purchasing power. The whole of this money will not however be available. All members cannot be debtors at the same time, and the plan does not contemplate the attainment of the full quota by any debtor. On the supposition that debtors are in debt only

1. Essentials in Post-War Currency Schemes, J. P. Edwards, *The Bankers' Magazine*, December 1943.

to a quarter of the quota and further that only some countries are in debt, the additional purchasing power will not probably exceed £750 million or roughly \$3000 million. On the face of it this would indicate a 21% increase in the total value of the import trade of the world which was in 1938 \$14232 million.<sup>2</sup> The increase will be 42% if half the quota is reached and 63% if three-quarters is reached. These figures are however misleading, for allowance has to be made for the higher prices prevailing everywhere. The expansion will then be found to be of lower percentage. Nevertheless these figures are useful in making a comparison with the American plan.

On the assumption that the countries of the world do not change their monetary policies, the American plan would be less expansionist for the reason that the total of quotas is much less and further that it requires an initial contribution in gold and a percentage surrender of gold or foreign exchanges for overdraft. Under the permissible quotas of the revised plan, countries with large gold and foreign exchange holdings can expand their trade in the first year of operation by only 25% of their quota and thereafter by 50%. Poorer countries with less gold and foreign exchange may expand in the first year by 50% and thereafter by 100%.<sup>3</sup> 100% is the maximum possible for any country without the special approval of the Board. And since this privilege will be enjoyed only by a few countries the expansion will be much less for the world as a whole.

Contrary to its claims, the British plan would seem to require some degree of outside management for its successful working. The bancor is available only for transfer from one account to another, and since it is not convertible into gold or local currency, the Central Banks of the member states will have the responsibility of creating or withdrawing local money according as the country in question is running up a credit or debit bancor balance. There is the need for importers paying and exporters receiving payment. This can be ensured only in the following manner. The Central Bank of the debtor country on receiving money from the importers

2. Statistical Year-Book of the League of Nations.

3. This calculation was made by deducting the gold and foreign exchange a member is required to surrender from the permissible quotas. The possible increase in importation is really measured by the difference.



should impound the money, and conversely the Central Bank of the creditor country on being advised of the credit bancor balance should create new money with bancor as backing to effect payment to the exporters. It does not seem as though this necessity can be avoided, and it is relevant to ask whether the new arrangement is an improvement at all on the old gold standard. The contraction of currency in a debtor country and the expansion of currency in a creditor country would have deflationary and inflationary effects respectively, just as under an outflow or inflow of gold, to avoid which the Central Banks should indulge in open market operations. The deflation or inflation, if it is of moderate dimensions, can certainly be neglected and should be allowed to function as a necessary corrective. The permissible fluctuations in the rate of exchange can be engineered only just that way. This is perhaps what will happen under the American plan which is less expansionist. If however deflation or inflation of a high degree results under either plan from the passive attitude of the Central Bank, its interference in the open market would become imperative to safeguard the internal situation and to maintain the stability of the rate of exchange. Member states are required under the plan to ensure the stability of the rates agreed upon and at least in fulfilment of this undertaking Central Banks will have to practise a little management. Open market technique is now a well-known technique, practised even by the newly established Central Banks, and few Central Banks will find it difficult to implement it in the daily management of trade balances. Still the necessity for outside management detracts from the 'internal stabilizing' character of the plan.

Both plans place a great deal of emphasis on the stability of exchange rates and under both schemes the new international organ secures a large degree of control over them. But there is greater flexibility in the British plan. In the first place, the bancor is not unalterably linked to gold; secondly, every member state has the right to alter the rate of exchange once by 5% in certain circumstances; thirdly, a repetition of this is allowed with the approval of the Governing Board; fourthly, the Governing Board is required to give special consideration to appeals for an adjustment of the rate during the first five years; and lastly the decisions of the Board require only a simple majority. The rigidity of the American plan in its original draft has been considerably modified in the process of revision. The gold value of the Unitas can now be changed by an 85% vote. The four-fifths majority

originally required for a change in the rate has been reduced to three-fourths. A new provision to the effect that in the first three years the rate may be changed by not more than 10% by a simple majority vote has been included. Still a member state will find it difficult enough to secure the approval of the Board for a change.

The gulf between the two plans is perhaps not unbridgeable, and the talks now going on between the experts of the two countries may conceivably result in an agreed formula. But any compromise effected should retain the characteristic features of both plans and should also register the greatest improvement on the international gold standard. This would be more easily attained by adopting the British plan as the basis and supplementing it by the good features of the American plan. It is easier to graft some of the provisions of the American scheme on to the British plan than vice versa without sacrificing the signal contribution of the British experts to the solution of the problem. In spite of our greatly enlarged gold holding to-day and the increased activity of the gold producing countries, the potential danger in the post-war period is a repetition of the experience of the inter-war period. The proposed international organization should make that impossible. The bancor of the British plan, capable of expansion and contraction with the changing 'needs of trade' is just the alternative to gold the world so urgently needs, and since it is of no use in domestic transactions, compulsion will be exerted on both creditor and debtor to make them resort to those very correctives which the situation would demand. Furthermore, accession to the British scheme is easier, for it involves no initial contribution in gold or foreign exchange, but only a readiness to receive payment for a country's export surplus in bancor and an undertaking to maintain stable exchanges. For a creditor country this means only the denial of the privilege of importing gold. Importation of goods from anywhere, foreign investments in any country, short-term lending or holding of idle balances are all possible under the scheme. The denial of the privilege of importing gold can hardly be accounted a real loss, as there is not much of a difference between holding idle gold and holding an idle bancor balance. To the debtor country it gives the greatly needed breathing space within which to correct the maladjustment and set its house in order. The situation that will develop in a creditor country will be identical with the effects of a gold sterilization policy without the corresponding deflationary pressure in the debtor country.

Once the scheme is set going its liquidity is assured by the necessary equality of credits and debits and by the impossibility of withdrawals of bancor. Creditors will have no inducement to contract out, for such procedure does not give them opportunities of using their bancor balance in ways which are not permitted to members. Debtors do not get rid of their obligations by resignation. Default by debtors has to be guarded against, and if suitable modifications are introduced in the provisions, it will not be difficult to vouchsafe the sustained allegiance of all members. Some sacrifice of the autonomy of a state is imposed, and a member lays itself open to interference in its internal economy, but the degree of interference is not greater than in the American plan and will arise only in the event of a debtor or creditor failing to act in a manner consistent with its position. The lack of assets in the Clearing Union to serve as backing to the bancor has been adversely commented upon.<sup>4</sup> This lack is the most characteristic feature of the British plan. Currency theory is to-day sufficiently advanced to recognize that the value of a currency depends not on the specific backing it has in gold or other assets, but upon its general acceptability. To implement this truth in an international currency plan is not a defect, but a merit and should receive recognition as such. If however anything is needed to sustain the value of bancor the member states may be required to give a collective guarantee. There is of course the necessity to safeguard the creditors against default by debtors. Existing provisions do not seem to be adequate for the purpose, for a debtor is required to submit acceptable collateral only when the debt exceeds  $\frac{1}{4}$  of the quota. A quarter of the quota may in some cases be as high as 750 million dollars (Britain for instance), and a default of this magnitude may, to say the least of it, be irksome to the Union. This defect may be corrected by a slight modification insisting on the submission of the country's own obligations for an overdraft upto  $\frac{1}{4}$  of the quota. This provision along with the already existing one that all countries should agree to pay into the Union any amounts due to a country in default will sufficiently safeguard the creditors. All things considered the British plan is better material with which to work.

So in the rest of this paper that plan will be made the basis of study with incidental references to the American and Canadian

4. V. K. R. V. Rao: India and International Currency Plans, pp. 12 and 20.

plans, and the main question under examination will be the manner in which the Indian economy will benefit from and be affected by joining the scheme.

## II

To define India's proper attitude to the currency plans is a difficult task, for none of the plans has assumed its final form and no one can be certain yet of the shape of things to come. That she in her own interests should join any international scheme when one is set up, admits of no doubt. Foreign trade has been of increasing importance to her in the past and will continue to be important in the post-war period. Whatever be the pace of industrialization, self-sufficiency is not immediately practicable, and as a long range policy its desirability is open to question. Nor can India hope to place the same reliance as of old on the automatic working of the gold standard. In the past, under adverse trade conditions she was able to pull through because of a certain degree of resilience she had, through the capacity of her nationals to lower their standard of living, a doubtful virtue, no doubt, and through the possession of a large stock of non-monetary gold. The loss of over Rs. 350 crores of gold during the depression period has not been made good subsequently, and the higher standard of life resulting from income inflation in the war period will make adjustment to a lower standard more difficult in the future.

To sustain the existing standard of life, foreign markets are needed for our exportable surplus. There will undoubtedly be a large demand for India's products for relief and rehabilitation in the war damaged countries, and from other countries too to make up for lost sources of supply. But it is futile to expect that an export surplus will be automatically forthcoming. Many countries in the post-war period will exhibit an inability to pay for the goods they urgently need either in goods or in gold, and unless there is some mechanism which enables them to postpone payment, the sellers will find it as difficult to sell as the buyers to buy. The world is only too familiar with this circumstance in trade depressions to question its truth. The fact that she will not immediately get payment for her exports is not a valid ground for curtailing exports. The advocates of an immediate restrictionist policy in exportation altogether neglect the depressing influence of such restriction on the economy and under-estimate the difficulties of a change-over to a new policy. Britain's liberal policy of foreign lending before 1914 and the much restricted American

policy of the same kind in the inter-war period did not have philanthropy at their back, but only self-interest. In India too self-interest and solicitude for the agricultural industry would demand the adoption of a similar policy to sustain the export trade.

From the point of view of India's future industrialization too accession to the scheme would seem to be imperative. The capital required for industrial development has to come to an appreciable extent from foreign countries. In fact the Bombay plan for industrial development specifically relies on foreign capital for this purpose. Such capital can be more easily got by India joining the projected World Bank than by independent negotiation. The provisions relating to that Bank are only in their early stage, but from what has already been said it would appear that membership of the monetary organization is a condition of membership there. This is perhaps in conformity with the policy the Sterling Bloc adopted when it was formed, of placing restraints on the freedom of non-members in floating loans in the London market. Any capital coming into India must necessarily come from the U.S.A. and a little later from the United Kingdom, and since both these countries seem to be serious about the creation of an international monetary organization, membership of that body may be laid down as a condition of help.

It is also necessary that India should be a member right from the start. Delay in the attainment of her full political status need not act as a hindrance, if her future status receives recognition immediately and she is given a place consistent with that status. The suggestion sometimes made that the inauguration of the scheme should be postponed to 5 years after the signing of the armistice to enable the world to solve the problem of relief and rehabilitation and to settle down to a more stable economic and political life does not seem to have much in it to commend itself. Apart from its long range usefulness, the scheme is ostensibly meant to help countries to tide over that difficult period, and if they manage somehow to muddle through without receiving such help they will find little use for it afterwards. Any such scheme involves the sacrifice in some measure of a State's autonomy and the immediate post-war period is the singularly appropriate time politically and psychologically for its inauguration. Nor is there much point in the suggestion that India should postpone accession till after the question of the standard and the rate of exchange

is finally settled.<sup>5</sup> India's problem is not peculiar here. The question of the appropriate rate of exchange bristles with difficulties, no doubt, but it would be sufficient if provision is made in the plan for a final settlement of these rates after the lapse of an adequate period.

It is a little difficult to calculate India's quota under the American plan, for though the aggregate value of all the quotas is known it is not yet known how many countries will participate in the scheme. However on the basis of national incomes, gold holdings and fluctuations in international payments India's quota will be about equal to the British quota and will be about  $\frac{1}{30}$  of the American.<sup>6</sup> The quota distribution in the American scheme is evidently very uneven. The U.S.A. will have a very large share of the total quota and other countries will have less than their requirements. It is very unlikely that the Indian quota will be enough to maintain her export trade even on the inter-war scale. Part of this quota has to be paid in gold, and since the absolute value of the quota cannot be calculated now, it is not possible to say whether the gold portion will be 30 or 50% (according to the revised plan). India occupies the ninth place in the world to-day in the matter of holding of monetary gold and so it is likely that the percentage will be nearer 50 than 30. Parting with this quantity of gold would have meant under the original American plan deflation of internal currency and attendant depressing influences. Fortunately, the revised plan permits the inclusion of the gold contribution to the quota in the legal reserve account of the Central Bank. Joining the scheme, therefore, will not involve deflation or a change in the legal reserve ratio.

In the British plan India's quota will be roughly \$506 million, about  $\frac{1}{6}$  of the British quota and  $\frac{1}{5}$  of U. S. A.'s. A quarter of this quota will be \$126 million or Rs. 42 crores. This will hardly enable the country to have an export surplus on trade account on the average inter-war scale which was Rs. 52 crores.<sup>7</sup> Part of this surplus will be offset by payments which India may have to make in respect of insurance, banking and shipping services rendered by foreigners. After making allowance for these

5. V. K. R. V. Rao: India and International Currency Plans, p. 26.

6. On the basis of a rough unweighted calculation.

7. V. K. R. V. Rao: India and International Currency Plans, p. 21.

and making allowance also for a complete repatriation of our sterling debt and a reduction of Home Charges to the vanishing point, this quota will not enable the country to maintain an export surplus on the normal inter-war scale at present day prices. The possibility of India importing more goods, especially capital goods, in the post-war period should not be left out of the calculation. But it should also be remembered that her large sterling balances will for sometime to come, pay for all her imports of capital goods. In all probability she will have an exportable surplus in excess of quarter of her quota. By and by it may be possible to reduce the surplus as her economy gets adjusted to her new role. In the immediate future however she can place very little reliance on her ability to lend abroad, for her creditor position is altogether nominal, enforced on her by the exigencies of war and attained through tremendous sacrifices on the part of her nationals. Nor can she import large quantities of consumption goods without jeopardizing the success of her expanding industries. The only satisfactory economic policy consistent with her industrial aspirations would be a steady decrease in her export trade spread over a period of time. Such a decrease is not immediately desirable or possible and coming on top of demobilization will be fraught with serious consequences to the economy. Therefore for the maintenance of her export surplus she needs a sufficient quota. If through a special assessment on the basis of population, national income and foreign trade she is given a larger quota she should welcome it.

The maintenance of exports against a bancor credit balance may mean the continuance or repetition of the situation existing in India now—an expansion of currency with bancor backing and a consequent rise of prices. But this alternative is preferable to the deflationary effects of restrictionism and can certainly be avoided if systematic resort is had to open market operations. To further safeguard the position the provision of the Canadian plan requiring the surrender of appropriate quantities of gold or foreign exchange for an overdraft in excess of half the quota may be included.

On the question of management India should demand modifications in the British plan. Here voting power is related to the quota of each country and it is specifically stated that only countries with the larger quotas will have independent representation on the Governing Board. This arrangement would appear to be most unreasonable. The quota of the British plan is not a contribution

that the country makes as in the American, but the measure of the overdraft permissible to it. To make that the basis of voting power is to give the whip hand to the debtors. If it is unthinkable that in a joint-stock bank the largest debtor of the bank should have the largest voting power, such a position is equally unthinkable in the proposed currency union. The proposal is calculated to confirm the natural suspicion of small powers that all international schemes are specifically designed to maintain the statusquo and perpetuate the economic hegemony of the Great Powers. India should as a condition of entry demand equal and separate representation for all member states on the Governing Board. Even under the existing provisions India may have separate representation. Excluding the enemy states, next to the United Kingdom and the U.S.A. India will have the largest quota, and so she will in all probability secure a permanent seat. But if on the ground of inferior political status she is to be denied that, it would not be worthwhile for her to enter the scheme at all. Political grouping with other Empire countries would be decidedly against her interests, for many of the colonies are her fierce competitors for export markets.

In addition to separate representation she should have equal voting power with others. The way the Union is to be constituted demands that. The Union will acquire powers over domestic policy hitherto untried, and national safety requires that in the determination of common policy all states should have an equal voice. According to certain estimates, the United Kingdom will have 16% and the U.S.A. 14% of the total votes.<sup>8</sup> The United Kingdom with her Empire countries can easily dominate the Union. This, by all means, should be prevented.

The relation of voting power to the quota of each country is in harmony with the general constitution of the American Fund, for it is based on the well-known business principle that the larger contributors should have the larger powers. But, as has been indicated already, the great inequality which characterizes the distribution of quotas in the American plan gives a predominantly large share of power to the U.S.A. Though the maximum limit of one-fifth of the aggregate basic votes is laid down for any

8. J. H. Riddle in an unpublished memorandum quoted by I. De Vegh—*The American Economic Review*, p. 538.



country regardless of its quota and though the 4/5 majority vote of the original draft has been reduced to 3/4 in revision, the U.S.A. can in conjunction with other Pan-American interests veto all proposals not to their advantage. If the American plan is to be made acceptable to smaller states and backward countries the dominance of American interests should be removed.

Provisions relating to the rate of exchange too require detailed scrutiny from the Indian point of view. These provisions fall into two groups, those relating to the initial determination of the rate and those others relating to subsequent alterations. In the British plan the fixing of the initial rate is left to be determined by agreement between the Union and the country concerned. This gives sufficient leeway for India to choose a rate that will be most appropriate to the internal situation then existing. The link with the sterling which will probably continue till the end of the war presents however some special difficulties in this matter. The continuance of the Sterling Bloc is consistent with the inauguration of an international monetary organization. But the question is whether any useful purpose will be served by continuing such blocs and whether in the particular case of India the continuation of the link will in any way be advantageous or necessary. In the past the signal service of the link was that it offered unique facilities for Indian trade with Empire countries and it eased the budgetary problem of meeting the external obligations of the Government of India. The total absence of the problem of external payments in the post-war period and the diversion of India's foreign trade from Britain to other countries in spite of artificial supports especially noticeable in the inter-war period, would both cast a doubt on the advisability of maintaining the sterling link. India's economic aspirations of the future and the growing divergence of the interests of the two countries also point to the necessity for a change. Moreover, the sterling is no longer the strong currency that it was. All these indicate that no useful purpose will be served by continuing the link.

Successive committees and commissions have advocated a gold standard for India, and now that the leading countries of the world are thinking of reviving the standard after the war in some form or other, India should take advantage of the opportunity and establish a gold standard. But it is very doubtful whether sufficient gold to serve as backing for the greatly expanded currency can be found immediately. So the most

advantageous course for her will be to link her currency to the bancor in a fixed but not unalterable relation and thus effect an indirect link with gold. This will facilitate, as will be explained later, the treatment of her huge sterling balances. The rate should be determined in the light of the situation existing at the time of entry.

The American revised proposal of adopting the rate of exchange which prevailed in July 1943 is altogether unacceptable to this country. The rupee is overvalued in terms of sterling to-day and the overvaluation is likely to be of even greater degree by the time the war is over. While the rupee sterling rate has remained steady throughout the war period, the internal purchasing power of the rupee as revealed by the price index compiled by the Economic Adviser to the Government of India had depreciated by 58·9% by the end of June 1943. The internal purchasing power of the sterling had depreciated during that period by only 36·8%.<sup>9</sup> The sterling too is overvalued on the dollar-sterling cross rate. That rate changed unfavourably to Britain in the early days of the war by 12 to 13%. Since then through severe and complete exchange control the rate has been maintained steady between 4·02½ and 4·03½ dollars to the pound. The rate of depreciation registered on the exchange has little relation however to the depreciation of the internal purchasing powers of the two currencies. The internal depreciation of the dollar by the end of June 1943 was only 26% as against 36·8% of the pound. In terms of the dollar therefore the rupee is very greatly overvalued and it will be most disastrous for the domestic economy of the country to accept that rate. It would mean a severe deflationary effort of perhaps the same magnitude as was enforced on Britain in 1925 by the mistaken policy of stabilization at the pre-war level.

Provisions relating to the subsequent revisions of the rate are the most difficult to harmonize with the national interests of the different countries. Here again the British plan is more elastic. Both plans contemplate a revision of the rates during the experimental period—three years in the American and five years in the British plan. Whether it is three years or five years the

9. On the basis of the index number of wholesale prices of all commodities published in the Federal Reserve Bulletin.

period is arbitrarily determined, and the question is whether a three year or a five year period is adequate for countries to settle down to a stable level. The last post-war boom went on intermittently for 11 years, and if past experience is any guide, the suggested periods are too short. But history may not repeat itself, the very existence of the international organ helping to shorten the period of adjustment. On the whole however the five year period gives a safer margin than the three year period. It will give India sufficient time to attain her full political status and take decisive action in currency and industrial policy.

The degree of change unilaterally permitted to a debtor country is 5% in the British plan. A repetition of this or a larger degree of change requires the approval of the Board. The American plan is very rigid, requiring the approval of the Board for any change, by a simple majority vote up to 10% during the first 3 years and thereafter by a 3/4 majority vote. Of the three plans the Canadian is the most elastic in this matter. It requires only a simple majority vote for the decisions of the Governing Board and permits a unilateral change by 10%. No plan specifically lays down the maximum degree of change the Board can approve. The matter will obviously be decided on merits in each individual case. But the point is whether the Board can be relied upon to permit a change at the appropriate moment and in the requisite degree. The example of the Tripartite Agreement in delaying French devaluation when the country urgently needed it, is not particularly reassuring in this connection. There is no guarantee that identical tactics will not be adopted by the Board to prevent changes in the rate. It is necessary therefore that every country should retain the power to effect a unilateral change in the rate up to a certain maximum. The maximum has to be arbitrarily determined, for little guidance can be got from the devaluations of history. The devaluation of the Franc of September 1936 was of the extent of 25·19 to 34·36%.<sup>10</sup> The further devaluation effected in May 1938 was by 39%. The American devaluation of 1934 was by 41 %.<sup>11</sup> It does not seem possible to give freedom to members to depreciate currencies on this scale without jeopardizing the

10. Paul Enzig: *World Finance 1935-1937*, p. 233.

11. Calculated from the change in the dollar price of gold from 20·67 a fine ounce to 35 a fine ounce—Federal Reserve Bulletin, September 1943, p. 903.

existence of the Union, nor would such major devaluations be needed unless abnormal conditions supervene. With flights of capital effectively prevented—and that is one of the purposes of the organization—moderate changes in the rate would be all that would be necessary to restore equilibrium. The Canadian proposal of a 10% unilateral change would in most cases serve the purpose, but it should be made applicable both ways to enable a country to appreciate currency too. The Indian problem in the immediate post-war period may conceivably be one of undue pressure exerted on her for goods needed by the world at large. To ward off that pressure in national interests and to prevent consequent inflation she should have the freedom to appreciate her currency even before her credit balance with the Union exceeds half the quota. In the American plan this is achieved by the rationing of the scarce currency and by the requirement that the sale of such currency should receive the approval of the country concerned. A corresponding safeguard for a creditor country is needed in the Clearing Union.

The above proposal, however, must be distinguished from another that has been made that freedom should be given to each country to have flexible rates of exchange, the range of fluctuation permitted being 10 or 15%.<sup>12</sup> This latter suggestion, by bringing into existence unstable rates of exchange, will introduce an element of uncertainty into trade relations. It is not calculated to generate confidence, but will on the other hand make the conduct of trade extremely risky. The whole purpose of the international organization, viz., to ensure stability of exchange rates, will be defeated by the inclusion of this provision. It is contrary to the letter and the spirit of the scheme. But the 10% change either upward or downward is a clean and simple departure from an earlier rate. Before and after the change stable rates will prevail.

In addition to this there should also be a provision allowing the Central Banks concerned to pass on the one per cent penalty payable on a credit or debit balance to the importers of goods. This may be done by the Central Bank of the debtor country shifting the penal rate on to the price of foreign exchange made available to the importers and the Central Bank of the creditor

<sup>12</sup> V. K. R. V. Rao: *India and International Currency Plans*, p. 35.

country deducting the penal interest from the local currency paid to the exporters. The exporters to safeguard themselves will naturally add the deduction to the price of the commodity. Probably the intention behind the penal interest is just this, but nothing is lost and something is gained by the inclusion of a specific provision. This will be one way of generating the minor fluctuations in the rate required by the scheme.

Such automatic correctives become almost imperative in view of the fact that under the British plan there does not seem to be any limit to the credit accumulations of a country. The overdraft facilities available to a debtor country are within specified limits. These limits will operate on the credit side also as far as total credits are concerned, for at no time can total credits be different from total debits. But it is quite within the provisions of the plan for a single country to be the creditor of all the others. The failure to specify a maximum for single credit balances may spell danger to a country like India. She cannot stand the strain of excessive demand for goods. Already during the war period she is being put to that strain and the continuance of that strain even after the war, is more than what her nationals can acquiesce in. The danger would appear to lie in the unco-ordinated nature of trade transactions. Exporters will sell at highest prices whether the buyers are foreigners or nationals, with the net result that the country will have a high level of prices together with an absolute scarcity of goods for internal consumption. It is therefore essential for India to begin to apply the correctives as soon as a quarter of the quota is exceeded without waiting for the Board to recommend equilibrating action.

The remedial measures specified for a creditor country under the British plan are (1) expansion of domestic credit and domestic demand, (2) appreciation of currency in terms of *bancor* or alternatively an increase in money rates of earnings, (3) reduction of tariffs and other discouragements against imports and (4) international developmental loans. For a poor country like India with a low per capita income the last is clearly ruled out, and the third would be so inconsistent with her policy of industrial expansion that it too can hardly be thought of. The other two are the only possible ones, and of the two, appreciation of currency is fraught with less serious consequences. A simple overvaluation of the rupee on the exchange without any deliberate attempt by the Central Bank to bring the internal and external values of the rupee into harmony will leave the internal situation of the

economy unaffected while it wards off foreign demand for the country's products. Some burden will be imposed upon the consumers through the rise of prices of imported goods, but that is inevitable for the attainment of the desired end. In order to be successful, however, the degree of appreciation should be adequate and the Governing Board should have the good sense to recommend a corrective that will serve its purpose. All this can, of course, be avoided if the country concerned has the option to prohibit the exportation of goods altogether. In spite of its evil savour this course of action will be simpler, more direct and more unflinching and there does not seem to be anything radically wrong in granting this right to a creditor country as a reserve power to be used when the other method proves unavailing.

To sum up, India should demand as a condition of entry the following modifications in the British plan:—

1. A special assessment based on population, national income and foreign trade.
2. Separate representation and equal voting power for all member states on the Governing Board.
3. The right to change the rate of exchange within 5 years from the termination of war after consultation with the Governing Board.
4. Power to the Central Banks of member states to alter the rate of exchange suitably so as to pass on the burden of the penalty of one per cent to the traders concerned.
5. The right to give effect to a unilateral change in the rate by 10% either way if the bancor credit or debit balance has exceeded  $\frac{1}{4}$  of the quota on the average of at least 2 years.
6. The reserve power to creditor countries to prohibit exports when corrective measures already taken prove ineffective.
7. The delivery of a country's own obligations as security for a debit balance up to quarter of the quota.
8. The surrender of an appropriate amount of gold or acceptable foreign exchange for all overdrafts in excess of half the quota.
9. A collective guarantee of the bancor by member states.

## III

The American plan includes detailed provisions for the regulation of abnormal balances held by some countries in others. The British plan contains only the brief statement, "that they constitute a problem of considerable importance and special difficulty" and that "there should be some special over-riding provision for dealing with the transitional period only by which, through the aid of the Clearing Union, such balances would remain liquid and convertible into bancor by the creditor country whilst there would be no corresponding strain on the bancor resources of the debtor country." It is significant that a plan prepared by the experts of a debtor country should omit the detailed consideration of this problem. Is it because it still defies solution by them or is there the implication that at the termination of war the only thing that can happen to these balances is cancellation? In view of what happened to German reparations and inter-allied debt in the last post-war period and in view of this inexplicable silence, the suspicion is natural. To India this matter is of vital importance, for curiously enough she holds a fairly large amount of these balances—an amount that is out of all proportion to her ability to lend—and the loss of this through cancellation would mean a moral and an economic shock to her. The sterling securities in the Issue Department of the Reserve Bank of India are estimated to rise to 950 crores by 31st March 1944, an increase of 890·5 crores over the pre-war figure.<sup>13</sup> Before the war is over the figure may rise to a very much higher level if the Financial Settlement between the two governments continues to be in operation. This is a sum of money which the country can ill afford to lose. It is essential therefore that a detailed examination should be conducted with a view to discovering the way in which the Clearing Union can be of aid in solving it.

The American solution for the problem is the purchase of these balances by the Fund from the country which holds them in exchange for local currency and the retransfer of 80% of the balances thus purchased equally to creditor and debtor against gold or such free currencies as the Fund may wish to accept over a period of twenty years at the rate of 2% per annum beginning from 3 years after the date of purchase. The remaining 20% will evidently be cancelled, but the Fund will be more than reimbursed by the penalty of 1% payable by both creditor and debtor on the amount of blocked balances sold to the Fund and also by the

13 Finance Member's Budget Speech, March 1944.

charge of one percent annually levied on debtor and creditor on the amount of such balances remaining to be retransferred. According to these provisions, the debtor will pay in all 90% of the balances in gold out of its trade, 50 to the Fund, 40 by way of purchase money and 10 by way of penalties, and 40 to the creditor. The creditor will receive full value in local currency from the Fund at the time of purchase, but will subsequently have to pay to the Fund 40% of value in gold for repurchase and 10% by way of penalties. It can however collect the 40% in goods from the debtor country. The original plan contemplated the purchase of all such abnormal balances, but in the revised plan the purchase is limited to 10% of the aggregate of the quotas of member states during the first two years of operation. The very large size of the balances has obviously necessitated this limitation.

These provisions are not sufficiently explanatory and have been made unnecessarily complex from the desire to have the joint guarantee of both debtor and creditor. It is not known how the Fund will secure the local currency needed for purchase. Since in the revised plan purchase is limited to 10% of the quotas, the required local currency may be taken out of the quotas. But that would reduce the Fund's holding of such currency, necessitate rationing and restrict the export trade of the creditor. Alternatively the Fund may borrow the needed local currency from the country concerned and keep that as a separate transaction. In that case the creditor country will merely be substituting the Fund's debt for the original debt, and in the absence of a guarantee that the debt will be liquidated in gold it would not be better off than before. The situation will be eased, however, if the country selling the abnormal balances runs up a debit balance with the Fund and provides the Fund with sufficient quantities of its currency. The requirement that the creditor should import goods in order to utilize these balances is perhaps implicit in the plan. The country will then find that the transfer of the balances to the Fund enables it to secure general purchasing power in exchange for some specific purchasing power.

The idea underlying these provisions seems to be fourfold, viz., that the creditor should secure immediate use of the balances, that the strain on the debtor should be spread over a period of years, that the creditor should purchase goods from the debtor up to a certain percentage of the debt and lastly that the Fund should be fully safeguarded. Of these purposes it is extremely doubtful if the first is advisable even from the creditor point of view. In India, for instance, where these sterling balances serve



as backing for currency in circulation, their immediate utilization would involve severe deflation. The substitution of *ad hoc* rupee securities for sterling securities as has been hinted at by the Finance Member in his recent budget speech will not really solve the problem unless the Government itself becomes a very large buyer of goods for investment purposes. If Government is the buyer all that it has to do is to pay for the goods in sterling and substitute *ad hoc* securities as backing for currency. But if importation is on private account and on a very large scale the rupee payments made by the importers to the Bank for sterling or other foreign exchanges will be so much reduction of currency in circulation the off-setting of which by open market operations will be attended with slender success. The amounts involved are so large. To avoid this and also to avoid the strain on the rest of the world, especially the debtor country, it is essential that the release of these balances should be gradual.

The other purposes underlying the American provisions can equally well be served by an agreement between debtor and creditor outside of the monetary organization. But in all such agreements the danger of unilateral blocking or even of default or repudiation is always present, and so it seems safer for the creditor country to receive the guarantee of the organization for the debt and convert at least a part of the balances into general international purchasing power. These objects may be secured in the Clearing Union by the following or similar provisions:

The creditor country should transfer the balances to the Clearing Union in return for a special bancor credit balance bearing interest at 1 or 1½% per annum releasable over a period of twenty years at the rate of 5% per annum commencing from 3 years after the transfer. Of the annual releasable quota half should be made available to the creditor in original balances and the other half for transfer to other accounts in the Union. The debtor country would have a corresponding special bancor debit balance with its own interest bearing securities as backing surrendered by the debtor or delivered by the creditor if it already has them. The debtor should agree to liquidate the debit at 5% per annum over the same period, half in local currency and the other half by off-setting with other accounts of the Union. If the period is considered too long it may be reduced to ten or fifteen years and the percentage of annual release correspondingly increased. The rate of interest may be fixed at a convenient point so as to leave a margin of difference between what the Union earns on the securities and what it

pays on the credit balance. This margin will reimburse the Union for all its incidental expenses. If necessary, bancor securities bearing the prescribed interest may be delivered to the creditor. These provisions will mean the gradual utilization of the balances and an insistence on the creditor importing goods including bullion to the full value of the balances half of which at least should be from the debtor country.

For India this plan would mean the substitution of bancor securities for sterling securities as Central Bank reserve and an opportunity to import goods and bullion up to half the value of the balances from anywhere and to carry on an import trade with the debtor up to the remaining value. The danger arising from the development of a seller's market in the debtor country is there, no doubt,<sup>14</sup> but in the absence of the Clearing Union's aid that danger will be greater. If the truth is borne in mind that the creditor country cannot realize its credits without importing goods and the debtor country cannot pay except in goods, this compromise will be seen to be of advantage to both. As and when the bancor credit is liquidated by importation of goods and bullion into the country the Central Bank should utilize the money it receives from importers to buy bullion within the country and convert non-monetary into monetary gold. The time will then be ripe for the adoption of the full gold standard in India. In the interim period requisite modifications of the Reserve Bank Act should be made.

P. S.—

Since this paper was sent to the press events have moved quickly. The U.S.A. and the U.K. experts issued an agreed statement and the Monetary Conference summoned by the American President met at Breton Woods. It is regrettable that the compromise effected is different from what this paper advocates. American influence and the need to placate American interests have been too strong for the U.K. experts and they have had to give up their cherished desire of seeing the world freed from its bondage to gold. Monetary orthodoxy dies hard, and to use the words of Edwin Cannan, the world still prefers to be barbarian. In spite of the increase in the aggregate of quotas to \$8 Billion, the new scheme appears to be less expansionist than even the White Plan, and gold still plays a dominant part. But member states are vouchsafed greater freedom in the determination of domestic policy and in the initial fixing and subsequent alterations of the rate of exchange. The Indian quota has been fixed at \$400 Million, inadequate for her needs, with five countries above her, thus denying her a permanent seat on the Executive Committee. But the most unfortunate part of the new scheme is the elimination of the question of abnormal war balances altogether. This greatly reduces the value of the plan to India.

14. See V. K. R. V. Rao: *India and International Currency plans*, p. 17.

## AN INSCRIPTION FROM PAṬṬADAKAL

By

K. A. NILAKANTA SASTRI

The inscription edited below was first noticed by Fleet in his *P., S., and O-C., Inscriptions* as No. 55 and again edited by the same talented epigraphist as No. CIV (IA. x pp. 166-7) in his Series of *Sanskrit and Old Canarese Inscriptions* in the *Indian Antiquary*. When I read this last edition of the record, I felt that the inscription deserved to be better known, and wrote to Rao Bahadur K. N. Dikshit, the Director-General of Archaeology, requesting him to procure for my use an impression of this inscription. I am grateful to him and to Dr. N. P. Chakravarti, Deputy-Director-General, for the promptness with which they arranged the taking of a fresh impression and its despatch to me, and for the readiness with which they accorded me permission to edit the inscription in the *Journal of the University of Madras*.

The inscription comprises five lines of writing engraved on the back face of the front pillar of the Virūpākṣa temple at Paṭṭadakal in the Bijapur district of the Bombay presidency. The same pillar bears on its front face an inscription of Lōkamahādēvī, the queen of Vikramāditya II, in characters that closely resemble our inscription as may be seen by a comparison of the facsimile given here with that of the other inscription reproduced by Fleet at IA. x, opposite p. 165. And it is perhaps no accident that the two inscriptions on this pillar are closely related in their subject matter. The inscription on the front face is a confirmation by the queen of the privileges which her father-in-law, Vijayāditya, had conferred on the singers of the temple (*gāndharvargge*); our inscription engraved on the back, relates to the subject of dancing. The temple of Lōkēśvara, the former name of the present Virūpākṣa, was built, or rather rebuilt, on an elaborate scale by Lōkamahādēvī<sup>1</sup> and most of the inscriptions in the temple are coeval with the present structure and belong to the early

years of the eighth century A.D., and this is also most probably the date of our inscription which bears no date.

The language is Sanskrit, written in fairly correct, high flown classical style. The form *Simgha* (1. 2) for *simha* may be due to the influence of the popular speech of the time. A visarga is omitted at the end of l. 4. The inscription is made up of two verses in the *Āryā* metre.

The engraving has been on the whole very carefully done; only the letter *na* in *paranata* in the second line was omitted in the first instance, and inserted later a little below and between the two adjacent letters, and this accounts for its position and unusually small size. The ligatures *sphu* and *hpa* with the *upadhmānīya* may be noted. Fleet read the first ligature as *spu* and corrected it into *sphu*, but this is not necessary in view of the hook attached inside *pa* to its right arm, clearly seen in the impression. He also read *natu* in the first line and corrected it into *nata*; but this again is not necessary—cf. *ta* here with *ta* in *nata* at the beginning of the second verse and *tu*, the penultimate letter in l. 3. The spirals at the beginning of the record and the ends of the two verses show that the spiral was used both as an auspicious symbol and as a stop. Fleet read the last word in the inscription as 'Achalada', but what was taken to be *da* by him is clearly not *da*, but possibly another stop mark indicating the end. Achala is obviously the name of the composer of the verses.

Summarising the two verses Fleet said that they were 'in praise of Achaldada-Bharata, the author of a work on dramatic composition'. His own translation of the inscription did not bear out this statement, and the name Achalada-Bharata is not warranted by the text. What we have in reality is a eulogy by Achala of an unnamed author who composed a work on Nāṭya, acting on the stage, in which he closely followed the views and tradition of Bharata; and this work was effective in putting a check on the prevalence of other schools of acting. Acting was an ancient art in India, and it is well-known that a *nata sūtra* of Śilāli is mentioned by Pāṇini.<sup>2</sup> Allowing for the exaggeration of the poet, we can still see that the differences between the schools were rather matters of acute controversy at one time, and that the



ॐ नमो भगवते वासुदेवाय ॥  
 श्रीकृष्णार्जुनसंवादे ॥  
 अर्जुन उवाच ॥ द्रुपद उवाच ॥  
 अर्जुन उवाच ॥ द्रुपद उवाच ॥  
 अर्जुन उवाच ॥ द्रुपद उवाच ॥  
 अर्जुन उवाच ॥ द्रुपद उवाच ॥  
 अर्जुन उवाच ॥ द्रुपद उवाच ॥

new work on *nāṭya* rendered the triumph of the Bharata school complete. We thus get a tantalising peep from this record into a forgotten chapter in the history of the Indian stage; but we have no information vouchsafed about the author of this triumph of Bharata in Western Deccan in the eighth century A.D.; we do not even know the name of the work or the language in which it was composed, which might have been either Sanskrit or Kannaḍa.

## TEKṬ

1. Bharata-nuta-vacana-raca-ā-viracita-naṭa-sēvyā
2. simgha-nādēna; para-naṭa-madāndhā-hastī-parihīna-madō
3. bhavatyēva || Naṭa-sēvyā-Bharata-mata-yuta-paṭuta-
4. ra-vacan-āśani-prapātena; kuṭil-onnata-naṭa-śaila (h)
5. sphuṭit-ānata-mastakaḥ-patati || Acala |

## TRANSLATION

The elephant, blind with rut, which is an actor of another school, is indeed deprived of his frenzy by the lion's roar of (*the rules*) that are to be observed of actors, framed in accordance with the arrangement of the celebrated sentences of Bharata. The mountain which is a crookedly eminent actor, falls down having its crest (head) broken open and bowed down by the fall of the thunderbolt which is a most skilful composition following the tradition (*mata*) of Bharata worthy to be observed by actors.—Acala. (Fleet's translation slightly altered).

# THE TERRIBLE MOTHER: A PSYCHOLOGICAL STUDY

By

DR. G. D. BOAZ

There is ample evidence to show that one of the most primitive forms of religion was the worship of goddesses in general and of the mother goddess in particular. Mother-goddess worship in diverse forms seem to have been prevalent almost all over the world.

A study of these mother-goddess cults with the accompanying ritual is very fascinating to the student of the psychology of mother-child love. Modern researches and clinical practice have brought out the extreme importance of this first sentiment of the child and the great part it plays in shaping most of the subsequent sentiments of love and hate in the individual. The mother symbol is enthroned in the very heart of man. Man's perception of motherhood in divinity followed naturally from his recognition of divinity in motherhood. The mother-child relation is the prototype of God's relation to man, so much so, we can say that the child's first call to religion comes from the realm of the mother. The sanctity of motherhood finds its fulfilment not only by imprinting upon the deeper layers of the human psyche a craving for religion but also in evoking a religious response by acting as a divine stimulus. Anthropologically, it may be right to say that the earliest divinity known to man was the mother-goddess, but from the religious point of view it is more correct to say that man first perceived the qualities of motherhood in God-head, his early experiences with his actual mother forming the empirical foundation.

Thus most of the characteristics of the primitive mother-goddess have been derived from the nature of the mother image which reigns supreme in the depths of the human mind. Even a casual study would reveal the various ways by which the benevolence and tenderness of the mother and of the mother-goddess are conceived and expressed by the human mind. But one also notices the qualities of destruction and anger with which the human mind has clothed its first apprehension of God-head, the figure of the mother-goddess. Though this tendency is common

to other parts of the world as well, perhaps it is true to say that it has reached its climax in India. The gentle and lovable Uma or Parvati becomes the terrible Kali or Durga. In the latter aspect she is clothed with all possible ideas of horror and terror. With a garland of skulls round her neck, with children as earrings, soaked in blood, with the tongue hanging out, hands of human victims dangling round the waist and dancing madly in the cremation ground, sometimes over the body of her own husband, Kali indeed presents the most grotesque and horrible figure that human mind could conceive.

'The dread mother dances naked in the battlefield,  
Her rolling tongue burns like a red flame of fire,  
Her dark tresses fly in the sky, sweeping away sun and stars,  
Red streams of blood run from her cloud-black limbs,  
and the world trembles and cracks under her tread.'

And yet, it is the same goddess of whom it is said,

'But we think of thee

As the untraversable ocean of mercy and nothing else.'

(Tagore).

What, then, is the basis of such a character in the experience of the child? Can we find it in the very nature of the empirical mother image? A strange feeling of terror towards the mother has been observed in psycho-analytic practice and ample discussion on this point can be found in the writings of some psychologists, notably in those of Jung and his followers. (In many psychopathological conditions, attitudes of love and fear towards the mother come to a sharp conflict without being properly co-ordinated. We shall presently discuss this ambivalent relation more fully. We may recall, however, the strange fact of addressing the witches of Europe as mothers, which is only a reversal of the process of conceiving a cruel and terrible mother). Hence the mother is sometimes also conceived of as terrible and as one who destroys and kills. Jung explains this ambivalent feeling of the child toward the mother as arising from the corresponding ambivalent nature of the mother, or as he puts it, "the dual role of the mother." Explanations of this dual role have been suggested by various people in different contexts. We shall consider here some of these theories put forward to explain this projection on the mother-goddess (or on the mother) of qualities that are calculated to strike horror and to create awe in the minds of men.



(i) Freudians find in this process what they call a castration anxiety. Strictly speaking this castration anxiety can only form part of the father-image and make the son hate his father. But no doubt it is true that if there is such an anxiety it can be projected on the mother also, if there was adequate reason to identify her with the father. The daughter will develop (according to this theory), a direct hatred of the mother because of the latter's 'stealing' the father from her; and the son through an identification of the mother with the father. Referring to the dance of Kali in her fearful aspect, Dr. Money-Kyrle, a Freudian, says, "Of this, at least, we can be fairly confident that Kali was a phallic goddess and that she castrated and destroyed her consort. No psycho-analyst could question this interpretation."<sup>1</sup> And he bases this interpretation on the meaning he gives to the skulls with which Kali is bedecked. He says that the skulls are the phalli of her sons. (Yet another phallic symbol!) Without discussing Freudian theories in any detail we would simply point out here that they have no universal application and that the Freudian analysis of mother-child attachment is true of only certain particular forms of society presupposing a particular ethos. The whole interpretation seems foreign and even fantastic, for the simple reason that there is no evidence for such a nuclear Oedipus complex in the unconscious of the Indian mind which created those figures and stories of Durga and Kali.

(ii) A more common explanation of this ambivalence (or the dual role of the mother) is that it represents the changes in the seasons and the whims of Nature. It is true that in a country like India we get extremes in seasonal changes which are sometimes unbearable. Mother Nature can be seen in her gentle and nourishing aspect in one moment and in the next moment in the garb of a fearful and mighty ogress, threatening to destroy the whole earth. In fact life and death seem to go hand in hand. It is not difficult to imagine, in some parts of India, a pleasant evening when life runs smoothly and all is peace; suddenly clouds gather up bringing death and darkness in their train, sweeping away life in a torrent of flood, storm and lightning, adding to the toll. It is possible then to find a partial explanation of the dual and contradictory nature of Durga in these vicissitudes of Nature. But these phenomena cannot offer a complete and ultimate

1. 'The Meaning of Sacrifice'. London, 1930, p. 101.

explanation. This dual role of Nature cannot be so strongly projected on the mother-goddess unless such a duality was also found either in the very nature of the mother-image, or in the attitude of the child to its mother. Worship of Durga or Kali is no mere reverence for a personification of the energy of Nature.

(iii) A variation of the above explanation is the suggestion that the figure of the terrible mother can be found in the birth-pangs of the mother. In Nature death and destruction are but the prelude to new life. The terrible aspect is only the outward expression of the 'groaning and travailing in pain when giving birth to a new life. Can it be that for a moment the mother, out of the pain of delivery, curses the husband and the child and wishes, as it were, the death of humanity? It is with this phenomenon in mind that B. C. Bhattacharya explains the wild dance of Kali as the darkness which enveloped the universe at the time of creation.<sup>2</sup> In her fierce aspects Kali is always represented as of black complexion. That this black complexion may stand for the darkness of the pain of delivery is supported by one of the stories in Markundaya Purana where we are told that Ambika comes out of the body of Parvati and that as a result of it she becomes black. Some people have objected to this explanation saying that it results from an unacceptable allegorical method of exegesis. We do not agree with this objection in-as-much as it is an attempt to find the explanation in the depths of reality, in the very nature of the archetypal mother image. At the same time we are not able to find this as the full and sole explanation. There are other theories with equal claims.

(iv) Yet another theory, which ultimately is not different from the above two, is suggested by Elliot Smith while discussing the legend of Re and Hathor, in which the destructive Sekhmet (Hathor herself) is represented as a fierce lion-headed goddess of war, slaughtering mankind and wading in blood. He finds the meaning of this legend in the ancient Egyptian practice of killing the king when his vitality showed signs of failing. The king is slain in order to preserve and release the life-giving energy. The goddess destroys and kills so that she may preserve the life of the community. The killing itself is an act of bestowing life. "Thus the Great Mother, the giver of life to all mankind, was

2. 'Indian Images', London, 1921. Part I, p. 41

faced with the dilemma that, to provide the king with the elixir to restore his youth, she had to slay mankind, to take the life she herself had given to her own children. Thus she acquired an evil reputation which was to stick to her throughout her career. She was not only the beneficent creator of all things and the bestower of all blessings; but she was also a demon of destruction who did not hesitate to slaughter even her own children".<sup>3</sup> This legend of Re and Hathor (Sekhmet) is not without its parallel among the stories narrating Durga's adventures, though there are some important differences. Instead of the goddess herself being lion-headed, Durga rides on a lion; and instead of mankind in general it is the demons who are the victims of her anger. And we have the same picture of torrents of blood flowing through which the victorious goddess dances to battle. One of the demons whom the goddess Durga kills is himself called Durga. (According to popular tradition Parvati gets the name Durga from this incident). After the fierce and bloody battle in which the goddess finally kills the demon and all his hosts, she is so mad with frenzy that the gods become terrified that she might destroy the whole universe and send Shiva to appease her. But all these parallels between the two legends and their variations are beside our consideration. An important factor which is relevant for our present purpose is common to all the accounts of the battles of the Indian goddess against different demons. Invariably the demon or demons become a menace to the life and power of the gods. It may be that by their own power they defeat the gods and dethrone them or it may be, as in the case of the demon Durga, that the gods are challenged and ill-treated with the help of a boon from Brahma himself. In all cases the demons disturb the sacrifices made to the gods, rob them (the gods) of their due share and vanquish them from their heavens. Thus the life and very existence of the gods become threatened and they all appeal to the goddess. With the slaying of the demons the gods are restored to their position and they are able to revive their sacrifices and thus maintain their life. Thus in these stories we may find a fairly strong basis for the theory that the goddess assumes the role of destruction in order to restore the life of the gods. But we still have a few more theories to examine before accepting any one of these as final.

3. Evolution of the Dragon. p. 114.

(v) A fifth theory is expounded by Jung mainly from the point of view of the psychological relation of the child to its mother.<sup>4</sup> He finds the explanation for a terrible mother in "the psychology of the wrench from childhood". "The libido taken away from the mother, who is abandoned only reluctantly, becomes threatening as a serpent, the symbol of death". (p. 20). According to Jung, the struggle of psychic weaning, which he calls 'the battle for deliverance', is the first great task of mankind and one which requires the greatest effort on the part of the growing child. "The onward urging, living libido which rules the consciousness of the son, demands separation from the mother. The longing of the child for the mother is a hindrance on the path to this, taking the form of a psychologic resistance which is expressed empirically in the neurosis by all manners of fears, that is to say, the fear of life.....The fear springs from the mother, that is to say, from the longing to go back to the mother, which is opposed to the adaptation to reality. This is the way in which the mother has become apparently the malicious pursuer. Naturally, it is not the actual mother, although the actual mother, with the abnormal tenderness with which she sometimes pursues her child even into adult years, may gravely injure it through a wilful prolonging of the infantile state in the child. It is rather the mother-image, which becomes the Lamia. The mother-image, however, possesses its power solely and exclusively from the son's tendency not only to look and to work forwards, but also to glance backwards to the pampering sweetness of childhood, to that glorious state of irresponsibility and security with which the protecting mother-care once surrounded him.....Apparently it is a hostile demon which robs us of energy, but in reality it is the individual unconscious, the retrogressive tendency of which begins to overcome the conscious forward striving....." (pp. 184-185). Although Jung thus finds the explanation in 'the battle for deliverance', he does not make it very clear whether the ambivalence is to be found only in the attitude of the child or whether it is to be found in the nature of the mother as well. According to some Jungians, the ambivalence is a product of the basic instinctual attitude to the mother and not a quality of the

4. 'Psychology of the Unconscious', Part II, Chaps. VI and VII—What he calls 'The battle for deliverance from the mother' and 'The dual mother role'.

archetype. But from the words of Jung we can make a case for either, for the simple reason that the struggle is real for both the mother and the child. Depending upon individual conditions, it is possible for the mother to become an actual Lamia pursuing the child, or to appear as one in the unconscious of the child.

We have so far considered five explanations of the phenomenon. With the first of these we found we could not agree; the other four contain a common basic principle, viz., that the destruction either of some existing matter or of a present state is inevitable for bringing in change, progress and new life. In this function of destruction, the mother or the mother-goddess is empirically perceived as being terrible and cruel. There is certainly a great deal of truth in this principle and especially as it is explained psychologically by Jung. We agree then that all these explanations may be partially true and have certainly contributed their share to the creating of this terrible figure. But we still have some more to consider.

(vi) Another suggestion is made by Dr. E. O. James that the 'Terrible Mother' represents the goddess in her warlike qualities which she took over from vegetation rites which were military in practice, as the principle of fertility was made to depend on the extraction of human hearts.<sup>5</sup> The sun being the god of warriors, the Great Mother associated with vegetation becomes a goddess of war, when calendrical rites which were solar in origin were introduced in agriculture. This explanation seems to fit in well with the Aztec ritual with which Dr. James is primarily concerned in that particular context. But it seems hardly possible to advance this suggestion as a general and complete explanation of this universal phenomenon. It is doubtful whether this explanation can be offered in the case of Durga or Kali even in a far-fetched manner. This terrifying aspect of Durga does not seem to be associated with agriculture; at least not in any direct manner. It is true that Durga in her terrifying aspects represents the warrior who fought against the different demons. But she was not waging wars in the sense of undertaking campaigns for the conquest of territory. Nor were the battles fought to secure

5. 'Origins of Sacrifice', p. 92. John Murray, 1933.

victims for her own sacrifices.<sup>6</sup> Arjuna is asked to pray to Durga for victory in the battle of the Mahabharata, not because she is particularly a goddess of war, but because she is the supreme goddess safeguarding all the interests of her devotees. Bhandarkar says: "In the M. Bh. (Bhismaparvan, Chap. 23), however, there is a hymn addressed to Durga by Arjuna under the advice of Krishna in which she is prayed to for granting victory in the forthcoming battle. This hymn itself shows that at the time when it was composed and inserted in the poem, Durga had already acquired such an importance that she was adored by men as a powerful goddess, able to fulfil their desires".<sup>7</sup> For the warlike qualities of Durga in her demon-slaying aspect we have other more probable explanations. Further, the objection which we raised against the second theory mentioned above holds good here also. The duality must be connected with the mother and her functions and the consequent attitude of the child.

(vii) Another explanation can be found in the suggestions made by Rudolf Otto in his book 'The Idea of the Holy'. According to his suggestions, the explanation for the 'Terrible Mother' can be found in the element of awe with which man as a creature approaches the 'Numinous' or the 'Mysterium Tremendum'.<sup>8</sup> It is this element of Awe that has developed into a 'Mysticism of Horror'. The Rev. E. A. Payne discusses this suggestion in a very favourable light and seems, on the whole, to agree with it in regard to Durga worship. He says: "Consciousness of the numinous in Nature permeates much Sakta worship. . . . It must be admitted that, taken as a whole, Saktism belongs to an early stage of religious development, but when it is studied along the lines which Otto's book suggests it is approached with more sympathy and

6. Bloody sacrifices are offered to Durga only when she is worshipped in the aspect of the slayer of the demons. The probable idea behind this is very crude and simple. When the goddess is praised in her fierce aspect as 'thirsting for the blood' of the demon, she is believed to assume for the moment all the qualities of that aspect. Thus it becomes necessary to appease her with sacrifices so that by her identifying herself with the killing of the victim she may find an outlet for the anger. Forces of anger once released must be given a suitable outlet.

7. Vaisnavism, Saivism and Minor Religious Systems, Strassburg, Veralg Von Karl. J. Trubner, 1913, p. 142.

8. It may be recalled that Otto analyses the attitude to the 'numinous' into elements of Awe, Overpoweringness, Energy or Urgency, the Wholly Other, and also of Fascination.

understanding than has often been the case. . . . .”<sup>9</sup> After pointing out Otto’s reference to the similar ideas in the Old Testament about the Wrath or Anger of Yahweh, Mr. Payne says: “There are noteworthy descriptive similarities between the Semitic and the Indian conceptions of this Wrath of God”. He quotes as evidence a passage from the book of Isaiah.<sup>10</sup>

We may develop this suggestion in a slightly different way without altering the underlying principle. Man’s sense of sin sets him against God. And his weakness finds expression in this antagonism in the creation of a fearful deity—at least in the case of the primitive man. The sense of separation arising out of a consciousness of sin and weakness produced fear in his mind. In the conception of Durga the Terrible, we have ample evidence for this. Her essential role as Kali the Fearful is to fight evil and its representations. All the demons she fights are represented as enemies of everything that is good. The sections in Markandeya Purana which contain the glorious deeds of the goddess have ample references to her antagonism to sin and her promises to deliver mankind from the oppression of evil. Is there any basis in the child-mother relationship for the ideas behind this explanation? We have pointed out more than once that the phenomenon of motherhood must have produced a sense of awe and mystery. Apart from this, every child at some stage or other feels that it is not living up to the demands of its mother and thus develops a fear of guilt. This fear is reinforced during the time of the

9. ‘The Saktas’; Y.M.C.A. Publishing House, Calcutta, 1933. p. 114.

10. pp. 108, 109. He quotes the passage from the translation by Moffat from what Mr. Payne calls ‘a slightly emended text’. This is the passage (Is 63: 1-6).

“.....  
 All alone I trod the winepress for no man lent me aid;  
 So I trod the foe in fury, trampled them down in my anger;  
 ‘Twas their blood splashed by robes, till all my clothes are stained.  
 For I resolved upon a day of vengeance; the time to free my folk  
 I had come.  
 I looked but there was none to help, I was amazed that there was  
 none to aid;  
 So my poor power gained me the victory, it was my passion  
 bore me on,  
 As I trampled the nations in my wrath and smashed them in my  
 fury,  
 Spilling their blood upon the earth.”

'wrench from the mother'. The child is liable to seek an explanation for the 'receding' mother, not in her badness or unkindness but in its own badness. From this, it is not a long step to the conception of the mother as a persecutor, as one who punishes. The wisdom of the Hebrew people gave the following warning. "The eye that mocketh at his father and despiseth to obey his mother, the ravens of the valley shall pick it out, and the young eagles shall eat it."<sup>11</sup> When a consciousness of this 'sin' deepens in the mind of the child, in the unconscious mind the mother herself becomes the cruel raven and the fiendish eagle. In other words, the hatred and fear of those foul agents of punishment come to be directed in the unconscious against the mother herself. And fear gets the upper hand, because of the ties of love that are already there. Thus we find that the figure of the 'Terrible Mother-goddess' may be an expression, crude and imperfect as it is, of a fundamental factor in the relation of man to God; and it has its echo in the relation of the child to its mother. There is then a great deal of truth in this explanation. But it is very difficult to accept it as the sole cause of the *origin* of this phenomenon of the 'dual role of mother'. For one thing the ideas involved are too complicated. A strong sense of sin and a consequent feeling of separation does not seem to have marked the earlier stages in human development. True, it must have been there from the beginning. But it could not be sufficiently strong to produce this figure of the persecuting mother. The phenomenon underlying this explanation did certainly contribute a great deal to this archetypal figure. But one must try to find the origins in simpler ideas.

While dealing with the terrible aspect of Kali some people have taken to an allegorical method trying to explain everything in terms of conflicts between human emotions and passions.<sup>12</sup> We cannot, however, get any guidance from these suggestions for the origins of this phenomenon we are considering. Bhandarkar suggests that the graver aspects of Durga, as Kali, may have been borrowed from the fierce goddesses of earlier wild tribes and also from the character of Rudra.<sup>13</sup> This suggestion only puts the

11. The Book of Proverbs, 30: 17.

12. For some examples of this see Payne op. cit. pp. 23 ff. There he gives quotations from Woodroffe's book 'Shakti and Shakta' and from Miss Underhill's 'Hindu Religious Year'.

13. Op. cit. p. 144.



problem one step further. He ascribes the process of identifying one goddess with another to the 'usual mental habit of the Hindus'. While this may be true in the particular case of Durga and Kali, the phenomenon of the dual role of the Mother-goddess is found in other parts of the world as well. Hence, leaving aside these methods of explaining this phenomenon we must try to find the ultimate origins of this figure in the very nature of the mother and her functions.

(viii) We may take our guidance from a charming folk-tale of the Nigerian tribes. In many of these tribes, according to the legal code, the children belong to the mother. The following is a story to explain why this is so.<sup>14</sup> Once there was a beast with two sons. They lived in the bush near the dwelling of a poor couple who had twelve children. In their absence, the beast sent one of its sons to entice the children and eventually the beast itself came and carried away one of the children to make a meal. On their return the parents missed their little one and learned from the other children as to what happened. Next time when they had to go farming, the husband was left behind to protect the children. The beast again made its appearance. Although the father was well armed, at the sight of the horrible beast his courage failed him. He ran for his life through the back door way, leaving his helpless children at the mercy of the greedy monster, which carried away one more child. When the mother returned, her grief knew no bounds. She returned *fiercely* on the husband and demanded explanation. He told her a lie saying that he was very ill and had to go to the bush once or twice and that it was in his absence the monster had come. The children, however, all cried out and told her the truth. "Filled with fury at this, the woman made her husband be gone" . . . "He did not need to be told twice, but went out and hid himself in the bush nearby. *The mother determined to risk her life to save her little ones. She armed herself with a very sharp machet and waited for the beast, who came again as before and thrust in its head to sieze a child. Then the woman stood forth bravely and killed her enemy, whereon the children raised a cry of triumph.*" We will not stop to find out how far the portrait of the father is true. But there is a great deal of truth in the portrait of the mother. Protect-

14. P. A. Talbot. 'In the Shadow of the Bush.' London 1912, p. 101 ff.

ing the offspring is one of her functions.<sup>15</sup> The Chinese mother goddess was represented with a sword in one hand and a child in the other. To save the child from the impending danger the mother will take any risk and put on the role of the fiercest giant. We have seen otherwise gentle hens chasing and fiercely fighting hawks and crows that come to steal their chickens. The fierceness of female wild animals while guarding their young ones is proverbial. The intensity of this mad fierceness is determined only by the intensity of their passionate love for the young ones. Although Durga or Kali is portrayed as a battle-queen, her function in that aspect is always protecting the gods and men from their enemies. In all the accounts of her fierce battles with the demons and in the hymns of praise to the glory of the goddess, this purpose of her fierceness is repeatedly emphasised. She is often adorned as the protector of the universe. She repeatedly promises to take on this fierce form and deliver mankind whenever it is oppressed by evil enemies. Her very anger is the blessing of mankind, since it destroys the enemy.

“Thy bell that fills the world with its ringing,  
And destroys the glories of the Daityas (the demon army).  
May thy bell guard us, O goddess,  
Even us like children from sins!  
Besmirched with the blood and fat of the Asuras  
As with mire, gleaming with rays,  
*May thy scymiter be for our welfare!.....*”<sup>16</sup>

The anger of the Devi is directed only against the enemy and will consume only the evil one.

“O Durga! thou hast deign'd shield  
Men's feeble virtue with celestial might,  
Gliding from yon Jasper field;  
And, on a lion borne, hast brav'd the fight:

15. It is not a function ascribed to her by an external authority. It is a part of her nature, a fundamental expression of her love. A child seeks protection from the mother more than from the father, until the age when it can understand the greater physical strength of the father. In an ordered society such a function is more than a duty of the father. While not diminishing the love of the father, I think it is true to say that external circumstances, like social customs and greater physical strength, have helped him to take on this role.

16. Markandeya Purana. 91: 25 ff. (Italics mine in these quotations).

For when the demon Voice thy realms defy'd  
 And armed with death each arched horn,  
 Thy golden lance, O Goddess! mountain born  
 Touched but the pest—he roared and died.”<sup>17</sup>

The goddess protects mankind not only from assaults of demons in human or animal form, but she also saves them from all other forms of evil like flood, earthquake, famine, and all sorts of epidemics. It is interesting to note in this connection that many of the South Indian goddesses, especially the fiercer ones, are goddesses of some disease like cholera and small-pox. By their functions of protecting men from these diseases, they become goddesses of diseases, and naturally are not gentle and lovable in that aspect.<sup>18</sup> The goddess Kāli is also usually considered as the final destroyer of the world and her fierceness is often attributed to that role. But such a conception of the evolution and dissolution of the universe must necessarily be of a very late origin. As a destroyer of evil she can easily assume this role of the destruction of the universe as the fitting end of an evil age.

Thus, the simplest explanation seems to be found in the function of the mother as the protector of her offspring and of the species. Some of the factors which we have discussed in connection with the above mentioned theories have contributed their share and reinforced this belief in the terrible and destroying aspect of the mother and of the mother-goddess. We find therefore that this dual quality is more a characteristic of the archetypal image itself than of the attitude of the child towards it. The duality arises from the very nature of the mother love.

17. E. O. Marin 'The gods of India,' Dent, 1914, p. 179. (quoting from Sir Wm Jones' trans. of Hymn to Durga).

18. It may further be noted that Rudra, who also assumes side by side the contradictory qualities of horror and gentleness, is the vedic god of diseases.

# THE EVOLUTION OF THE COAST LINE OF INDIA

By

V. KALYANASUNDARAM

The triangular peninsula of India juts out into the Indian Ocean from the south central part of Asia. The eastern and western sides are washed respectively by the bay of Bengal and the Arabian sea and the two converge to meet at the southern extremity of the peninsula—the cape, Comorin.

The coasts of India are comparatively regular and smooth, there being but few creeks, inlets or promontories of any magnitude to diversify it. It is only on the Malabar and Konkan coasts that there are a few lagoons and creeks, but elsewhere, the coast is for long stretches fairly smooth with but few indentations. This has contributed to give the sub-continent a very low ratio of coast-line to area (between Karachi and Chittagong there are not more than 3,500 miles of 'direct' coast and that means only 1 mile of coast to about 450 sq. miles of hinterland)<sup>1</sup> and very few natural harbours. The whole seaboard is bordered by a narrow submarine ledge—the continental shelf—where the sea is very shallow with soundings less than 100 fathoms. The shelf zone is generally broader along the west and the Arakan coasts than along the east coast. From these shelving plains the sea bed gradually deepens both towards the bay of Bengal and the Arabian sea to a mean depth of 2,000 fathoms in the former and 3,000 fathoms in the latter, the descent to the level of the deep sea plain being more rapid along the west than along the east coast.

The west coast of India from about the latitude of Bombay southwards is remarkably straight and with few exceptions the coastal plain fronting the sea is restricted to a very narrow zone and in some sections completely absent. In contrast to this the east coast has a low smooth outline and facing it is a coastal plain of fairly great width (with the exception of the Vizag area). There

1. Lyde: *Continent of Asia*—p. 359.

is an apparent straightness on the east coast also, but on the whole the east coast possesses a smooth rounded outline, a feature indicating greater maturity and which is therefore in keeping with its earlier origin as compared with the west coast.

Along the west coast and at no great distance from the shore is the crest line of the W. Ghats rising abruptly from the narrow coastal plain, if present, or from the shore line itself if there be no coastal plain. The ghats present the appearance of a sea cliff to a person that approaches the Indian shore from the west—a characteristic feature of the W. Coast. This sea wall like feature is quite continuous from a little north of the latitude of Bombay almost to the extreme southern tip of the peninsula with but one major gap—the Palghat gap. All along this distance the ghats rise abruptly to an elevation of rather more than 3000' in the northern half gradually increasing southwards to more than 6000' in the Nilgiris. But when looked into in greater detail there is a certain amount of difference between the northern half i.e., roughly all that lies north of the latitude of Goa and the region south of it. North of Goa the hills come very close to the shore and there is practically no coastal plain. The ghats with a flat topped summit present an abrupt and steep face to the sea. With the exception of Narbada and Tapti<sup>2</sup> there are no big rivers embouching into the sea and even these two rivers have not formed deltas which will tend to modify the coastal form.

Off the West Coast of India and at a varying distance from it there is a well defined group of barrier reefs and atolls—the Laccadives. A map of the Indian ocean shows clearly the presence of 3 well marked groups of islands off the west coast of India—the Chagos, the Maldives and the Laccadives. They seem to occur more or less in a line running N to S and therefore inclined to the general trend of the west coast which runs in a direction about 30° W of N to 30° E of S. The 3 groups seem to be arranged on a basal plateau of about 1000 fathoms and sepa-

2. Wadia: The making of India (General Presidential Address, I.S.C. 1942) P. 17. "Two more fracture planes, parallel with the Makran coast fault, remain to be noted. These have given rise to the prominent lines of steeps in the Central Indian landscape—the Vindhya and Satpura ranges—and at the same time guided the channels of Narbada and Tapti along these tectonic lines. The latter rivers are peculiar in their being the only west flowing streams of South India, a fact which finds explanation in this accidental circumstance providing them with their valleys."

rated from one another and from the mainland by deeper water. The northernmost end of the Laccadives archipelago approaches very close to the mainland of India from which it is separated only by a narrow passage, the deepest sounding in which is 1066 fathoms. Continuing the line further northward there are two banks—the Angria and the Direction banks. The line connecting these banks and the Maldiv-Laccadive ridge, if produced northward, will coincide with the axis of the Aravalli mountains of Rajputana.

The East Coast of the Peninsula is a low gently shelving plain with a smooth course and unlike the west coast it shows a well defined change in its direction. There is a marked distinction between a northern 600 miles from about lat.  $16^{\circ}$  northwards with a north-east to south-west trend parallel to the strike of the ghats and a southern 400 miles lying almost due north and south along  $80^{\circ}$  E meridian and over which the N.E. and S.W. monsoons blow obliquely; and on the one, the northerly one, there are 3 deltaic promontories—those of the Kistna, the Godavari and the combined Mahanadi-Brahmani, while on the south there is none (with the exception of the Cauvery delta). (The topography of the Indian Ocean basin has not been studied in great detail and there is consequently a dearth of information regarding the physical features of the basin. This applies more especially to the bay of Bengal than to the Arabian Sea).

The two seas that wash the sides of the Indian Peninsula are geologically speaking of comparatively recent origin having originated during the earth movements associated with the break-up of the great southern continent of Gondwana land; but of the two, the bay of Bengal appears to be the older.

*Pre-Gondwana Period:*—The peninsula of India apparently seems to have been built up by the continued growth from and the ultimate fusion of 3 centres or masses which represent some of the oldest parts of the Indian unit. The eastern and southern parts of the peninsula are made up of archaean formations (shown in red on geological maps) one of the most ancient land surfaces of the globe. Parts of it are believed to belong to the primeval crust of our planet as it first cooled and condensed from a gaseous or liquid mass. A glance at the geological map will reveal 3 areas, apparently disconnected, of gneissic rocks comprising the peninsula, Viz:—

- i. the southern mass limited northward by the Deccan trap and north-eastward by the Godavari Gondwana belt;
- ii. the semi-circular gneissic mass of the Bundelkhand area and
- iii. the gneissic tracts of the north-east including parts of Bengal, Bihar and Orissa;

Each of these gneissic tracts seems to have had its own history, distinct from that of the others up to the beginning of the Gondwana period.

The greater part of the peninsula south of the Kistna is composed of gneissic and granitoid rocks traversed, especially in the western half by a number of nearly parallel bands, running N.N.W. to S.S.E. and parallel to the present west coast of India, of schists, conglomerates, banded haematite beds, etc.,—the Dharwars of Indian stratigraphy—beds, some of which are of sedimentary origin. With regard to the geography of this remote period, it is impossible to hazard any statement.

Subsequent to the folding and denudation of the Dharwars—the period of the eparchaeon unconformity—there are indications of seas washing the north-eastern and eastern sides of this unit and forming the Kaladgi, Godavari and Cuddapah basins of deposition. Very probably these basins may have been contiguous with one another and their present isolated distribution will then be due to subsequent denudation. In the crescent shaped Cuddapah basin, the older rocks rest quite flatly or with a gentle eastward slope on the gneiss while the higher beds overlap the lower and older beds towards the west; and this together with the fact that conglomerate beds are not uncommon here leads one to conclude that the present western boundary of the basin could not have been far from the old coast line. In the Godavari basin of Cuddapah sedimentation the same relationship holds good between the gneiss and the Cuddapah deposits. The same sea probably curved round to wash the northern side of the gneissic mass in the Kaladgi basin.<sup>3</sup> It appears therefore that during the Cuddapah period the southern

3. Records, Geological Survey of India, Vol. XV. p. 191.

portion of the peninsula was washed by a sea whose shores very probably coincided with the present western limits of the Cuddapah and Godavari basins and the southern limit of the Kaladgi basin.

*II Bundelkhand mass:*—The Bundelkhand area of gneissic rocks—a semi-circular mass bordered on the north by alluvium (of the Indo-Gangetic depression) and elsewhere by Vindhyan sediments appears to have been on the northern shores of a sea during the Cuddapah times. The Bijawars lie nearly horizontally on the gneiss and towards the south they are covered by an extensive spread of Vindhyan sediments; but before they disappear under the Vindhyan, they begin to show signs of crushing and folding (indicating distance from the shore). The Bijawars were apparently shallow water deposits and probably never extended very much farther north than at present.<sup>4</sup> When they reappear from under the Vindhyan in the Son-Narbada valley region they are very strongly folded. Cuddapah sediments are found in the Aravalli region where they have been caught up in the folding movements and therefore are more affected than in other areas.

If our reading of the testimony of the Cuddapah deposits has been correct, we can picture the existence during that period of 3 land units—the southern, the northern and the north-eastern separated from one another, probably by a fairly extensive sea, which gradually got filled up by sediments brought down from the adjacent lands; these were later on subjected to earth movements which affected only very slightly the deposits near the shore while those farther away were more intensely folded.

*Vindhyan Period:*—The deposits of the Vindhyan period are found developed in two areas of the peninsula, Viz:

- i. the Vindhyan of Rajputana and Central India which are continued in the south of Bundelkhand and Bihar. The lower part of the Vindhyan system consists of marine deposits including limestones while the upper part consists of deposits of arid and semiarid climates, represented by red sandstones and shales with intercalated bands of gypsum.
- ii. the Cuddapah basin of the Madras Presidency, where the Karnul system, considered as the equivalent of the upper Vindhyan is developed.

4 P Lake: The growth of the Indian Peninsula-Geological Magazine, New Series, Decade III, Vol. X. p. 313.



The Vindhyan sediments of Central India indicate a sea extending from the Vindhyan mountains in the west to Bihar in the east. The marked overlapping of sediments to the north suggests the nearness of the shore; and the Indo-Gangetic alluvial region was then, most probably, a land area on the northern shores of the South Vindhyan sea.<sup>5</sup> The same sea may during the upper Vindhyan period, very probably have extended southwards as far as the Cuddapah area to receive the deposits of upper Vindhyan facies, which have been carved into two isolated tracts, the Kurnul series of the Cuddapah basin and the Bhima series of Hyderabad State, by later sub-aerial denudation. Outliers of the Vindhyan are found in the Godavari valley also but the cover of the trap has hidden whatever evidence there may have been of the connection or otherwise of these southern representatives of the Vindhyan and those of the type area.

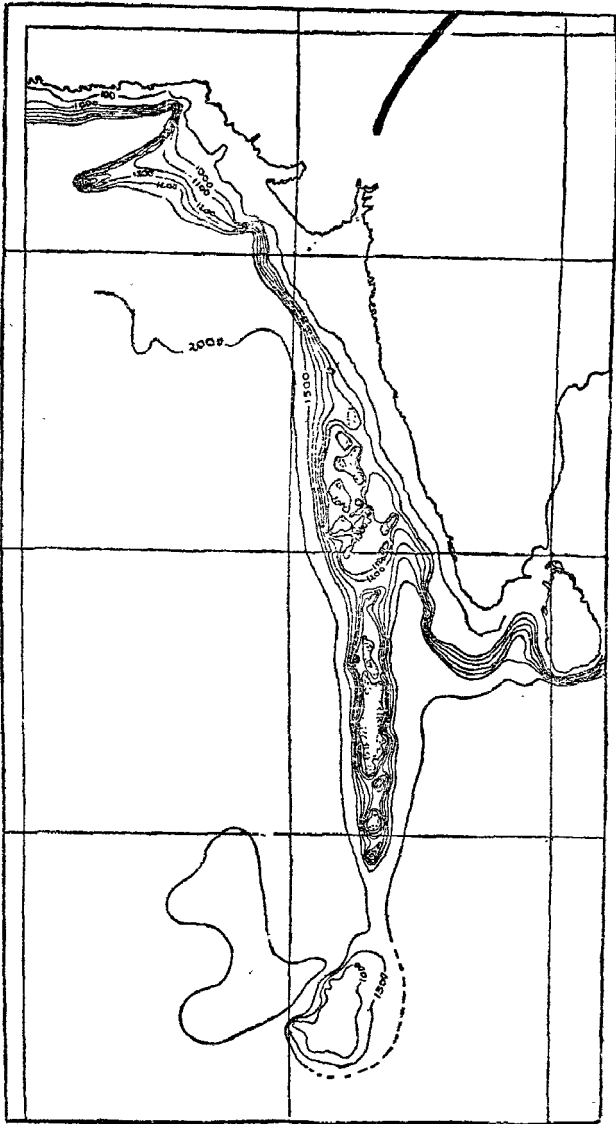
Rocks showing a strong lithological similarity to the Vindhyan have been noticed in the Salt range of the Punjab and the more distantly placed Hormuz series of Iran. While the lithological characters indicate a similarity of physical conditions of deposition, it is impossible to prove the contemporaneity of these isolated occurrences. While Fox is for correlating the Vindhyan of central India with similar lithological types at the base of the Salt range Cambrian and Hormuz series of Iran<sup>5a</sup> it is difficult for us to reconcile the marked disparity between the two formations with regard to their fossil contents and consider them as contemporaneous. It appears more reasonable therefore, to accept the view put forward by M. R. Sahni that "a correlation between Cambrian and Vindhyan strata seems unjustifiable though one may concede that the physical conditions remained unchanged from the Vindhyan to the Cambrian times."<sup>5b</sup>

No rocks of a later age than the Vindhyan but older than the Gondwanas have been known to occur in the gneissic tracts under consideration. Prior to Gondwana period therefore the three gneissic tracts which have been considered as the nuclei out of which the present peninsula has been built, appear to have had nearly the same history. Sediments were deposited along their

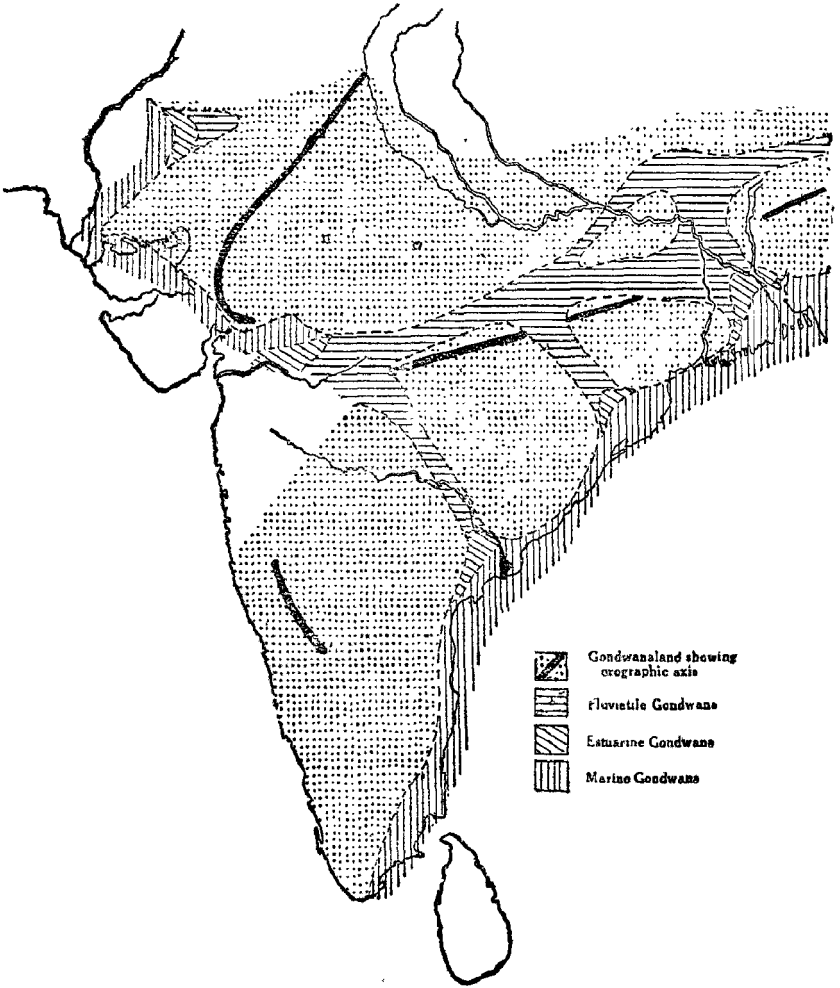
5. M. R. Sahni: Palaeogeographic revolutions in the Indo-Burmese region and neighbouring lands—Proc. 28th Ind. Sci. Congress Part II, p. 126.

5-a. C. S. Fox, Progress report, 1925.

5-b. M. R. Sahni: Ibid. p. 128.



Submarine Contour of a part of  
the Arabian Sea.



Map of India showing Geography Gondwana Period after C. S. Fox

borders during the Cuddapah period which were then crushed up against the unyielding gneiss. After a period of denudation another and perhaps a larger sea came on the scene covering the Cuddapah basin, the Godavari valley and the Bhima valley in the Deccan and the Son-Narbada tract in Central India and which curved round the western border of the Bundelkhand tract to cover what is now the Aravalli—Rajaputana region.

With the close of the Vindhyan period the sea probably receded further west and north-west and at any rate they don't seem to have played an important part in the subsequent history of the peninsula which may therefore be considered to have remained as a fairly stable land mass (subject to local exceptions).

*Gondwana Period:*—The present coasts of India were determined at a comparatively late stage in the geological history of the peninsula—the late mesozoic and early tertiary times. Prior to this period the peninsula formed part of a great southern continent or a series of land masses—the Gondwana land, which had been called into existence by about the end of Devonian times—which were connected closely enough to permit the free distribution of terrestrial fauna and flora. This southern continent included the peninsular India, Malay peninsula, Australia, South America, South Africa, Madagascar and Antartica, which were probably very close together during the time. The Gondwana continent seems to have persisted through the greater part of the mesozoic period and was broken up at the end of the cretaceous. Geologists and biologists are now agreed that such a continent did exist, but with regard to the mechanism of its break up into several disconnected patches as we see them today there is difference of opinion. Some believe in the displacement of large blocks of the continent—the connecting links—along vertical or nearly vertical planes giving rise to the oceanic basins of the Arabian sea and the bay of Bengal (the submerged land link between India and Madagascar being referred to as Lemuria), while others, probably the more numerous in recent years, following Dr. A. Wegner<sup>6</sup> whose theory of continental drift has been brilliantly and convincingly enunciated by Dr. A. L. Du Toit,<sup>7</sup> acquiesc in the development of fractures and the subsequent

6. A. Wegner: The origin of Continents and Oceans.

7. A. L. DuToit: Our Wandering Continents and also C. S. Fox: The Gondwana system and related formations—Mem. Geol. Sur. India Vol. 58.

drifting apart of the units roughly in an easterly direction. Whatever view be taken it is quite clear that the break up of the Gondwanaland and the determination of the coasts of the peninsula was during a recent geological period in the history of the earth.

The recent origin of the west coast of India is indicated by a variety of features, Viz:—

i. The parallism of the western ghats to the sea is suggestive of a connection between the two. The parallism of the ghats and its steepness for long distances are cited as furnishing evidence of a rise of land. The trap country of the western ghats runs from Goa northwards in an unbroken wall of 2000' to 4000' cut back in places by streams, projecting here and there into long promontories, but preserving everywhere a singular resemblance to sea-cliffs—a resemblance which ceases to a large extent southwards where metamorphics replace the horizontally bedded traps.

ii. *The abrupt termination of the traps along the west coast.* The traps at present cover an area of about 200,000 sq. miles and extend from Bombay to Amarkantak and from Belgaum to Goom. They are thickest along the west coast—along the Bombay coast they have a thickness of about 6000'—and rapidly thin out towards the east. Isolated outcrops of the traps occur in Kathiawar, Sind and other places; their present distribution and the way they thin out indicate a much greater extension of the trap area to the west in the past than at present. It is very likely that the traps reached the surface some where near Bombay,<sup>8</sup> as they are thickest round about this region and spread out laterally. The gradual increase in thickness of the traps towards the west coast where it reaches its maximum thickness suggests that it once extended far out into the Arabian sea. Its disappearance is unlikely to have been due to marine denudation<sup>9</sup> as suggested by Stanley Gardiner but must be due to faulting. Direct evidence on this point is provided by recent deep borings in Kathiawar and Guzerat, which indicate that the traps have been faulted down to at least 2000' below sea level. Similarly Fermor as a result of his examination of the rocks penetrated by a deep boring for coal at Bhusaval, Bombay presidency, noticed a disparity between the level of the base of

8. Records, Geological Survey of India, Volume 5, p. 91, 13 p. 69, 58 p. 90.

9. Stanley Gardiner: The Indian Ocean—Geographical Journal, Vol. 28. pp. 313-332.

the traps at Nagpur and that at Bhusaval and remarked, that "this proves that the traps (assumed to be of subaerial origin) at Bhusaval have been faulted at least 515' if the bottom flow erupted at sea level, or at least 1515' if erupted at the level of the base of the traps in the neighbourhood of Nagpur"<sup>10</sup> and again when he says that the projected second boring at Kalyan was abandoned "in view of the results referred to in the previous paragraph and of the possibility of still greater downthrows to the west as one approaches the great fault or systems of faults forming the west coast of India."<sup>11</sup> One particular character of the traps is in keeping with this view. The traps which are usually horizontal except where they thin out, display a marked departure from their horizontality and have gentle dips of 5° and more towards the sea in several places along their present western edge, e.g. Bombay, W. Satpura, Khandesh and Rajpipla hills near Broach. These westerly dips may be taken to be the result of this faulting. Since the faulting has affected the trappean rocks also the initiation of the west coast consequent on this faulting cannot have been earlier than the eruption of the traps-Eocene?<sup>12</sup>

iii. Blanford has drawn attention to the faulted nature of the Makran coast of Baluchistan.<sup>13</sup> In support of his argument he refers to the existence of a submarine cliff parallel to and at some distance—10 to 20 miles—from the shore. The Kirthar mountains of Sind terminate at the promontory of cape Monze, but the island of Churna off cape Monze may be shown to be a continuation of the Kirthar mountains. Continuing this range of mountains there is a well marked submarine ridge that rises from a depth of 1700 to 1800 fathoms on either side to a depth of only 1226 fathoms in the middle of the ridge while at the extreme western end, it is

10. L. L. Fermor: Records, Geological Survey of India, Vol. 58. pt. 2. p. 220.

11. Ibid. p. 221.

12. The age of the Deccan traps has been determined with reference to the infra-trappeans of Rajahmundry and the inter-trappeans of Rajahmundry, Lameta ghats (near Jubbulpore), Nagpur and Chhindwara, Bombay, Cutch and Sind and the overlying fossiliferous beds of Sind. The evidence available so far seems to suggest that the trap commenced to be poured out in the upper most cretaceous and that they continued through the gap of time marked in Europe by an unconformity between the mesozoic and the tertiary. Reference may be made to:

i. Dr. Birbhal Sahni: The Deccan traps: an episode of the tertiary era-Pro. 27th Ind. Sci. Con. Pt. II, 1940.

ii. Dr. Birbhal Sahni-Proc. Ind. Sci. Con. Pt. IV 1940.

13. Blanford: Rec. Geol. Sur. India, Vol. 5. pp. 41-45.

covered by only 950 fathoms of water. This submerged ridge may be a direct continuation of the Kirthar mountains of Sind, but which has been faulted down during the formation of the Makran coast.

The same authority puts the west coast of India during the miocene times much further west than at present.<sup>14</sup> Dr. Fox<sup>15</sup> too is of the same opinion when he says that the presence of a fault out at sea and parallel to the west coast has long been suspected. J. D. H. Wisemann and R. B. Seymour Sewell have on the results of the John Murray expedition come to the conclusion "that the northern part of the Indian ocean assumed its present form as a result of compression in tertiary times contemporaneous with Alpine-Himalayan folding; and that subsequently in Pliocene and post Pliocene times a tract of land occupying this area faulted down to its present depth."<sup>16</sup> Corroborating these views we find that the hot springs which occur at intervals along the coastal strip of the Konkan from a little south of Ratnagiri to north of Bombay are arranged on a remarkably straight line indicative of an association with a line of fracture.<sup>17</sup> LaTouche cites the submergence of the eastern part of the Bombay island and remarks that it is not the only instance of a change in the relative level of land and sea "in a region which is perhaps more than usually susceptible to such movements," as the west coast of the peninsula lies on the edge of a great depression by which land connecting India with Africa has been 'submerged' beneath the waters of the Arabian sea within comparatively recent times.<sup>17a</sup>

14. Blanford and Medlicott: Manual of Geology of India, Vol. I. p. 11 and Records, Geo. Sur. India, Vol. V. pp. 82-102.

15. C. S. Fox: Rec. Geol. Sur. India, Vol. 54. p. 126.

16. J. D. H. Wisemann and R. B. Seymour Sewell: Geological Magazine, Vol. 74, p. 226.

17. T. Oldhams: The thermal springs of India—Mem. Geol. Sur. Ind. Vol. 19. pp. 99-161.

17-a. The submerged forest is found along the eastern coast of the island while there are indications of a recent upheaval along the west coast of the island. This discovery of the existence of a number of trees submerged to a depth of some 20' below sea-level but in many cases still retaining their upright position and with their roots attached to the soil in which they grew furnishes evidence of the submergence of the land surface in the immediate neighbourhood of ground which appears to have been recently elevated—indicated by the occurrence of raised beaches composed of shells and gravels, partly consolidated into a littoral concrete, is found at many places along the west coast of the island extending to a height of 12' above high water level. La Touche: Rec. Geol. Sur. India, Vol. 49, p. 214,

iv. Col Sewell<sup>18</sup> has referred to the possible connection between the Aravalli mountains and the Maldive-Laccadive ridge with its extension in the Angria and the Direction banks. Both Pascoe and Sewell<sup>19</sup> have expressed the view that the Aravallis were far more extensive than today and that they formed a major physical feature, probably the central water shed of the Gondwanaland. "As a result of earth movements, a large block of the Gondwanaland west of what is now the Bombay coast faulted down beneath the sea."<sup>20</sup> The formation of the west coast by the break up of the Gondwanaland was probably accompanied by faulting in other directions as well; and one of these seems to have coincided with the southern boundary of the peninsula of Kathiawar and to have initiated the ~~Narbada~~ <sup>Nar</sup>bada valley, the middle section of which has a remarkably straight course. Another such structural disturbance seems to have been responsible for the separation of the continental island of Ceylon from the main land,<sup>21</sup> while a number of other disturbances in similar and inclined directions but of smaller magnitude have resulted in the present distribution of relief in the peninsula. From the nature of the case it is impossible to produce any direct evidence of the geological continuity of the Aravallis and Maldive-Laccadive ridge, for one reason that during the outflow of the Deccan trap lava flow the denuded remains of such a southerly continuation of the older mountain chain must have been buried beneath a layer of lava; and secondly the extensive cover of continental and coralline debris completely shields it. But there are certain resemblances between the two which are, to say the least, suggestive and appear to be in favour of such a view.

v. True mountain ranges are few and the Aravallis are almost the only mountain ranges in peninsular India. Dr. A. M. Heron<sup>22</sup> has shown that the Aravalli mountain has been produced by extensive upthrust with faulting on the eastern and south-

18. *Memoirs of the Royal Asiatic Society of Bengal*, Vol. 9, p. 427.

19. *Ibid*, p. 432.

20. *Ibid* p. 427.

There is evidence of a considerable amount of faulting all along the west coast of the peninsula and thus it is possible that the continental shelf may be a submerged portion of the peninsula.

21. Lithological and biological evidences point to a long continued connection between the two.

22. A. M. Heron: *The Gwalior and Vindhyan systems in south eastern Rajputana—Mem. Geol. Sur. India*, Vol. 45, pt. 2.



eastern sides and owing to the manner in which the folds have been thrust over towards the south and the east, the slopes on these two sides are much steeper than on the north and the west. If then the whole extent of the mountain range including the Aravallis to the north and the Maldive-Laccadive ridge to the south were parts of the same mountain system one would expect to find the same or similar conditions throughout the chain. A study of the submarine contours of the two sides of Maldive-Laccadive ridge shows that as a rule the eastern side slopes down much more rapidly than the western side. The eastern side rises abruptly from the sea bottom to the top of the basal plateau which gradually slopes westwards.

vi. Lieut.-Col. E. A. Glennie<sup>23</sup> of the Geodetic Survey of India who conducted gravity observations during the John Murray expedition to the Indian Ocean has come to the conclusion that throughout the Laccadive archipelago there is a positive anomaly which he connects with a similar positive variation extending along the Aravalli mountain. He suggests that the line of upwarps which has formed the Aravallis—the oldest range in India—is continued southwards into the Arabian sea and forms the base on which the coral islands of the Laccadives are situated—a conclusion corroborating that of Sewell. In the Maldives area the gravity anomaly was found to be negative, and Glennie interprets this as “a result of a downwarp present over the southern end of the Indian peninsula.” If this assumption be correct, it appears reasonable to conclude that there has been faulting between the Laccadives and the Maldives along the line of the eight degree channel.

vii. Oldham has mentioned the occurrence of a certain freshwater mollusca—*Cremnoconchus*,<sup>24</sup> unknown elsewhere but so closely related to the littoral *Littorina* as to render possible the assumption that both are descended from a common ancestor but which have evolved along different lines due to changes in the environment brought about by subsequent rise in level of the upthrow side.

viii. Separating the ghats from the coast is an undulating piece of country, a sort of a terrace, usually rising abruptly from

23. Geological Magazine, Vol. 74. p. 227 (J. D. H. Wisemann and R. B. Seymour Sewell: The floor of the Arabian Sea).

24. Oldham: Manual of Geology of India, p. 11.

the level of the coastal plain to a height of 150' or 200' at its seaward edge and gradually increasing to about 500' near the foot of the ghats. Their gently sloping nature and their gradual seaward slope is a clear proof that here we have an instance of an old marine terrace—a plain of marine denudation.

ix. The peculiarity of the main drainage of the peninsula has also been explained as due to faulting.<sup>25</sup> All the major rivers of the peninsula with the exception of the Narbada and the Tapi rise very near the crest line of the ghats almost within sight of the west coast, but instead of taking a shorter course to the Arabian sea drain all the way down to the bay of Bengal. The easterly drainage of the peninsula must be an old one as they flow through flat valleys with very low gradients and indicate base levelling at least once before. The assumption of the former greater extension of the Aravallis to include the Maldive-Laccadive ridge to form the central water-shed of the mesozoic Gondwanaland offers an explanation to the present drainage of the peninsula. The break up of the Gondwanaland consequent on faulting and displacement or drifting removed the westerly drainage from the central water parting of the Gondwanaland, leaving the drainage of the eastern half alone on the field with the rivers rejuvenated to a certain extent (due to rise in level of the head waters following the break). This rejuvenation is specially prominent in the case of the streams draining into the Arabian sea.

*Age of the West Coast:*—It will by now have been made clear that the west coast of India had come into existence at a late stage in the geological history of the peninsula, it having been initiated by the earth movements which caused the break up of the Gondwanaland. The testimony of the traps indicates an eocene or post-eocene age to the coast.<sup>26</sup> But it is rather difficult to date the origin of the west coast precisely except as a range in time during which this must have taken place. The occurrence of

25. Mem. Roy. As. Soc. of Bengal, Vol. 9, p 1.

26. Recent work by V. S. Dubey and R. N. Sukheswala on the Radio-active characters of the trap suggests a time range from upper cretaceous to perhaps as late as oligocene; but there is still a certain amount of uncertainty attached to the deduction from radio-active data. Taking all the evidences into consideration it may not be far wrong to say that the trappean eruption was more eocene than oligocene; and hence the faulting along the west may have started in the late eocene or post-eocene times.

fossiliferous marine strata in the extreme south of the west coast serves to indicate the time before which the faulting must have taken place. The Quilon and Warkala beds—a series of current bedded sandstones and variegated clays with thin seams of lignite and capped by laterite—occur in the form of a coastal fringe from Quilon to Warkalai. A broadly similar type of formation has been noticed in well sections in Padappakarai near Quilon. The limestone beds contain corals and mollusca and the fauna indicates an essentially upper miocene to pontian (lowest pliocene) age. Further north on the Ratnagiri coast beds of Gaj age (lower miocene) overlain by laterite, are exposed. In as much as beds of lower miocene age have been found near Ratnagiri and of upper miocene age in the Quilon area, the coast must have been initiated not later than the miocene but not before the upper cretaceous, as the traps of upper cretaceous to eocene age have been affected by the faulting.

The evidences available, therefore, suggest that till about the miocene there is no evidence of our western coast; either India had not yet split away from Africa or what seems more likely it had brought away with it a large tract of land which lay to the west of it. By the sinking of this tract in post-eocene but pre-miocene times, "the gulf between India and Africa had widened out into the Arabian sea isolating our triangular 'island of the Deccan' or the peninsular mass"<sup>27</sup>—island because the position of the Himalaya-Baluchistan and the Himalaya-Burma arc was still occupied by the tethys and the Himalayas was being nurtured in its womb—"which like a gigantic raft had been cut adrift and will continue on its long journey to the north-east."<sup>28</sup>

From Kathiawar northwards conditions seem to have been different. This part of India which was practically devoid of marine sediments since the Vindhyan times, witnessed marine transgressions during the upper jurassic, upper cretaceous and miocene times. A shallow sea appears to have extended northwards from Cutch as far as salt range of Punjab—a conclusion based on the jurassic stratigraphy of Salt range and Cutch—and this sea seems also to have spread over a large part of Rajputana in Bikaner and Jaisalmer.

27. B. Sahni: Pro. Ind. Sci. Con. 1940 pt. II, p. 6.

28. Ibid.

Marine jurassic rocks are found in (i) Cutch (ranging from inferior oolite to neocomian or upper cretaceous); (ii) Dharangdhara in Kathiawar—probably a part of the same basin as that which covers Cutch; (iii) in S. W. Rajputana where they are exposed in Bikaner and Jaisalmer but their full extent is concealed by desert sand; (iv) Salt range of Punjab—though folded, compressed and disturbed, these show greater affinity to those of Cutch than to the geosynclinal facies developed in Himalayas and Baluchistan.

The character of these jurassic deposits indicate shallow water conditions and nearness to the shore. During the next period—the cretaceous—the sea very probably retreated from Rajputana (we can not be sure of this) and probably also from the Salt range but over Cutch it had persisted from jurassic right down to middle miocene times, as there is a fairly conformable sequence from jurassic through cretaceous to the middle miocene times with but temporary and small breaks in sedimentation; and during the upper cretaceous (cenomanian) the sea seems to have transgressed into what are now Surat, Broach and portions of the Narbada valley. The deposits laid down during the cenomanian transgression are well developed in a tract of country extending from Wadhwan in Kathiawar to Bagh in Gwalior state. This is the first time that this area appears to have been under the sea as the marine Bagh beds rest directly on the eroded surface of the archaeans. This arm of the sea appears to have become deeper with the passage of time.<sup>29</sup> The age of these Bagh beds had been placed at turonian, perhaps extending up to cenomanian and senonian. Vredenburg, after an examination of both the marine Bagh beds and the estuarine or fluviatile Lameta beds came to the conclusion that the two were contemporaneous and that the former represented the marine facies of the Lametas. It is more than probable that in this region there embouched into this Jurassic sea a westward flowing river draining the eastern gneissic country.

The close resemblance between the fauna of the Bagh beds and those of the cretaceous of Arabia and southern Europe

29. The Bagh beds consist of a lower division consisting of a basal conglomerate with sandstones and shales and an upper division consisting of coralline limestone, marly limestone and nodular limestone and this succession definitely indicates that by the end of the Bagh period of deposition the sea had enlarged sufficiently to cover large areas as to place this spot away from the coast or found itself not much affected by sediments.

suggests a continuous channel for the distribution and intermingling of the marine fauna. As the cretaceous of southern Europe were deposited in the same geosyncline that covered the Himalayan region, this faunal affinity might be taken to indicate that during the cenomanian (upper cretaceous) marine transgression, there was an arm of the Himalayan sea invading the Narbada valley. Another interesting point which forges home the relationship between the cretaceous seas of the Narbada tract and the tethys is that the cenomanian marine transgression covers about the same time interval when there was a more or less pronounced stratigraphical gap between the lower and upper cretaceous in the geosynclinal area (absence of cenomanian deposits in the Hazara and Baluchistan areas). This would therefore mean that the cenomanian marine transgression in the Narbada Valley probably compensated the marine regression on the borders of the geosynclinal area of the extra peninsula.<sup>30</sup> It is also rather interesting to note that at about roughly the same period there was a marine transgression along the east coast of the peninsula which latter had been determined earlier than the west coast; but there seems to have been not much of a connection between the two seas, for while the fauna of the Narbada cretaceous was tethyan in character that of the east coast was that of the Indo-Pacific province.

The cretaceous sea gradually retreated and during the eocene it covered the coastal region of Surat and Broach where inliers of middle and upper eocene beds are found amidst the later alluvium, resting either directly on the traps or overlapping on to the jurassic and overlaid fairly conformably by strata of miocene age, indicating thereby that the sea continued to exist over the area till lower miocene times; and after the lower miocene period the sea gradually shallowed to receive deposits of a littoral or estuarine facies. The marine facies of deposition—of a coastal type—seems to have prevailed over Cutch, Kathiawar and Rajputana during the eocene and in the former it persisted until as late as middle miocene or even later.

*The East Coast:*—Subsequent to the deposition of the Purana group, the bulk of the peninsula remained as a stable piece of land mass until about the middle of the jurassic period and during a major part of this long interval it formed part of the Gondwana-

30. M. S. Krishnan: *Geology of India and Burma*, p. 365.

land. The first indication<sup>30a</sup> of a break up of this ancient land mass appears along the present east coast where in a belt of country extending from Cuttack to as far south as Ceylon are found a number of isolated outcrops of upper Gondwana formations with intercalated marine fossiliferous strata.<sup>31</sup> The plant remains of the upper Gondwana formations have been assigned to middle and upper jurassic (Rajmahal and Kota stage) while the associated marine fauna, ill preserved in most cases, has been assigned to neocomian by Dr. Spath. This association of marine strata containing identifiable fossils is the first indication of a sea in this neighbourhood. It appears reasonable therefore to expect that the dismemberment of the Gondwanaland and the subsequent separation of Australia had been initiated by about the beginning of the jurassic period when either through fracture and rifting or block faulting and subsidence the land link between India and Australia was removed and a bay was developed. The eastern sea, the precursor of the bay of Bengal invaded the low lying parts of the newly formed coast, leading to the formation of characteristically shallow water deposits and thus helping to date the separation of the Australian mass from the Indian mass.

Such invasions by the sea, known as marine transgressions,<sup>31a</sup> are of short duration and affect only the lowlying regions near the coast, converting them for the time being into epicontinental seas (to be distinguished from geosynclinal tracts); the deposits due to

30-a. "To the east and south-east of the eastern ghats there was presumably land. But what gap there was between these and Australasia is not known. It may however be conceded that in Damuda times (lower Gondwana) there was an arm of the sea somewhere in the region of northern bay of Bengal into which the rivers of the Damodar basin found an outlet." M. S. Krishnan: *Geology of India*, p. 269.

31. The Jurassic marine strata of the east coast is found developed as isolated outcrops in various parts from Cuttack to Ramnad and then to Ceylon and goes under different names: at Cuttack-Atgarh beds and at Rajahmundry—Golapilli sandstones, Raghavapuram Shales and Tirupati sandstones and etc.

31-a. Such temporary invasions by the sea of low lying regions near the coast are not uncommon in geological history, and are caused by a sudden decrease in the capacity of the oceanic basins by some deformation of the crust such as the sinking of a large land mass or elevation of a submarine tract. The earlier severance of the land link between India and Australia originated the bay of Bengal and incidentally led to an invasion of the lowlying parts of the now separated India.

marine transgressions consist of sands, clays and limestones of a littoral type and are usually of moderate thickness as compared with that of regular marine deposits and they cover as a rule only a narrow strip of land bordering the coasts, usually displaying such characters as irregularity in dip, current bedding and a gentle dip seawards. These detached outcrops of marine jurassic formations of the east coast probably represent the undened remnants of an originally extensive formation, developed perhaps in an unbroken stretch along the continental edge and probably also, the slope of the newly formed east coast of the peninsula. The nearness of the coast line is indicated not alone by the frequency of cross bedding and the general seaward slope, but by the occurrence of conglomerates, as for example, in the Alikuli-Satyavedu region where they are coarsest. Besides, the occurrence of caves at the head of a valley in the Alikuli hills have been referred to as sea cliffs though Dowie has sought to explain it as due to sub-aerial weathering of the conglomerates. The marine transgression during the jurassic, it is interesting to note, started at a period when there are indications of a temporary regression in the geosynclinal area of Spiti and Hazara.<sup>32</sup>

*Cretaceous*:—There was again another marine transgression during the upper cretaceous (cenomanian) times, which affected the south-east coast of the peninsula. The same sea which during the cenomanian times transgressed into what are now parts of Trichinopoly and South Arcot districts and left fossiliferous marine deposits, stretched northwards into what is now the province of Assam, for similar types of fossil shells have been found in the two regions. This period of cretaceous marine transgression seems to have coincided with the similar incident in the Narbada valley. But the faunal assemblage of the latter region is so different from that of the south-east coast that the sea which transgressed into Narbada valley tract must have been different from the one that flooded the east coast and Assam, for while there is some evidence showing affinities of the Bagh beds of the Narbada valley to the

32. In the geosynclinal region of the Himalayas there is a marked interruption—indicated by an unconformity—of sedimentation, commencing from callovian and lasting till oxfordian in Spiti and the N. Himalayas, while in Baluchistan it lasts until the neocomian period. In the coastal facies the lower jurassic is absent and the deposition begins later assuming a marine character in the callovian and continuing beyond the jurassic times.

cretaceous of South India, the fauna of the former has a closer resemblance to those of Arabia and southern Europe in general and the latter has an affinity to those that occur in Assam, the Arakan Yoma belt and the Natal province of south Africa. There therefore must have existed two seas, a northern one, the tethys, extending from southern Europe through middle east into the Himalayan region and further north-east and which during the cenomanian times transgressed into parts of Rajputana, Narbada valley Kathiawar and Cutch, and a southern sea—the Indo-Pacific ocean, which washed the south-eastern shores of the Indo-African continent and which transgressed into parts of Assam and Trichinopoly district. Probably there was a limited amount of intermingling between the two by way of the Narbada valley; but on the whole the Indo-African continent which had not yet separated, acted as a fairly effective barrier between the mediterranean and the Indo-Pacific zoogeographic provinces.

Associated with the cretaceous of Pondicherry there are rocks which have recently yielded eocene foraminifera but the extent of these rocks is not known. Overlying these are out-crops of Cuddalore sandstones which extend from near Pondicherry as far south as Madura. Similar yellow and brown coloured sandstones are found overlying the deccan traps near Rajahmundry (the Rajahmundry sandstones)—and again near Banpada (the capital of Mayurbhanj state), Cuttack, Midnapur, Kalipur and Khansol east of Raniganj (Durgapur beds). These are referred to the miocene period of the tertiary system. Referrable to the same group are the miocene limestones of Jaffna. The evidence of the eocene and miocene formations point to slight and local incursions of the sea on the east coast and the shore line during the successive invasions seems to have been further east than the immediately preceding one. The Jaffna limestone, the earliest marine formation in the island of Ceylon throws some light on the separation of this continental island from the mainland. For sometime after the break up of the Gondwanaland Ceylon may have been attached to the mainland, but sometime before the miocene period it must have been severed from it; the severance was very probably the result of a fracture, a sympathetic shock of the main diastrophic movement that caused the break up of the Gondwanaland. Thereafter, towards the close of the miocene, the Jaffna limestone and shales laid down in the gulf that separated Ceylon from India were elevated thus establishing a land link



between the two,<sup>33</sup> a link that enabled the migration of Indian fauna into Ceylon, especially during the glacial epoch; but this again broke, probably not so much by a structural disturbance as by erosion (due to the monsoon that was established) and thus served to cut the connection between the two.

In the north the sea seems to have occupied parts of Assam, at any rate the part south of the Shillong plateau; and these marine conditions continued until about the second phase in the elevation of the Himalayas during the middle miocene times. The tertiary period is characterised by a fairly well defined and gradual recession in the north, north-east and north-west, following the elevation of the sediments to form the Himalayas and the associated ranges.

From about the middle or upper carboniferous till early tertiary times, with but a few temporary recessions, the site of the Himalayas and the hill ranges of the north-west and north-east was occupied by the tethys—a primitive mediterranean ocean that extended from the Carribean to the East Indies; and in this were deposited a vast pile of sediments of the order of several tens of thousands of feet thick—an accumulation which was made possible by the sinking of the floor of the basin *pari passu* with deposition. The sediments were upheaved to form the present Himalayas and the associated ranges by a series of four great movements separated by intervals of quiescence; and this resulted in the obliteration of the tethys.<sup>34</sup>

*Conclusion:*—The study of the evolutionary development, with the help of the stratigraphy of the peninsular and extra-peninsular units, of the coastline of India, makes it clear that the peninsula had

33. Deraniyagala: Some post-Gondwana land-links—Proc. 27th Ind. Sci. Con. Pt. III. p. 119-120.

34. The first of these upheavels took place during late eocene which cut up the tethys into a series of shallow marine lagoons; the second and the most powerful upheaval as a result of which the Himalayas appear to have acquired its major features took place during the miocene; the remnants of the shrunken tethys were converted into a long narrow continuous shallow trough between the peninsular mass and the newly born Himalayas; the third was during the late pliocene and the final phase, a mild one, was during the later pleistocene.

## REVIEWS

**INDIA AND CHINA**—A thousand years of Sino-Indian contact by Dr. P. C. Bagchi, M.A., Dr. es-lettres (Paris). China Press Ltd., Calcutta, 1944, Price Rs. 5|-.

This neat little volume of a little over a couple of hundred pages is a competent and timely aid to the mutual understanding of the two great nations of the East that should play an increasing part in shaping the future of the world if it is ever to shed the fury of rival imperialisms. Dr. Bagchi's work as a Sanskritist and Sinologist has earned for him a high place in Indian scholarship, and there is none better fitted for the task of interpreting China and India to each other in the light of their past historic connections. The author says that he has tried to make the book 'as free from academic discussions as possible', and the reader will find here the results of many years of patient study and hard thinking presented in an easy and simple style, that has much in common with the expositions of the great French Indologists under whom Dr. Bagchi had his training. The scope of the book will be seen from the headings of the chapters (1) Routes to China and the first contact; (2) The Buddhist missionaries of India to China; (3) Ancient Chinese pilgrims to India; (4) Buddhism in China; (5) Buddhist literature in China; (6) Indian art and Sciences in China; (7) China and India. There is an appendix on Indian scholars who worked in China containing well over a hundred entries arranged alphabetically with useful biographical notes on each. A good map, a short bibliography and a Chinese index of ten pages are other features. Altogether a very useful and authoritative manual that one should like to see in the hands of every student of India's history and culture.

K. A. N.

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**RAJPUT STUDIES:** By A. C. Banerjee (Published by A. Mukerjee & Bros., Calcuta, Rs. 7/-, 1944).

The history of the Rajputs forms an important chapter of Indian History, and yet the attention that it deserves has not been bestowed on it by scholars writing in English. The book under review is a collection of papers published by A. C. Banerjee in different journals together with some new chapters on some aspects of Rajput History.

Todd is almost the only source from which the author has freely drawn in producing these papers. The chapters dealing with the relations between the East India Company and the Rajput States are however based on unpublished documents of the Imperial Record Department. In discussing the early history of the Guhilots, the author supports the theory of Bhandarkar that the Guhilots were originally Nagar Brahmans and of foreign origin. There is another theory that the Nagar Brahmans were Maitrakas and therefore the Mewar and Valabhi dynasties belonged to the same foreign tribe. It is time that we revised our opinion of the origin of Rajputs and ceased to stick to old, worn-out theories. We are sorry to note that the author has not gone into this question and further that he accepts statements like the following: "The Mewar and Valabhi dynasties were somehow connected". Among the studies, that on Rajput polity is thin. Neither the nature and character of the Central Government nor the relations between the Prince and the chiefs are clearly defined. The second half of the volume is devoted to British alliance with Mewar, Jaipur, Marwar and some other minor states. It is shown that the Rajput-Maratha relations in the 18th century were so strained that the Rajputs were by necessity driven to seek British alliance. The book furnishes a connected account of the slow expansion of British supremacy over Rajputana, and to this extent it is useful. There is no index.

V. R. R. DIKSHITAR.

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ANNEXATION OF BURMA: By A. C. Banerjee (Published by A. Mukherjee & Bros., Calcutta, Price Rs. 7/-, 1944).

Banerjee has taken up in this book a rather neglected field of Indian History. The importance of the North-East frontier of India cannot be minimised. This book deals with the events that led to the Burmese Wars and finally resulted in the incorporation of Assam and Burma as part of the British Empire. The history of Anglo-Burmese relations practically commences with the conquest of Arakan in 1784-85 by King Bodawpaya. Some people of Arakan went to the neighbouring district of Chittagong and settled there. This was resented by the Burmese who made several attempts to violate British territory from 1786-1824. The troubles at this frontier reached their climax in 1823 when the Burmese troops occupied Shahpuri on the British side of the channel of the Naf. These and other causes led to a declaration of war in 1824. By the peace of Yandabo (1826) the King of Burma renounced his

claims to Assam, and ceded Arakan and Tennasserim to the Company. The violation of certain articles of the treaty of Yandabo and a number of complaints from English residents of Rangoon and other British merchants led to the second Burmese War and finally to the annexation of Pegu. The next landmark in the Anglo-Burman relations was the signing of commercial treaties in 1862 and 1867. King Mindon wanted to recover Pegu through the friendly intervention of the French Emperor. He sent an embassy to Paris which concluded an ordinary commercial treaty in 1873. A similar treaty was concluded with Italy in 1871. But the King died in 1878. Thibaw who succeeded him gave offence to British merchants and thereby lost his throne. Upper Burma was annexed to British India in 1886. There is a useful bibliography and index. One chief merit of this book is that it is fully documented. It is written well and without prejudice. The comments are sober. We congratulate the author on his successful study.

V. R. R. DIKSHITAR.

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**THE NAYAKS OF GINGEE:** By Rao Bahadur C. S. Srinivasachari, with a foreword by Dr. Sir C. R. Reddy—Published by the Annamalai University.

Prof. Srinivasachari is a renowned historian of Gingee. More than three decades ago the learned Professor wrote a small monograph on Gingee. He continued his studies and a French version of his history of Gingee was published in 1940 (Pondicherry Bibliothèque Publique, Rue des Capercius). The author's versatility egged him on to publish an all-comprehensive history of Gingee which he has made his own. The result is the book under review. In ten chapters covering 533 pages Professor Srinivasachari presents his history of Gingee. In the first there is a description of the fort at Gingee together with a discussion on the origin of the name Gingee. Even in the age of the Cholas of Vijayala dynasty, Gingee was not well-known and its fortifications must have been effected in the centuries immediately following the disruption of the Chola empire. According to the Karnataka Rajakkal Savistara Charitram which the author uses pretty freely in his book, one Ananda Kon, a shepherd by caste, and a petty ruler of Gingee was responsible for the first fortifications. Then the dynasty of the Kons gave way to the Kurumbar rulers from whom it passed on to the Vijayanagar power. About the 14th century one Narasinga Raja held it as a fief of Vijayanagar sending an annual tribute. It soon became a

seat of a line of Nayak rulers who extended its fortifications. Tubaki Krishnappa was the founder of the Nayak line. His rule lasted till 1521 A.D. He built temples with rich sculptures, and enclosed the three hills of Gingee with thick walls, making big granaries of the Gingee fort and the Kalyana Mahal. That he reigned and ruled is evident from the writings of Father Pimenta, a Jesuit traveller to his court. His zeal for Vaishnava religion is seen from his determination to restore and repair the Govindaraja shrine at Chidambaram. His relations with the Portuguese and the Dutch and his unfortunate part in the civil war of Vijayanagar (1614-17) are dealt with in great detail. His successors were weak, inefficient and consequently thrown to the shade.

All this led to the incursions of the Muslims and the occupation of Gingee by Bijapur army by 1649, the then Nayak surrendering. Gingee continued to be in possession of Bijapur till 1677 when Sivaji easily attacked it in the course of his Carnatic expedition. He strengthened his relations with Golconda. Before he consolidated, Sivaji died in 1680 and Sambhaji mismanaged and precipitated a conflict with the Mughals which resulted in his capture by the Mughals in 1689. Feeble and unsuccessful attempts were made by the Marathas to retain Gingee but, in 1698 the Mughals got possession of the fort. From 1700 to 1714 Raja Sarup Singh and the famous Raja Desing were in charge. From the former the Fort St. David Government were able to get some territory and other concessions. With the removal of the headquarters of the Mughal subha to Arcot, Gingee lost its importance politically. The capture and occupation of Gingee by the French (1750-61) and its final fall into English hands are entertaining portions of the book.

All the available original documents are pressed into service besides a helpful index and fascinating illustrations. The Professor deserves the gratitude of all students of Indian History, and especially of South Indian History.

V. R. R. DIKSHITAR.

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PROGRESS OF GREATER INDIAN RESEARCH (1917-42): By  
U. N. Ghoshal, Calcutta, 1943.

Thanks to modern enlightened Governments and to the various learned societies, the past history of Greater India is being unearthed and interpreted. Archaeologists and historians have put forth their best in this co-operative endeavour and their achievement during a period of a quarter of a century or less is something

remarkable and striking. Prof. Ghoshal whose services to Indology are very well-known and who has contributed an informative study on the subject to the Jubilee Volume of the Bhandarkar Research Institute has chosen to publish it again in a handy little monograph together with a learned preface, three useful appendices and an index. This study relates to Afghanistan, Central Asia, Tibet, Mongolia, and Manchuria, Burma, Siam, Cambodia, Champa, Malayasia, and Ceylon. Under Malayasia, Java, Bali, Borneo and Celebes, Sumatra and Malay Peninsula are treated. It is a bibliography of the work, archaeological and historical, done practically within two or three decades. In placing before the public a scientific and critical review of the progress of researches, Prof. Ghoshal has consulted all the published works on the different countries by authoritative scholars, whether in the form of books, monographs or articles. A perusal of this work of Ghoshal will at once show the tremendous output of original research carried on with great competence and diligence during the years 1917-42. It is a welcome addition to the bibliography on Greater India. It indicates that the ancient Indian was a bit of an adventurer who not only took his goods to the foreign market but also transplanted his institutions and his religion, and made their influence enduringly felt in South-East Asia for nearly ten centuries. Dr. Ghoshal has earned the gratitude of every student of this fascinating subject.

K. A. N.

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**THE CASE FOR EXAMINATIONS:** By J. L. Brereton, M.A.  
Cambridge University Press, Cambridge, 1944.

It is not an easy job to present a generally acceptable case for examinations as we know them. The modern tendency is to regard them as out of date, their results as misleading, and their influence on the pupils as vicious. But such an attitude may not always be based on considered opinion. It can easily become just an 'unfortunate fashion' to condemn examinations. Hence it is very desirable for any one concerned with education to read what a vigorous exponent from the other camp has to say.

The book consists of two parts, the first part dealing with the elucidation of general principles and an account of the way in which the present school examination system has arisen (in Britain), and the second part with some changes that may be made to suit the present day needs of that country. The author, who has sixteen years' experience with the Cambridge Local

Examinations, deals with the subject only in relation to the educational system that obtains in Great Britain and consequently he is chiefly concerned with examinations like Oxford and Cambridge Locals, London Matriculation, etc., that are popular in that country. The recently published Norwood Committee's Report is discussed in the final chapter. However, he makes a good deal of useful observations on examinations in general.

The first three chapters of the book contain most of what Mr. Brereton has to say in support of examinations in general. According to him, the examination is the linch-pin of the whole educational system. The examination is not only the means of testing its results, but is also the most practical mobilising force on education, acting as stimulus both to the students and teachers. The success of an examination is analysed as being dependent upon:—

(a) Offering a suitable reward, a certificate that would be accepted by potential employers and for higher educational activities.

(b) A limited time within which it will be held. In this connection the author discusses the psychological effects of having periodical examinations with their dates fixed.

(c) A knowledge that it will be conducted fairly. Here the various steps that could be taken to ensure fairness in a single examination, as well as the desirability of having uniformity in the standard of difficulty in the successive years of a particular examination are discussed.

(d) Its being neither too hard nor too easy. "The standards must be high enough to extend the candidates but not so high as to discourage them". In connection with this principle the policy that ought to direct the fixing of the 'pass marks' is considered at length. The author works on the assumption that a certain percentage are bound to be failures and that the number of passes must be determined in accordance with the number of available places for further activities, by way of seats in the upper class or jobs in outside society. This point is repeatedly referred to in the whole book, and yet one is left with the impression that the author has not dealt with all the practical difficulties that would be involved in an application of this principle. It is pointed out that the standard for pass must be raised when the general level of knowledge increases. Or else, the examination will fail in its function of being a stimulus to the candidates and of selecting

the fit ones for further activities. That the standard of difficulty must be related to the available knowledge of the changing times, is certainly a sound principle.

(e) Its being able to bring out the comparative merits of the examinees. The necessity of proper weighting of certain papers when an examination consists of several subjects is emphasised and brought out clearly with the help of examples. This is useful because, in many examinations, this factor is not given any consideration.

(f) Its being a 'gateway to further activity'. It is under this point that the author has to say a good deal with regard to what an examination ought to be. The examination is not merely the end of one phase of activity, but is also the gateway to another. It should be considered as a link. Hence the author stresses the need for planning the syllabus and courses of study with this point in mind. It is in fact the main theme of the second part of the book which deals with possible and necessary reforms proposed by the author. It is contended that the planning of the course of studies and the examinations, must be done jointly by those responsible for training the students before the examinations and those responsible for their activities after they have taken them; the latter may be representatives of higher educational bodies and of the industrial, commercial, and governmental employers. Even though all the practical difficulties are not properly appreciated by the author there will be general agreement with what he has to say on this point.

The style of the author makes the reading easy and his tendency to repeat himself—in some cases, perhaps too often—makes it easier to know what he is driving at. Though the book may not go a long way in meeting the objections of those who do not believe in examinations, the author has certainly done a valuable service to those that are concerned with the planning and conducting of examinations, at least in Britain.

G. D. BOAZ.

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## THE KUPPUSWAMI SASTRI MEMORIAL

### AN APPEAL

The immense services of the late Mahamahopadhyaya Prof. S. Kuppuswami Sastri to the cause of Sanskrit learning and education are very well-known. He was a profound scholar in all the Sastras and a *litterateur* of rare excellence. He combined the depth of knowledge of the old style of learning with the width of the critical outlook of the modern scholar in a remarkable measure. First as Principal of the Sanskrit Colleges in Mylapore and Trivadi, and then as Professor of Sanskrit and Comparative Philology in the Presidency College, Madras, he played for many years the most decisive part in the designing and the working of the courses of study in Sanskrit, and Indian languages in general, in the University of Madras. He started the Samskrita Academy in 1926 in collaboration with Sri V. V. Srinivasa Ayyangar and others, and the Journal of Oriental Research in 1927 with Sir P. S. Sivaswami Ayyar as the President of the Executive Committee and himself as the Chief Editor; and as the Curator of Government Oriental Manuscripts Library, he organised an intensive campaign of manuscript collection and got together what is to-day one of the finest collections in the world, of which the province is rightly proud to be the owner. During the thirty years of his work as Professor, he trained a number of eminent panditas and young men in the critical methods of the study of Sanskrit works, and brought into being a school of research the members of which are now carrying on research work in the several institutions in and outside Madras. He planned the revision and amplification of Aufrecht's *Catalogus Catalogorum* of Sanskrit Manuscripts and was Chief Editor of this work for some years. His work as member of the various academic bodies in the Universities of India and in the University of Madras in particular, was always characterised by a thoroughness and high academic perfection which earned for him the deepest respect of his colleagues.

The Public meetings held in the city and elsewhere when the news of his passing away was reported last September and the speeches that were delivered by many scholars and publicists on those occasions gave clear proof of the high esteem in which his work was held and the love and affection his personal qualities evoked.

At the last All India Oriental Conference held at Benares (December 31, 1943 and January 1 and 2, 1944), the President of the Conference, Dr. S. K. Belvalkar, himself Sanskritist, made an eloquent appeal for starting a Kuppaswami Sastri Research Institute at Madras on the model of the Bhandarkar Oriental Institute at Poona, and the new Ganganath Jha Institute at Allahabad. Such an Institute would be a fitting memorial to the great Professor and it could take under its protecting wings the Samskrita Academy and the Journal of Oriental Research that were so dear to the Professor during his lifetime, undertake the publication of the unpublished works of the Professor, and continue the useful work of research started by him.

Liberal contributions are solicited towards the realisation of this project which would require a lakh of Rupees as a minimum, and they may be kindly sent to Sri Rao Bahadur K. V. Krishnaswami Aiyar, Advocate, 6, North Mada Street, Mylapore.

The Rt. Hon'ble V. S. Srinivasa  
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A. Shanmuga Mudaliar, *Secretary*.  
Dr. V. Raghavan, *Secretary*.

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# GAUDAPĀDA, ĀDI ŚEṢA AND VASIṢṬHA

By

T. M. P. MAHADEVAN,

While attempting to fix the date of Gaudapāda, the present writer was led to compare the *Gaudapādakārikā* with two other works on Vedānta, viz., the *Paramārthasāra* of Ādi Śeṣa and the *Yogavāsiṣṭha* of sage Vasiṣṭha. Much the same thoughts are found in the three texts; and there is a great identity in the terminology used. We shall examine the points of resemblance and see if anything could be deduced regarding the sequence of the three works.

The *Paramārthasāra* is attributed to Bhagavān Ādi Śeṣa. But who the author was and when he lived are questions which have not been finally settled. What can be asserted beyond doubt is that he must have lived before Abhinavagupta (11th Century A.D.) who adapted and expanded Ādi Śeṣa's work to form a handbook of the Pratyabhiññā system, and gave it the same name. Between the *Paramārthasāra* and the *Māndūkyakārikā* there are some significant points of resemblance. Neither quotes *verbatim* from the other. This is probably because of the difference in metre. But the similarity in doctrines between the two works is unmistakable. The following doctrinal identities may be noted:

- (1) The three forms of self, Viśva, Taijasa and Prājñā, belonging to the three states, waking, dream and sleep, are but phenomenal. The fourth which transcends them, viz., Turiya, is alone the real.<sup>1</sup>
- (2) Māyā is the power (śakti) or energy (vibhūti) of the Lord. It constitutes his nature (svabhāva). By Māyā the Lord appears to delude himself as it were. The endless diverse forms such as prāṇa are illusorily posited.<sup>2</sup>
- (3) In truth, however, there is neither origination nor destruction, neither bondage nor release.<sup>3</sup>
- (4) The one who has realised the truth is free to live as he wills. The ethical standards do not apply to him, because he has transcended the realm of morals. In this respect he is comparable

1. Gk, I, 11; PS, 31.

2. Gk, I, 9; II, 12, 19; PS; 30, 32, 33, 56.

3. Gk, II, 32; PS, 69.

to non-conscious beings or ignoramuses.<sup>4</sup> (5) With no system of thought is Advaita in conflict. The different schools contradict one another. But they are not inconsistent with Advaita, since all of them proclaim the self of all.<sup>5</sup> Besides these doctrinal similarities, one who reads the two works closely will notice that many of the key terms and phrases are the same in both and that both make use of rope-snake, shell-silver and the ether analogies.

On the ground of the points of resemblance set forth above, can any suggestion be made regarding the sequence of the two works? Professor S. S. Suryanarayana Sastri has suggested that the *Paramārthasāra* may well be considered to be the original which was drawn upon by Gauḍapāda.<sup>6</sup> The reasons given by Professor Sastri for his suggestion are as follows: (1) Ādi Śeṣa seems undecided as to the unity or plurality of *jīvas*, whereas Gauḍapāda seems more definitely against plurality. Hence it is that the latter characterises analogies like those of clay and its products, fire and its sparks, as being purportful only as introducing the doctrine of non-difference, not as teaching difference.<sup>7</sup> Since Gauḍapāda is more definitely inclined towards *eka-jīva-vāda*, the probability is that he came after Ādi Śeṣa. (2) In Kārikā III, 15, Gauḍapāda juxtaposes the illustrations of clay and fire. The first illustration occurs in the *Chāndogya*, and the second in the *Bṛhadāraṇyaka* and the *Muṇḍaka*. The juxtaposition of these two illustrations in one kārikā is not by itself unintelligible. But it would be more plausible if conceived as referring to and rejecting a similar juxtaposition elsewhere. This is just what we find in the *Paramārthasāra*, where in one verse (46) there is reference to the clay analogy, and in the very next (47) there is the illustration of the sparks issuing from the fire in a piece of heated metal. Probably Gauḍapāda had these two verses before him, when he juxtaposed the two illustrations only to refute them.

These reasons by themselves, we submit, cannot make plausible the suggestion that Gauḍapāda borrowed from Śeṣa's work. (1) In the first place, Gauḍapāda does not seem to uphold *eka-jīva-vāda*. As Professor Sastri himself admits, Gauḍapāda does offer an explanation for the empirical plurality of *jīvas* on the analogy of

4. Gk, II, 36-37; PS, 76-79.

5. Gk, III, 17; IV, 5; PS, 65.

6. *The Paramārthasāra of Ādi Śeṣa*, Karnataka Publishing House Bombay (1941), p. ix. See also JORM, Vol. xiii, pp. 99-100, *Some observations on the Māṇḍūkya Kārikās*.

7. Gk, III, 15.

defilement of a single pot ether not affecting the ether in the other pots; and this is identical with the explanation given by Śeṣa.<sup>8</sup> What Gauḍapāda is concerned to maintain is *ekā'tma-vāda*; and this is the backbone of all forms of Advaita. In Kārikā III, 3, for instance, the plural *jīvaiḥ* is used, and it is said that the Ātman appears in the forms of the jīvas. (2) In Kārikā III, 15, there is a reference not only to two illustrations but to three which are explicitly mentioned and to all other such illustrations which are implied by the words *et cetera*. The examples of clay (mṛt) and metal (loha) appear in the *Chāndogya* (VI, i, 4-5); and the illustration of sparks issuing from fire occurs in the *Bṛhadāraṇyaka* (II, i, 20), the *Muṇḍaka* (II, i, 1) and the *Maitrī* (vi, 26) *Upaniṣads*. Taking these illustrations as specimens, Gauḍapāda observes that Scripture has non-difference for purport even when it teaches creation. It is but natural that he should have chosen his examples from different Upaniṣads in order to show that all of them have the same purport. There is no refutation of the illustrations, as Professor Sastri suggests. What Gauḍapāda does is only to bring out the implication of the illustrations. And it is possible for one who would like to place Ādi Śeṣa after Gauḍapāda to argue as follows: Śeṣa cites the analogy of clay and its products along with another (the body and its limbs) in verse 46, and says in the spirit of the *Chāndogya* and the *Kārikā* that the non-dual self appears as if different in the phenomenal manifold (*advaitam dvaitavad bhāti*). In the next verse (47) there is a jumble of two analogies into one, and the sparks are pictured as issuing out of a heated metal. In none of the three Upaniṣads (*Bṛhadāraṇyaka*, *Muṇḍaka* and *Maitrī*) where the fire-sparks illustration is found is there a mention of metal.<sup>9</sup> Probably, Śeṣa had before him the *kārikā* of Gauḍapāda and understood the words *loha-visphuliṅga* to mean *loha-gatād dahanāt visphuliṅga-gaṇāḥ iva*. The interpretation though not unintelligible, is a little ingenious. Abhinava-gupta has only one verse in his *Paramārthasāra* corresponding to the two of Śeṣa's work, and he omits the analogy of clay, and instead of heated metal and sparks, gives the illustration of 'a radiant thing and its modes.'<sup>10</sup> (3) The view that Gauḍapāda was

8. Op. cit., p. ix; Gk: III, 5; PS, 36.

9. *Bṛh*: agneh; *Muṇḍ*: sudiptāt pavakāt; *Maitrī*: vahneh.

10. V. 49: aham eva viśvarūpaḥ kara-caraṇādi-svabhāva iva dehaḥ, sarvasmin aham eva sphurāmi bhāveṣu bhāsvarūpam iva. 'It is I who take form as the universe, like a single body composed of hands, feet, etc. In the whole it is I who am revealed as a radiant thing in its modes.' (L. D. Barnett's translation). See *JRAS*, 1910; p. 734.

earlier than Śeṣa may be sought to be strengthened by comparing the verses in the two works that deal with the three forms of the self. In verse 31 Śeṣa refers to Viśva, Taijasa and Prāñña and says that they veil the fourth, viz., Turīya. If we look at the verses that precede and succeed verse 31, we will notice that there is some casualness about this verse. Verse 30 speaks of Vāsudeva who, as if desiring to sport, spreads himself out in endless diverse forms. Verse 32 says that the *deva* deludes himself, as it were, through his own Māyā, and again realises the self, as it were. There is thus a natural connection between these two verses. The interposition of verse 31, referring as it does to the Turīya in the neuter gender, appears rather out of place. The discussion of the three states of waking, dream and sleep and of the three forms of self, Viśva, Taijasa and Prāñña and the exposition of the nature of the Turīya as the reality underlying them are all in place in the *Gauḍapāḍakārikā*. The *kārikās* of the first prakaraṇa constitute, in fact, an explanation of the *Māṇḍūkya Upaniṣad*, and so could not have been modelled after a single verse of the *Paramārthasāra*. It would appear, therefore, that Śeṣa or whoever was the author of the verse in question should be considered the borrower in this case. Either on his own authority or on the ground of some tradition, Śeṣa adds the phrase *ādi-madhya-nidhana* (beginning, middle and end) in apposition with *viśva-taijasa-prāñña*. And Abhinavagupta paraphrases it as *śṛṣṭi-sthiti-samhārāḥ* (origination, sustentation and destruction).<sup>11</sup> (4) Professor V. Bhattacharya thinks that Śeṣa must be dated even later than Bhāskara (9th Century A.D.), one of the post-Śaṅkara commentators of the *Vedāntasūtra*, for he seems to be acquainted with the theory of creation held by Bhāskara. Śeṣa effects a synthesis of the Sāṅkhya and the Vedānta doctrines of creation and finds a place also for the theory of *aṇḍa* or cosmic germ which is found, for instance, in the *Manusamhitā* (I, 8 ff) and the *Viṣṇu Purāṇa* (I, 2, 58 ff). In his commentary on *Manu* I, 8, Kullūkabhaṭṭa observes that the view of the Sāṅkhyas as regards the evolution of the non-intelligent Prakṛti is not acceptable to Manu, and that in his view is reflected the doctrine of *tridaṇḍi-vedānta*,<sup>12</sup> viz, that Brahman itself is the cause of the world through *avyakta* which is its power.<sup>13</sup> That the world is a transformation of Brahman

11. Op. cit., V. 34.

12. The School of Bhāskara.

13. See *Manusmṛti* with Kullūkabhaṭṭa's *Manvartha-muktāvalī* (Kasi Sanskrit Series) p. 6.

through *avyakta* is the view of Bhāskara.<sup>14</sup> Śeṣa seems to be aware of this view when he says that by Upendra (Viṣṇu) the world is created because of his own primal nature (*mūla-prakṛti*). He makes this statement, as it is but proper, under the seal of Advaita, viz., that the world is non-real and appears as if real.<sup>15</sup>

Though the view sketched above seems to be attractive, there are difficulties in accepting it as plausible. In the *Paramārthasāra* the terminology of Advaita is not fixed and defined. The work appears to mark a stage in the development of Advaita doctrine earlier than the one effected by Śāṅkara. So far as definiteness and fixity go, the *Paramārthasāra* is not even so advanced as the *Gauḍapādakārikā*. It would appear that Śeṣa's aim was to provide Vedānta with a short manual on the model of the *Sāṅkhyakārikā*. The approach to Advaita he makes is also through the Sāṅkhya. The style and language he employs bear the stamp of antiquity.<sup>16</sup> Though it cannot be proved from internal evidence, which alone is available to us, that the *Paramārthasāra* was earlier than the *Gauḍapādakārikā*, it can be said with a fair measure of certitude that it has come down to us from an age when the Advaita-Vedānta had not attained its character as a well-defined system—a character which it acquired at the deft hands of Śāṅkara.

We may now turn to the other work, viz., the *Yogavāsiṣṭha*. As to the identity of the author of this extensive work consisting of over twenty-three thousand verses<sup>17</sup> we know next to nothing. The mythical Vasiṣṭha is the spokesman of the author and the epic Rāma is made the recipient of the teaching. Whether there was a short poem as the original to which additions were later on made we do not know. But the need for abridgement was felt quite early, and there are now available several summaries of the work.

Between the *Yogavāsiṣṭha* and the *Gauḍapādakārikā* there is much in common in thought and terminology, though there are to be found only a few identical lines word for word in the two

14. See Udayana's *Nyāyakusumāñjali* (Bibliotheca Indica, Part I) p. 332. *brahma pariṇater iti bhāskara-gotre yujyate.*

15. V. 9, See *Āgamaśāstra*, pp. xxxii-xxxv.

16. For this suggestion I am indebted to Dr. V. Raghavan.

17. The YV says that it is a composition of thirty-two thousand verses (II, 17, 6); actually there are 23,734 verses to be found in the text.

works.<sup>18</sup> The view that the ultimate reality is non-dual consciousness is common to both Gauḍapāda and Vasiṣṭha. The supreme self is immutable, since it does not suffer modifications. Both the thinkers characterise the world as an appearance, comparable to the imaginary world of dreams or the *fata morgana*. From the standpoint of the supreme truth there is no difference between the dream world and the universe of waking life. For both Gauḍapāda and Vasiṣṭha the world is *māyā-mātra*, an illusion, a fabrication. In reality, there is no creation whatever, none in bondage, none released or to-be-released. The very concept of causality is unintelligible. Ajāti is the truth. Both the authors believe in release as the nature of the self. When the truth is known non-duality alone remains. The path of *yoga* is sketched in both the works, as the one leading to the goal; only the treatment is elaborate in the *Vāsiṣṭha* and not so extensive in the *Kārikā*. That liberation need not wait for the decease of the body is a view held by both the philosophers. Both appear well-acquainted with the Bauddha views and make use of their terminology.

The close affinity in thought and language between Gauḍapāda and Vasiṣṭha is only natural, since both of them teach Advaita. But, from the affinity can anything definite be said as regards the relation of the two teachers in time, Who was indebted to whom? Or was there a common original from which both of them drew material for their philosophical constructions?

Dr. B. L. Atreya has attempted to show that Vasiṣṭha<sup>19</sup> was the earlier of the two philosophers, and that Gauḍapāda was inspired greatly in his composition of the *Kārikā* by the teachings of the *Vāsiṣṭha*. His argument is based on the following grounds: (1) The *Gauḍapādakārikā* was not written as an independent work, as it was offered only as a sort of commentary on the *Māṇḍūkya Upaniṣad*. Gauḍapāda does not claim originality for his views. He refers to previous thinkers by such terms as 'vadāntesu vicakṣaṇāḥ,' 'tattva-vidāḥ,' 'nāyakāḥ' and 'buddhāḥ.' The views attributed to these thinkers and approved by Gauḍapāda are found in the *Yogavāsiṣṭha*. (2) Unlike Gauḍapāda, Vasiṣṭha claims to have received his doctrines directly from Brahmā and

18. For instance, (1) ādāvante ca yan nāsti vartamānepti tat tathā—Gk, II, 6; IV, 31; YV, IV, 45, 45; (2) upadeśād ayam vādo jñāte devaitam na vidyate—Gk, I, 18; YV, III, 84, 27. The same appears in YV, III, 84, 25 with *avibodhāt* instead of *upadeśāt*.

19. By Vasiṣṭha is meant here the author of the *Yogavāsiṣṭha*.



to have realised their truth in his own experience. (3) The *Kārikā* must be taken to represent a later phase of the philosophy of Advaita, for there is found in it a tendency to become critical, hostile and polemical towards other contemporary schools of thought. The *Yogavāsiṣṭha*, on the contrary, is free from polemics and looks at the rival schools from a higher point of view wherein all contradictions are harmonised.<sup>20</sup>

The reasons given by Dr. Atreya do not appear to prove his case or even make it probable. (1) The *Kārikā* is not a commentary on the *Māṇḍūkya Upaniṣad* in the literal sense of the word, though in the first prakaraṇa it seeks to explain the mantras of the *Māṇḍūkya*. It is a prakaraṇa treatise and not a bhāṣya. Even granting that it is a commentary, it does not follow that it must be dated later than the independent work on Advaita of another author. Gauḍapāda's reference to earlier Vedāntins does not mean that among them should necessarily be included Vasiṣṭha. The *Vāsiṣṭha* cannot be credited with originality for all its views, for the seeds of most of them could be traced in the Upaniṣads. Surely, there was not a philosophical vacuum between the age of the Upaniṣads and the times of Gauḍapāda and Vasiṣṭha! There must have passed several generations of Upaniṣadic scholars. It is to some of these that Gauḍapāda refers. Vasiṣṭha also cites the views of earlier Vedāntins.<sup>21</sup> There is a possibility, therefore, of both Gauḍapāda and Vasiṣṭha having drawn from a common source. (2) That Vasiṣṭha claims to have received his doctrines directly from Brahmā is no proof to establish the priority of the *Vāsiṣṭha* to the *Kārikā*. It must be remembered that, like Plato who makes Socrates his spokesman in the *Dialogues*, the author of the *Vāsiṣṭha* puts his views into the mouth of the sage Vasiṣṭha. The sage having learnt his philosophy from Brahmā is but a philosophical fiction; and it is true only in the sense that all truth is divinely inspired. In this connection, we may also point out that there is a similar tradition concerning Gauḍapāda, viz., that he received his teaching through the grace of Nārāyaṇa in Badarikāśrama. (3) It is not correct to say that the *Kārikā* has a tendency to become critical, hostile, and polemical towards other schools of thought. There are in this work criticisms of categories like the concept of cause. But there is not any hostility to other systems. On the contrary, Gauḍapāda expressly declares that Advaita is opposed

20. See *The Philosophy of the Yogavāsiṣṭha*, pp. 17-19.

21. E. g, IV, 21, 26: vedāntinaḥ.

to no school of thought.<sup>22</sup> As for the reference to other views which are contradictory to one another and mutually conflicting that is found in the *Yogavāsiṣṭha* too.<sup>23</sup> Hence the reasons offered by Dr. Atreya are not conclusive to show that the *Vāsiṣṭha* was the earlier work and that it was composed probably before Bhartṛhari and after Kālidāsa. As against his view, it has been pointed out that the *Yogavāsiṣṭha* quotes not only from Kālidāsa but also from the works of many other poets and writers who came long after Śaṅkara.<sup>24</sup>

Another consideration which contributes to placing the *Vāsiṣṭha* after Śaṅkara is that the terms *jīvanmukti* and *jīvanmukta* which are used in that work are not found in the *Kārikā*, nor in Śaṅkara's works. The doctrine of *jīvanmukti* is important for Advaita. Both Gauḍapāda and Śaṅkara explain it as an essential part of their philosophy, but without employing the term. If the *Yogavāsiṣṭha* had been composed before the time of Gauḍapāda and Śaṅkara, the chances are that they would not have ignored the term *jīvanmukti* used in that work, but would have adopted it themselves to make their theory of liberation while being embodied known by that term.<sup>25</sup> So considering the evidence that is available, there seems to be no case for assigning to the *Yogavāsiṣṭha* a date earlier than the *Gauḍapādakārikā*.

A comparison of the three works, then, leads us to conclude that, while the *Gauḍapādakārikā* and the *Paramārthasāra* belong probably to the same era before Śaṅkara, the *Yogavāsiṣṭha* is a post-Śaṅkara composition.

22. III, 17: tair ayam na virudhyate. IV, 5: vivadāmo na taiḥ sārddham avivādām nibodhata.

23. E. g. III, 62, 10-11; 84, 22-27. vivadanto hy asambuddhāḥ savikalpa vijṛmbhitaiḥ (cited by Prof. V. Bhattacharya: Op. cit., p. xxxvii).

24. See *The Date of the Yogavāsiṣṭha* by Dr. V. Raghavan (JORM, Vol. XIII, pp. 110-128). Dr. Raghavan places the YV between the 11th and the middle of the 13th century. He cites passages of the YV which show that the author had a knowledge of Śaṅkara's works, as e.g., the verse which contains the expression *sāsmadyuṣmad*. For parallels between the YV and the works of other writers, see the article in JORM.

25. Of the Upaniṣads only the later *Muktikā Upaniṣad* uses the term *jīvanmukta*. See Das Gupta: HIP, Vol. II, pp. 245 ff.

# CEREAL PRODUCTION IN MADRAS

By

C. W. B. ZACHARIAS

Next to the energetic conduct of the war, the food problem is the most pressing problem confronting the country to-day. To find a solution for it is the manifest duty of the Government and the people. The solution, whatever it is, should comprehend the immediate necessity and the long-range requirement, and should if possible envisage a continuity of policy. The problem is an all-India one and the long-range solution for it is undoubtedly the attainment of self-sufficiency for the country as a whole. But in India with its diverse soil and climatic conditions and the long distances between regions, self-sufficiency for the whole is best secured through regional self-sufficiency. Central policy should be built up on this basis, and Central direction should be restricted to cases where regional frontiers do not coincide with provincial boundaries and should resolve into mere co-ordination in cases where they do.

In the case of some regions this policy may be clearly ruled out for lack of avenues to be explored. To Madras however self-sufficiency is well within reach, and with determined efforts in that direction it may even be possible to produce in excess of our needs with a view to discharging the special responsibility which would from geographical proximity, seem to lie on her of succouring the States of Travancore and Cochin and in a less degree Mysore and Hyderabad. But what is exactly possible would depend on the potentialities of the situation, the discovery of which is the initial step in the direction of a solution.

In this paper a survey is made of food production in Madras Presidency as it has been developing in the immediate past so as to discover the main lines of policy to be pursued in the future, and an attempt is made to fix a target for production for the next few years. The study is confined to cereal production, for, howsoever desirable it may be to increase the production and consumption of 'protective foods,' that aim at the present time must remain only as an ultimate objective.

The review covers a period of twenty-four years, 1919-1943. The acreage and yield figures are taken from the Season and Crop Reports published from year to year. Acreage figures for this province are admittedly correct, but yield figures, being based

on subjective estimates, are supposed to be affected by a pessimistic bias. Though incorrect as data without proper allowances for the study of the adequacy of the food raised within the province, these figures may legitimately be used to make 'time comparisons.'<sup>1</sup>

Table I gives the area under the principal food and non-food crops for the years 1919-43 reduced to quinquennial averages for the years 1919-39. Table II gives the yield figures relating to cereal crops for the same period reduced in the same manner to quinquennial averages. Since the district of Ganjam was transferred to the Orissa province in April 1936, Ganjam figures have been deducted wherever necessary to ensure comparability throughout. In converting unhusked into husked grain the official rates of conversion have been adopted to make the estimates as conservative as possible. In the absence of specific seed rates for the different cereals applicable to the whole presidency, the seed rate of 3.5% of husked grain given in the Report on the Marketing of Rice for rice has been adopted for all cereals.

TABLE I  
Area under principal crops—Madras Presidency, 1919-43  
Quinquennial averages  
(In million acres)

Crop.	1919-24	1924-29	1929-34	1934-39	1939-42	1942-43
Gross area sown..	35.38	36.38	37.01	36.24	36.68	36.74
Area under food crops.	28.51	27.97	28.65	27.35	27.74	28.01
Percentage of area under food crops to gross area sown.	80.5	78	78	75.7	75.6	76.2
Area under cereals.	24.03	24.00	24.00	22.99	23.29	23.47
Percentage of area under cereals to gross area sown.	68.7	66	65	63.4	63.5	63.8
Area under non-food crops.	6.63	8.41	8.56	8.85	8.93	8.73
Area under rice.	9.83	9.81	10.47	9.92	10.27	10.38
Area under cholam.	5.22	4.71	4.72	4.97	4.87	4.85
Area under cumbu.	3.02	3.10	2.80	2.70	2.62	2.66
Area under ragi	2.30	2.12	2.02	1.77	1.73	1.82
Area under cotton.	2.24	2.50	2.16	2.39	2.38	2.21
Area under groundnut.	1.53	2.80	3.28	3.35	3.44	3.38
Area under tobacco.	.20	.25	.25	.29	.32	.28
Area under fodder crops.	.32	.42	.46	.46	.43	.37
Current fallows.	9.84	10.07	9.90	9.88	9.61	9.35

1. P. J. Thomas and N. S. Sastri: *Indian Agricultural Statistics*, p. 89.

TABLE II

*Yield of cereals—Madras Presidency—1919-43.**Quinquennial averages*

(In thousand tons)

Crop.	1919-24	1924-29	1929-34	1934-39	1939-42	1942-43
Rice. (a)	4679	4647	4954	4607	4849	4590
Cholam.	1419	1337	1323	1261	1309	1098
Cumbu.	780	816	754	659	685	606
Ragi.	1016	980	967	823	813	756
Maize.	48	57	49	30	30	25
Korra.	217	314	295	246	284	181
Varagu	417	410	410	319	343	345
Samai.	128	154	157	97	116	97
Total.	8703	8695	8910	8001	8431	7598
Total husked.	7765	7949	8191	7405	7761	7110
Less seed.	7493	7671	7905	7147	7489	6861
Per capita production of all cereals.	lbs. 416	lbs. 405	lbs. 398	lbs. 340	lbs. 327	lbs. 305
Per capita production of rice.	lbs. 250	lbs. 246	lbs. 249	lbs. 215	lbs. 227	lbs. 197

An analysis of the statistical material leads to the following conclusions:—

1. Absolutely and relatively to the gross area sown the area under food crops from 1934 onward was below the level reached in the quinquennium 1919-24.
2. The area under cereals also was characterized by the relative decline.
3. The area under non-food crops, principally groundnut, tobacco and fodder crops, was throughout the period extending at the expense of cumbu and ragi, and non-food crops generally were appropriating all the new area brought under cultivation.
4. The 'net outturn'<sup>2</sup> of cereals during the last nine years of the period was no higher than the average for the quinquennium 1919-24.

(a) Husked grain.

2. Net outturn may be defined as the quantity ready for consumption after husking and making provision for seed.

5. The quinquennium immediately preceding the outbreak of war, 1934-39, was specially marked by a highly depressed state of grain production, lowest levels being recorded both in acreage and in yield.
6. Throughout the entire period production of food grains was drawing farther and farther away from population (revealed by the figures relating, to per capita production).

Some of these conclusions receive substantial confirmation from the relevant trade figures. Full trade figures are not available for all the years included in the study. The publication of the accounts relating to the internal trade of India (rail and river borne) was discontinued in 1922 as a measure of economy and was revived only about the year 1934. They are not readily available after 1939 either. As Madras has a large volume of trade by rail and river the absence of these statistics for the years 1922-34 makes comparison difficult. The available figures are given in the table below.

TABLE III  
*Net Importation of Foodgrains into Madras Presidency*  
(In thousand tons)

Commodity.	1918-19	1919-20	1920-21	Average for 1919-21	1934-35
Total grains and flour.	85	447	309	378	1224
Rice.	78	405	250	327.5	912

1935-36	1936-37	1937-38	1938-39	Average for 1934-39	1939-40	1940-41	1941-42
1173	729	801	851	896	860	335 <sup>3</sup>	185 <sup>4</sup>
879	613	626	631	732	887	350 <sup>5</sup>	185 <sup>6</sup>

- 3 & 5. Estimated from the average trade figures for 1938-41 given in the Report of the Food Grains Policy Committee, p. 16.
4. Includes rice only by sea borne and coasting trade.
6. Includes only sea borne and coasting trade. Since by rail and river Madras is a net exporter of rice, to arrive at net importation a deduction of 50 to 70 thousand tons will be required,

Since the purpose here is only to test the conclusions derived from acreage and production figures, reliance can be placed without much damage to the result on the figures at our disposal. Taking the two year period 1919-21 it is seen that the average net importation of grains and flour (excluding grams and pulse) was 378,000 tons. These two years came immediately after the famine and pestilential year of 1918-19 during which, as may be reasonably expected, heavy drafts must have been made on the 'carry over.' It may therefore safely be inferred that this figure represents abnormally high importation to rebuild the carry over. This becomes fairly evident from the net import figures of the two years, 1918-19 and 1919-20. Net imports of rice increased from 78,000 tons in 1918-19 to 405,000 tons in 1919-20; imports of pulse increased from 97,000 tons to 141,000 tons; and total grains, pulse and flour increased from 188,000 tons to 608,000 tons in spite of the increased production of the year. Even if we accept the net importation of 378,000 tons as normal for the period, it will be seen that in the later quinquennium, 1934-39, average net importation was on a much higher level, 896,000 tons. In the following year too, the first year of the war, the same high level was maintained. The natural inference is that during this period internal production in relation to population was heavily declining. The situation as regards rice was not very different. In 1919-21 average net imports were 327,000 tons as against 732,000 tons in 1934-39 and 887,000 tons in 1939-40.

The question may now be raised whether these conclusions have any special relevance to the food difficulties experienced now. The decline in acreage and production in the quinquennium 1934-39 can hardly be said to have any direct relation to the food crisis. The fact that the crisis did not come with the opening of hostilities, but much later and only after production had begun to expand again, excludes the possibility of striking such a relation. Nor is there any ground for the supposition that the carry over was being depleted during the period. The high level of production in the quinquennium immediately preceding it and the substantially higher imports of the period under review lead to the inference that stocks must have been maintained at a high and constant level. However the leeway to make up in the subsequent period of slow expansion was great, and this may be said to establish an indirect connection between the depression of this period and the later difficulties.

Much more significance attaches to the growing gap between population and production which marked the entire period,

1919-43. It indicates the growing dependence of the Presidency on external supplies. As long as these supplies could be got without difficulty there was no food problem. The first impact of war on food supplies was through the creation of transport difficulties, and with the beginning of these difficulties a crisis was impending. In the first two years of the war however imports were maintained at almost the same level as in the preceding quinquennium, the fall in imports in 1940-41 being explained by the high level of production. In 1941-42 imports fell heavily causing, as may be expected, great depletion of stocks. The low stocks with which the next year opened, the phenomenally low production of that year and the loss of Burma which meant the loss of an average importation of 733,000 tons of rice and 649,000 tons of pulse and gram eventually ushered in the crisis. The crisis was therefore the direct result of our increasing dependence on outside supplies.

To make good the deficit caused by the loss of sources of supply is the problem ahead. In a normal year the deficit can be measured by net importation. With increasing population however the deficit of a past year cannot be used as the basis for estimating a prospective deficit. Some other method has to be devised for this calculation. The method originally adopted by the Food Department of the Government of India to determine the state of surplus or deficit in any area in any crop and in any year was the calculation of the difference between current production and the amount normally available for consumption, the latter being defined as internal production plus imports from all sources minus exports to all destinations. The actual formula which the provinces were asked to adopt was the following:—The annual requirements of each food grain were to be determined on the basis of the lowest figure of amount available for consumption during the three years immediately preceding the war. Provision was also made for any justifiable modifications. In the Basic Plan this formula underwent a change. Each province was asked to calculate annual requirement of each food grain "as being the amount of that food grain required in the province during that one of the three years immediately preceding the war in which the total requirements of *all food grains* in the province were the lowest." The intention behind all these modifications was to



minimize the deficits and exaggerate the surpluses so that the Central Government might with less difficulty make provincial allotments of available supplies.

The Food Grains Policy Committee after a review of this formula and the modifications thereof recommended the estimation of normal consumption requirements on the basis of the average amount available for consumption during the five year period ending March 31st, 1942. This alteration in the formula was thought necessary in order to bring the basic period as near to the year under consideration as possible and to give a broader span to the basic period itself. To the year 1943-44 the quinquennium suggested was near enough to yield fruitful results, but the farther away the year under review goes from this quinquennium the less relation will there be between the two, thus defeating the principle involved in the method, and the less correct will be the estimates. To suggest, as the Committee have incidentally done, that this quinquennium is the nearest normal period to any year of the food crisis is to overlook the fact that it includes three years of the war period during which control being ineffective food prices were rising unaccompanied by any compensating rise in incomes, thereby inflicting on the poorer sections of the population a reduced rate of consumption. Calculations according to this method would admittedly result only in the determination of the requisite amount for consumption on an austerity basis. Since the Food Department and the Food Grains Policy Committee were more concerned with the discovery of a formula for fixing deficits and surpluses for the provinces to ensure an equitable distribution of all-India supplies the adoption of an austerity standard was perhaps legitimate. They had necessarily to accept as given data the higher prices and reduced consumption prevalent everywhere.

In fixing a target for production however a more liberal provision has to be made. The normal quantity required for consumption is the amount which will meet effective demand at normal prices. This quantity can be discovered only by going back to the quinquennium which immediately preceded the outbreak of war. The low production of that period was fully offset by high importation and since the Depression had lifted by then the consumption rate could be expected to reflect the revival of prosperity.

The average annual per capita consumption during that period calculated on the basis of production and net import figures and

estimated population<sup>8</sup> was 386 lbs. Adopting this rate of consumption, a target for production may be fixed for the estimated population of any future year. Another and perhaps a more accurate method would be to determine the per capita consumption for the population above 2 years and accept that as the standard rate. The error in the estimation of future population would be slight and will be introduced only if the variation of total population alters a great deal from what it was in the decade 1931-41, and its age composition undergoes a marked change. Calculated according to this method the average annual per capita consumption for the period 1934-39 was 408 lbs.<sup>9</sup> This quantity is manifestly out of accord with the ideal quantity of 1 lb. of cereal per day per person suggested by Dr. Akroyd, the nutritional expert. That this ideal quantity had little to do with the quantity actually demanded in the past is clearly indicated by the relevant figures. The high level of importation during the years 1934-39 would seem to require some explanation if demand was regulated by this ideal figure. What is ideally desirable is bound to be different from the quantity determined by effective demand which is based on incomes, prices and the food habits of the people. Since the food habits of the people alter only slowly, the actual demand as it existed in the past offers a better working hypothesis than the ideally desirable.

Accepting this consumption rate of 408 lbs. per year the net outturn of cereals required for the year 1944-45 would be 8.72 million tons distributed among the various cereals in the proportions in which they were available in 1934-39. That means that rice should form 65% of this quantity. For the years 1945-49 the required quantities are given below.

	1945-46	1946-47	1947-48	1948-49
Estimated population above 2 (in millions).	48.12	48.40	48.68	48.97
Quantity required for consumption (in thousand tons).	8764	8815	8867	8920

8. Population was estimated by equally distributing the increase between 1931 and 1941 over all the years of the decade.

9. This includes the quantity imported into Cochin port and absorbed by the Cochin State and excludes the yield of 'other cereals' for which no production figures are available. These two figures may be expected to cancel each other.

To reach these levels production must increase by 16·5% in the current year and by 19·1% by 1948. This estimate differs from the one that may be derived from the Food Grains Policy Committee's formula roughly by 1 million tons for the year 1944-45. A margin of one million tons in a production target over a scarcity ration may reasonably be taken as the irreducible minimum.

The above estimates do not provide for the increase in the rate of consumption which may be caused by the nearer approach to full employment and the rising level of incomes. The effective control of food prices having removed their counteracting influence a special allowance for this may appear to be needed. Against it there is the consideration that the income elasticity of the demand for the staple food is limited to certain income groups and in those groups the rise in incomes has been neither uniform nor commensurate with the rise which had taken place in prices before they were stabilized. The little allowance which on balance may seem to be needed is however made by the conservative estimates of production made throughout the study.

The methods available for raising this additional quantity are (1) intensive cultivation, (2) diversion of land from non-food crops and (3) extension of cultivation into the culturable waste and current fallows. The Government of Madras in their Grow More Food Campaign appear to have preferred the first and the last to the second. From a long-range point of view relying on intensive methods is definitely the best course, but the immediate possibilities here being limited the efficacy of the other methods also should be canvassed. It is extremely doubtful whether through intensive methods more than 10% additional yield can be got in the next few years. Dr. Burns in his report on the Technological Possibilities in the Development of Agriculture in India makes a conservative estimate that through improved varieties, increased manuring and control of pests a 30% increase in production could be brought about—5% through improved seed, 20% through manuring and 5% through control of pests. To get this result only high yielding varieties of seed should be used, manuring should be at the rate of one ton of oil cakes per 5 acres and the innumerable pests should be controlled. On this basis the quantity of manure required for the 24 million acres under cereals in Madras would be 4·8 million tons of oil cakes or 240,000 tons of sulphate of ammonia. For the rice crop alone 2 million tons of oil cakes or 100,000 tons of sulphate of ammonia would be required. There are no reliable statistics of oil cake production in the province, but a

rough official estimate places total production at 267,000 tons, of which 246,000 tons are groundnut cakes. A portion of this quantity is fed to cattle leaving a balance of 200,000 tons available for manuring. This quantity is barely 1/10 of what is required.

The quantity of farm yard manure (cattle and buffaloes alone) produced in the province may be roughly estimated at 131.8 million tons.<sup>10</sup> Since the nitrogen content of farm yard manure is very much less, being only 0.5%, proper manuring to secure the same result will involve the utilisation of 2 tons of manure to an acre. A great part of this manure is burnt as fuel now leaving only about 33.4% for the land, all of which is used even now. Any increase for manuring purposes is therefore, conditioned by the discontinuance of the practice of burning it as fuel. At present the area under green manures in the province is only about one million acres. An extension of this area is possible at least in the paddy fields of the deltaic regions and through the distribution of green manure seed now being done under the Grow More Food Campaign some result may be expected, but they cannot be appreciable as the nitrogen content of this manure is only 0.7%. The preparation of composts out of night soil and their use as manure is said to offer immense possibilities, but even if a beginning is made now it will take some years before the practice becomes general. The full exploitation of the opportunity afforded by manuring for increasing the yield would seem to wait upon the importation or the production within the province of chemical fertilizers. This is bound to take time and though the Government is earnest about developing the fertilizer industry, the limitations imposed by war conditions would doubtless act as a brake. All things considered the 20% increase through manuring visualised by Dr. Burns does not appear to be within the range of achievement in the near future.

The results which may be obtained through the introduction of improved varieties under present plans will hardly exceed a 2.5% increase in yield. The scheme of seed distribution now being worked by the Department of Agriculture in nine districts of the presidency will result in some advance, the exact extent of which

10. Calculated on the basis of the following daily output rates, adult cattle, 40 lbs., adult buffalo, 50 lbs., and young stock, 20 lbs., given by W. Burns in *Technological Possibilities in the Development of Agriculture in India*.

cannot now be assessed. If expectations are fulfilled, half the area of the province under rice will by the end of 1946 be under new varieties giving an additional yield of 2.5%. To provide improved seed to the full acreage under cereals the total quantity of seed required at the rate of 3.5% of husked grain yield will be 270,000 tons. The difficulty here is not so much growing the seed as inducing the farmers to purchase it. As regards crop protection, quantitative estimates are hardly possible.

Resort must therefore be had to uncultivated land. If half the stipulated increase be allotted to new area brought under cultivation, on the basis of the normal yield of paddy on unirrigated land, 1.7 million acres of new land should be cultivated. Actually however more than this acreage will be required, as new land cannot be expected to give the same yield as land already under the plough. Through revenue free assignments of lands and the free supply of water wherever possible, some extension can doubtless be made, but the limiting factor here would appear to be a shortage of venturesome peasants. Keeping in view the peace time requirement of a proper balance between food and non-food crops the utmost that is possible in this direction should be attempted.

If recourse is had to diversion of land from non-food crops, the extent of irrigated or unirrigated land which will have to be thus diverted to grow half the required increase will respectively be 1.2 million and 1.7 million acres. The total irrigated land at present under non-food crops is only about one million acres all of which cannot be diverted. That part of it which is now under cotton, approximately 0.3 million acres, offers the best possibility of diversion, for cotton is the one non-food crop which may readily be thought of in this connection. For the rest a diversion of unirrigated land will be necessary.

But any action taken here, and action here would appear to be inevitable, should be based upon a well defined and effectively applied policy on the part of the State. Such a policy is specially essential in a situation where through control of prices the usual monetary incentives to production are removed. Reliance on *laissez faire*, even if modified by propaganda, will hardly suffice. More tangible inducements are required and even a resort to compulsion, if voluntary methods appear inadequate, will be fully justified by the urgency of the problem. Only the main elements of such a policy can be indicated here. They would appear to be (1) the selection of the non-food crops from which diversion

should be effected, (2) the fixing of targets for diversion, (3) the determination of the areas where diversion should be enforced, (4) the guarantee of remunerative prices over a period of years and (5) the grant of a subsidy wherever necessary to equalize cost and money return.

In all these different ways immediate attempts must be made to increase production. As a result of the Grow More Food campaign it is stated that there has been an increase in acreage under food crops by 1 million acres and in yield by about 1 million tons over the 1938-39 figures. This increase is altogether insufficient. Both the acreage and the yield were phenomenally low in 1938-39 and the increases stated above would mean a total production of only 7.5 million tons. The leeway to make up is still great. This shortage even without the alarming forecast of the harvest would have constituted a problem by itself in the current year. As things are, the situation is grave and nothing short of a province-wide rationing would adequately meet it.

# PRINCIPLES OF SOCIAL RECONSTRUCTION

By

E. ASIRVATHAM

Modern society is a dynamic, and not a static, society. It either goes forward or goes backward. There is no question of its standing still. Hence there is a need for continuous re-construction. Time was when philosophers dreamt in terms of a society resting at perfect equilibrium; but such dreams are reckoned to be mere day-dreams to-day. As recently as the latter half of the nineteenth century Herbert Spencer contended that, in determining the right conduct of the imperfect man in an imperfect society, one must first determine the conduct of the perfect man in a perfect society. We no longer uphold this contention of Spencer's; for there is no means by which we can determine how a perfect man will behave in a perfect society. The most that we can hope to reach, even as an ideal, is the penultimate ideal. The ultimate ideal is hidden from our view. Therefore, in endeavouring to re-construct society, our task is a comparatively simple one, viz., the task of devising a state of affairs better than what obtains now, rather than the impossible task of devising something which will be the best for all time. To use paradoxical language, the fundamental aim of social re-construction should be to produce "a state of moving equilibrium".

A further reason why society is ever in need of re-construction is that it is a living organism. It has the principle of life, growth, and development. If it was a dead organism or an inorganic piece of matter, one might lay down its permanent features. But such not being the case, one cannot lay down in minute detail the lines along which any society should develop. The principle of life suggests the idea of spontaneity. That means that it may not always be possible to produce a social system to order. "The wind bloweth where it listeth." Society does not grow and develop in such a manner as to accommodate itself to the preconceived notions or pet schemes of any social philosopher. Schemes of social planning have often been a failure because of their refusal to take into account certain fundamental aspects of human nature. Nobody can produce the type of society which he desires by the method of the arm-chair philosopher or that of the scientist in the laboratory cut off from the outside world.

Does all this mean that any intelligent planning of social processes is well nigh impossible? Surely not. While society is an organism and has the principle of spontaneous growth in it, it is well to remember that it is a cultivated organism like a plant in one's garden or a highly domesticated animal. The laws governing the plant in the garden are not the blind laws which govern the plant in the jungle. The passive adaptation of the jungle is rapidly replaced by the active, conscious adaptation of civilised existence. So within certain broad limits society allows itself to be moulded by man's intelligence and conscious thinking. From this point of view, therefore, one is justified in planning the re-construction of society. But like all great truths, it is only a half-truth; and half-truths can very well be the blackest of lies. The other half-truth is that society creates and re-creates itself. If re-construction has its place in society, so has re-creation. Most ancient societies which have survived had the principle of reviving and re-vivifying themselves when the need arose, while a good many of modern societies depend upon man's wit and planning.

Sound planning necessitates a thorough understanding of the natural laws of evolution and change. Schemes of social planning are bound to fail if account is not taken of racial and social factors, of the customs and *mores* of a people, of certain unexplained tendencies and behaviour, and even of the prejudices and predilections of a people. Yet 're-creation' should not be unduly emphasised at the expense of re-construction. Over-emphasis on re-creation leads to fatalism which has been a bane of many an Oriental society, just as over-emphasis on re-construction leads to the facile and easy-going meliorism of some of the youthful among Western societies. What is needed is something of a middle course between the two extremes. Old foundations should be retained where sound, and new superstructures built on them. Re-construction ought not to exclude re-creation.

### *Society and the Individual*

In planning for the future of society, a question which confronts one at the very outset is whether society or the individual is the unit of our thought and discussion. It is needless to say that this question is one of those eternal riddles for which there is no satisfactory answer. Attempt to solve it is much like trying to find a solution to the question whether the chicken or the egg came first in the course of evolution. All that can be safely asserted is that society and the individual are intimately wrapped up together, and it is folly of the highest order to emphasise one



at the expense of the other. Society is as necessary for the individual as the individual is for society. In the case of a society fighting for its very existence or defending itself against heavy odds, social needs and social safety may have to take precedence over individual needs and individual safety. But as a general rule, at least in normal times, the individual in society is the starting point of our thought and discussion.

In our day Nazi Germany has shown clearly the superb strength and colossal weakness of caring for social welfare almost to the exclusion of individual welfare. In Nazi Germany the State is powerful and the party is all in all. But the individual is reduced to a position of absolute impotence. He is a mere cog in the wheel. His life has no meaning or significance apart from the life of the State. He cannot think or act for himself. There is no freedom of thought, speech or writing. Religious freedom is to be found nowhere. The Jews have been persecuted in the most barbarous manner imaginable. Such a society as a society may be strong and even prosperous. But it is a slave society—a society which contains within itself the seeds of its own decay and disruption.

In Soviet Russia too, especially in the early years of the communist experiment, there has been regimentation, but not of the soul-crushing variety seen in Nazi Germany. It is to be hoped that with the winning of the war, the Russian individual will come back into his own and be able to hold his head aloft.

A truth which follows what has been said is that society does not exist for its own sake. It is not the be-all and end-all of existence. A society can be said to be strong and happy only to the extent to which its individual members are strong and happy. Human society is not like a society of bees or ants. The individual bee or ant is of little consequence. What matters is the prosperity of the beehive or of the swarm of ants as a whole. This over-emphasis on the group life to the exclusion of individual life and prosperity is seen clearly when a swarm of locusts goes on its mission of deprecation. Thousands perish in the way, but a blind instinct keeps the swarm moving, making short work of every bit of green on the way.

In the right planning of society, therefore, we must pay as much attention to society as to the individual. The two must march together *pari passu*.

*Difficulties in Stating Principles*

One chief difficulty in stating the principles of social reconstruction is that principles in the very nature of the case are of such a general character that one may read much or little into them. It is a well-known fact that on the basis of idealism Hegel built a theory of statism, while on the same basis T. H. Green and Bosanquet later constructed a negative theory of State action. Both J. S. Mill and Herbert Spencer are reckoned to be individualists and yet what a gulf separates Spencer's form of individualism bordering on anarchism from Mill's individualism which, in the economic field at least, is made to agree with the demands of socialism, if not those of communism. To cite Mill again, textbook writers call him a Utilitarian standing for the principle of "the greatest happiness of the greatest number." And yet he travels far away from the "pleasure-pain" principle of Bentham and distinguishes qualities of pleasure which Bentham had failed to do. As T. H. Green points out, once the Utilitarian agrees to interpret "happiness" as something more than "pleasure," meaning something like "blessedness" or "well-being," it is possible for the Utilitarian and the idealist to join hands together and work for the same end.

Another difficulty with principles is that we are living in an age which calls for action and not for theory or speculation. The stress seems to be on method and technique rather than on first principles.<sup>1</sup> The old idea of ends and means is fast giving place to the pragmatic idea of the continuity of means and ends. As F. G. Wilson observes: "To the pragmatist who is thoroughgoing, there is no meaning in a distinction between means and ends which considers ends in any degree apart from the means employed for their attainment. Likewise, as a part of this general proposition, the pragmatist denies the value of the distinction between theory and practice."<sup>1</sup> It is often argued that it is not as though we do not know what we want; but the question is how to attain it. On the one side, there are those who seek to accomplish the desired end by peaceful, evolutionary methods. On the other, there are those who hold that the basic condition of reconstruction is the transference or seizure of political power by the people or their representatives and the utilisation of it in the interests of equality. Which of these points of view will ultimately prevail, so far as India is concerned, it is difficult to say. Meliorism has accomplished

1. *Elements of Modern Politics*, p. 5.

great results in such enlightened countries as Great Britain and the U.S.A. But its scope is bound to be limited in India, steeped as it is in poverty, illiteracy, and religious intolerance.

### *The Principle of Equality*

Despite the difficulty regarding methods, we can make clear to ourselves the basic principles on which society needs to be reconstructed. Principles like "the greatest happiness of the greatest number" or "the greatest good of the greatest number" are too vague to be of much practical value. As a cynic puts it, the greatest number is one! The principle of equality, more than any other, is what the present-day world demands—but an equality which does not do violence to liberty, particularly civil and political liberty. Equality of ability and inequality of talents are bound to be. But inequality in the social, economic, and political fields needs to undergo radical modification. It is easy enough to argue that equality of economic goods cannot produce equality of enjoyment or equality of satisfaction. But that is no justification for the gross inequality which we find in present-day society. If society is to be reconstructed, we need to eliminate foreign rule, mobilise all resources, socialise public utilities, expropriate vested interests, and carry on mass campaigns to liberate people from their poverty, illiteracy, and the like. It is the duty of the social philosopher to shake the dumb millions of India out of their "pathetic contentment" and make the higher life possible for them. The higher life can be lived even apart from material goods, but that is not possible for the vast majority in the modern world. Education, wealth, leisure, and culture can all be placed within the easy reach of the masses only when the State is organised on behalf of the people and controlled by them. The problems of communalism, social evils, intolerance, etc., can be got rid of not so much by argument as by the action of the State.

While we do not argue a case for a dead, mechanical kind of equality, we earnestly desire to see equality of opportunity and equality of consideration. As Rashdall puts it, "other things being equal, my good is of the same intrinsic value as the good of anybody else." This means that equality should be the rule and inequality the exception. This does not necessarily mean equal wages for unequal work. But it does mean the wiping out of all meaningless distinctions and economic gulfs between the rich and the poor. It calls for a state of society where everybody is enabled to be the very best that he can possibly be, having the

fullest possible opportunity for the development of his body, mind, and spirit.

### *Social Harmony and Justice*

From the principle of equality, we may pass on to the principle of social harmony and justice which must underlie all schemes of social reconstruction. What is wanted is harmony and justice—not at any one level of human existence alone, but at all levels. Mankind has suffered incalculable harm by the circumscribing of loyalties. At a primitive level harmony hardly ever went beyond the limits of one's family, clan, or tribe. The modern world marked a distinct advance when loyalties were widened so as to include the whole of a national community based on such factors as geographical contiguity, racial unity, unity of language and religion, and common economic interests. The need of the hour is for the further widening of the horizon so as to cultivate a vivid sense of world unity and world community. This does not mean the abrogation of lesser loyalties but the correlation of loyalties in such a manner that the lesser automatically give place to the greater and the lower to the higher. A lesson which needs to be inculcated in youth everywhere is that one of the surest marks of a truly cultured person is his ability and willingness to order his loyalties. Harmony within a narrow social group and disharmony without are not the marks of a sound social system.

Men are so constituted that a good many find it difficult to widen their horizons. The most that a large number are prepared to do is to concede the claims of the members of their own economic class, nationality or race. But beyond these limits their attitude is one of sullen indifference, if not of active antipathy. Some of them are, perhaps, atavistic survivals who cannot be trained to be other than what they are. But a good many can be changed by proper home and school training and the necessary environmental changes.

There are those who argue that conflict is at the very root of progress and that without it society will become stagnant. This is a questionable proposition. Conflict of ideas and ideals may be justifiable, but that need not take the form of waging a war against the bodies of those who differ in ideas and ideals. There is no reason why conflict should take the form of extermination—the extermination of one group or other. Healthy rivalry and competition are justifiable in evolving the best possible struc-

ture, but not ruthlessness or destruction. If the whole world is a vast laboratory in which different social experiments are to be conducted in our endeavour to secure what appears to be best for the time being, there is no justification for extermination. In this connection the Eastern ideal of "live and let live" has more to commend it than the Western ideals of discipline and regimentation, although for both the East and the West the right ideal will be "live and help others to live."

### *Platonic Justice*

While social harmony ought to be the fundamental principle of any progressive society, it is not always easy to define it in concrete terms. Plato's idea of justice was that society was to be divided into rulers, warriors, and the working classes and that the members of each class were to perform the tasks assigned to them, without meddling with other people's business. While such a classification may very well fit into an authoritarian society, it cannot very well fit into a modern democratic society which aims at equality as much as at liberty. It is not possible to classify the main occupations of society into three main classes and compel people to stick to these occupations. The economic needs of man have multiplied by leaps and bounds since Plato's time, and the number of occupations is legion. Specialisation has gone on apace so that if we attempt to classify society on the basis of occupations we shall have a "Lilliputian society." Besides, there is no scientific evidence to show that skills are transmitted. It is true that there are families in India which have inherited certain occupational skills, but these are due to family training and close family secrets transmitted from generation to generation. The germ plasm itself is not affected. The Lamarckian theory of transmissibility of acquired characters does not seem to be based on any scientific foundation. As Aristotle discovered long ago, nature is not always consistent. To use his own language, the sons of slaves may be born with the minds of masters and the sons of masters may have only the physical excellence of slaves. This means that we have no right to keep a man to any particular profession, against his personal wishes and disposition. The society which we need today is a fluid society where it will be possible for a person to move up or down in the ladder according to his native gifts and capacities. Whatever the nature of future society may be, talent should not be allowed to perish for want of opportunity or encouragement.

*The Caste System*

If Plato's idea of harmony and justice is not suited for our times, the same may be said of the Indian caste system too. Under comparatively simpler conditions of society where external authority played a dominant part, caste no doubt had a useful role to play. But to-day it is largely an anachronism. Caste and occupation are no longer coterminous terms. The present war is obliterating the distinction between martial and non-martial classes by drawing into its vortex men and women of all classes and of differing abilities. Even now certain abilities are found more strongly present in certain caste groups than in others. The part of wisdom is to preserve these abilities and make them serve a social end. For this reason, we hesitate to recommend the abolition of caste root and branch. Where certain abilities are found firmly fixed, it will be suicidal to dilute them by thoughtless intermixture.

Even before caste intermixture takes place there should be social equality, legal equality, and equality of opportunity. One of the elementary truths which every student of social affairs should remember is that differences in themselves do not constitute superiority or inferiority. A given difference has a value only in the light of certain circumstances. When the circumstances change, the difference itself may lose its value. Our ultimate aim should be to make the whole of the Indian community intermarriageable, so that where there is a unity of mind and spirit marriages between members of different castes may take place without any comment or criticism. In the realisation of such an end equality before law and equality of opportunity can be of incalculable value.

If Indian society is to be planned aright, serious inroads have to be made into caste. Caste exclusiveness breeds communalism and communalism is a negation of nationalism. The institution of untouchability and the various disabilities that go with it should be put down by the strong arm of the State. A caste or group may organise itself for the social and educational uplift of its members, for the removal of caste disabilities, and for purposes of mutual aid. But no caste or group has any justification to so organise itself as to levy a toll from the rest of the community. Caste in politics and in administration has no place whatever. Yet it is a well-known fact that elections are often contested along the lines of caste; and appointments to public offices and promotions are sometimes unduly governed by the caste affiliations of

the ones at the top. In view of the caste and communal-ridden atmosphere which obtains in India to-day, it may be necessary for some years to come to retain something like a communal representation in the services. But it is nothing short of madness for each community and each caste to insist upon its exact mathematical percentage in all appointments and promotions. The right of the national community to be governed by honest and efficient administrators is much greater than the right of the various communities and castes of India to their share in the loaves and fishes of offices.

The bane of India to-day is the unduly important place given to caste and community. Hindu politics at its worst is caste politics just as Muslim politics at its worst is tribal politics. What is required is a genuine national politics. For good or ill the national community at the present stage of human development seems to be the right unit for the rousing of man's patriotic feelings and sentiments. Therefore, it is high time that attachments to caste and religious community were given a minor place when compared with loyalty to one's country. While the rest of the world is moving from smaller and smaller areas of co-operation to larger and larger areas, caste and communalism bid us do the reverse.

#### *India and Over-Population*

Leaving to a later place in the monograph the question of social harmony and justice in international relations, we may consider the question of over-population. A sound principle on which we may work in re-constructing society in India is that if we are to be progressive and hold our own in a world of conflict we must live in large numbers and live well. Malthus has grossly exaggerated the evil of over-population. At the time that he wrote no one dreamt of the almost limitless extent to which we can increase the productivity of the world by the application of science to agriculture, industry, and transport. The population of the world is not outstripping economic productivity to the extent imagined by Malthus. Whatever evils India may be subject to as a result of her teeming population, her millions have been her salvation. If it were not for these millions, the people of India in their contact with the aggressive nations of the West might have gone the way of the Maoris in New Zealand and Red Indians in America. It is our teeming millions which have prevented the effective colonisation of the country by the outsider, reducing us to pieces of curiosity in Government-managed reservations.

In saying all this, it is not suggested that quality does not matter. In India while the average span of life is ridiculously short (about 25 years), the life of the race has been inordinately long. Indians have been able to withstand the inroads of countless waves of foreigners, and they can be relied upon to withstand the inroads of the Britisher. While we want to improve the quality of the stock, it is not to be at the expense of numbers. At the present low stage of economic development, any campaign in favour of birth control will have a dysgenic effect. We shall breed from the bottom and breed out the top. If the man in the street to whom the population problem is a mere academic one is to be educated to the necessity of limiting his family, the proper place to begin is not to lecture to him on the virtues of birth control, but to raise his earning capacity and improve his standard of living. Even here it is not necessary for us to imitate the West in artificially raising the standard of living to such an extent as to favour certain vested interests. The aim of the social reformer in India should be to secure the maximum health and efficiency of the people at the minimum cost.

### *Good Living*

Malthusianism puts the cart before the horse. Our method is to put the cart where it belongs so that first things can be attended to first. If the Indian society is to live in large numbers and live well, one of the urgent needs is to provide a civic minimum for everybody—a minimum necessary not only for food, clothing and shelter, but also for education, culture, and recreation. As time advances a family wage should more and more take the place of an individual wage. The highly industrialised society of the West cares more for worldly comforts and luxuries than for the procreation of children. It is one of the important duties of the State to provide every possible opportunity for the full growth and development of all its children. In attaining this end there should be a multiplication of State services. Wholesome food should be within the easy reach of everybody. For this purpose, when the war is over, it may be necessary to have a permanent Food Ministry, which will eliminate middle-men sharks in the transport and sale of the essential articles of food. Our economy should be such that no one will be able to make huge profits out of speculation in food. The procuring and sale of the principal articles of food should be in the hands of public corporations on which the Government and the consuming public will have a strong



representation. Whatever profit is made will go back into the coffers of the Corporation resulting in lower costs for the consumer.

There should be an ample provision of State medicine so that nobody need be deprived of the best possible medical attention for want of money to pay for it. The medical examination of children at school should not be merely perfunctory. Examination should be followed by adequate provision for treatment and the education of parents in the rules of sound health and nutrition. Education should be free even up to the University stage. Fees may be charged for professional education, but they should not be exorbitant. Those who are found to be incapable of benefitting themselves by any type of education at any particular stage should be speedily weeded out so that they might not act as a drag upon the rest. Alternative methods of training suited to their needs should be provided.

If the Indian society is to live in large numbers and live well, much greater attention should be paid to housing than has been the case hitherto. Most huts in our villages are huddled together in the midst of insanitary surroundings with little or no ventilation. The living habits of the people have to be changed by education, persuasion, and example; even by force if necessary. There is no reason why in such a vast country as India people should be huddled together and live in the midst of dung heaps. Dwelling places in towns and cities also call for immediate attention. There is no justification for several families living together in a single tenement with inadequate lavatory and bathing arrangements. The State and municipality should undertake large scale building work, making it possible for people to buy their houses in easy instalments. Small houses with open space all round are to be preferred to luxuriously equipped flats. Our cities should be transformed into garden cities and cheap and rapid transport should be provided so that people can get to their places of business without much loss of time. Houses and streets should be built according to a well-thought out plan, making ample provision for future development. All principal roads and streets should be lined with shady trees. There should be many more parks, public gardens, open fields, and playgrounds than what we have now. Wretched hovels in our tea and rubber plantations and 'coolie lines' attached to our factories should be rapidly replaced by dwellings fit for human habitation.

If far-reaching changes are to be brought about in making the good life possible for the vast masses, the State should assume a

positive role and not rest satisfied with the mere enforcement of law and order. Already there is a system of graded taxation by means of which the abler and more fortunately placed members of society are made to pay for the needs of the less able and the less fortunate. Graduated inheritance tax and progressive income-tax are in keeping with the ideal we have sketched, and we need a further extension of the principle underlying them. It may be that even after the war is over, there should be something like an Excess Profits Tax preventing huge accumulations of wealth in the making of which the social and economic conditions of the community have played a very large part. If a civic minimum is justifiable, it is natural to ask the question, why not a civic maximum as well? Plato was neither a knave nor a fool when he suggested in his *Laws* that nobody should be more than five times as rich as his neighbours. The time will soon come when severe restrictions will have to be placed on the inheritance of wealth, which gives some people undue advantage over others and releases some from the necessity of earning a living. It is doubtful whether the good life which we covet for everybody is possible apart from a thorough-going socialist planning. Capitalism also can plan for the benefit of society as a whole, but the dice is likely to be loaded in favour of the vested interests. As things are at present, there is a sharp cleavage between the interests of the capitalists and labourers, landowners and peasants, moneylenders and debtors. Legislation can do a great deal in breaking down the middle wall of separation between them; but an ultimate solution is possible only with the establishment of a socialist society.

#### *Public Opinion and Self-help*

While legislation can do much in removing unjust conditions and in providing equal opportunity, one must not lose sight of the important fact that public opinion and self-help can play in evolving a strong and stable society. It has rightly been said that no country suffers more from self-inflicted ills than does India. This is particularly true in the realm of social living. The evils of caste and untouchability, the marriage of the immature, the prohibition of widow remarriage, purdah, certain unhygienic ways of living, and faulty diet are fetters which we have forged upon ourselves. Therefore, the remedy for the most part rests with us. If the Sarda Child Marriage Restraint Act is hardly enforced, it is because of the apathy of the people concerned. The time has come to push up the marriage of girls from 14 years to 18 and of boys from 18 to 21. The marriage of

the immature is sapping the life of the nation; and we see that what has happened to the cattle of the country by ignoring the laws of scientific breeding is happening on a large scale to human beings also because of the marriage of the immature and of those who are too closely related to each other. In all these matters sound public opinion should assert itself, even though the law of the country may lag behind for a while. A better thing will be for the law itself to legislate somewhat in advance of the times so that it may serve as a lever in raising public opinion to a higher level. Law should also come to the aid of the progressive-minded in the community by enacting permissive legislation in such matters as inter-caste and inter-communal marriages, re-marriage of widows, and the like. Laws of inheritance should be so changed that whatever applies to sons will also apply to daughters. One set of legal rules and moral code for the husband and another for the wife are out of keeping with the tempo of our time. Both the personal laws of the Hindus and that of the Muslims need to be replaced by a commonsense system of law. If we are to progress there should be no scruple in giving up old religious customs and inhibitions which have ceased to have a meaning to-day. In the kind of society which we want to re-construct, purdah and prudery have no more place than licence which masquerades under the name of liberty.

All this leads us to say that no society can last long which does not rest upon stable moral foundations. No progress is genuine which is not moral. Marriage is not merely the coming together of a man and a woman for the satisfaction of their sexual impulses or even for the procreation of children. It is an enduring experiment in social living. A home at its best is a nursery of social virtues—a place where lessons are taught, more by example than by precept, in mutual aid and co-operation, in service and sacrifice, in friendship and hospitality, and in order and discipline. At its worst a home easily becomes a prison house of selfishness. It is in the home that the foundations of future character are laid and the habits and dispositions of children are formed. Such being the case, any scheme of social reconstruction is foredoomed to failure if it does not give a proper place to the importance of the home and home training. Caste pride and exclusiveness, communal prejudices, and anti-social and anti-national dispositions and attitudes can be set right by proper home training. For the giving of such training we want educated mothers who themselves are filled with a moral zeal and a social passion. The children in turn should be taught to regard the father and mother as a conjoint

authority in their moral training and religious education. One of the urgent needs of our day is the culling out of stories and passages from ancient Indian lore which have a moral and social import and which can be used to great advantage in the training of children. While Christian scholars and priests have made available to children a vast field of simple religious and devotional literature, Hindu and Muslim scholars and priests have practically neglected this task. It is time that social reformers learnt the truth that the foundation for their work is to be laid in the home with the aid of the best that a people's art, music, literature, and philosophy can furnish.

### *Social Harmony and Justice in the International Field*

Attention hitherto has been confined largely to the reconstructing of the national community. We now turn our attention to the world community and see what vast changes have to be made there. If social harmony and justice between the various groups in a national community are of utmost importance, the same is true also of the relations between the national communities themselves.

1. *Racialism must go*: If the concept of a world community is to become a living reality, racialism must go root and branch. It is a significant sign of the times that in the present war the pigment of one's skin is not the basis of our alignments. The United Nations are fighting a 'coloured' race in the East and a white race in the West. The issues involved are economic, political, and moral. They are not primarily racial.

If racialism is to be rooted out, the proper starting point is not the advocacy of an indiscriminate intermixture of races. The proper starting point is the provision of racial justice. What the Negroes of America and other 'coloured' people are clamouring for to-day is justice and not charity. We must give the lie to the unwarranted assumption that the economic and social needs of the Westerner are greater than those of the Easterner and that the Western culture and civilisation are of a higher order. What recent years have shown clearly is that culture and barbarism are not the monopoly of any one people. They are found as much in the East as in the West. It is time that we learnt the simple truth that there is no pure race anywhere in the world and that purity in itself does not mean superiority or inferiority. One of the fundamental duties of all those who seek to bring about justice in racial relations is to work for absolute legal equality and equality

of economic opportunity. Earlier methods of dealing with backward peoples—the methods of enslavement, reduction to economic serfdom, and extermination by means of rum, gunpowder, and syphilis—are no longer in keeping with our changed notions regarding man and society. Whatever be the racial origin of a person, he should be given equal opportunity to strive and equal opportunity to reach positions of eminence by virtue of capacity. Equal wages should be guaranteed for equal work. Questions relating to immigration and emigration should be regulated not on the basis of colour, as is largely the case at present, but on grounds of cultural assimilability, educational attainments, social development, and standard of living.

There is no doubt that many of the Western nations are still victims of a superiority complex and if this war does not cure them of it, it will have been fought in vain. It is encouraging to find that many of the Eastern nations which quietly succumbed to Western aggression are now asserting themselves and are clamouring for a place in the sun. No lover of mankind wants to see a conflagration between the white and coloured races of the world in the future, but one fails to see how it can be avoided if there is a continuance of the kind of racial discrimination which is found in South Africa, East Africa, and portions of the United States—not to speak of the Nazi treatment of the Jews and its attitude towards Asiatic peoples in general. The U.S.S.R. is the only country to-day which seems to have satisfactorily solved the problem of race within its borders. Anti-semitism is punished as a treason to the State. Mr. Ickes, the Secretary for the Interior in the American Republic to-day, confesses that the treatment of minorities in his country, especially of the Negroes, is wretched when compared with the splendid treatment meted out to the minorities in the U.S.S.R. So far as we in India are concerned, one of our first duties is to cultivate in our children true manliness and courage. We have been assiduously trained for generations in slave virtues; and this has enfeebled our character placing a premium on dissimulation and deceit. True manliness does not mean priggishness. It means that a person may be the humblest of men in his personal relations, but will be the proudest of men when it comes to his ideas and ideals and the honour and self-respect of his country and his people. This kind of manliness will make not for war and conflict but for peace and co-operation.

2. *Imperialism and the Colonial system must go*: If racialism is to disappear, imperialism which is both the parent and the child of racialism must also disappear. When C. D. Burns claims that

imperialism is a half-way house between nationalism and internationalism and that it frees a person from the narrowness of village politics and makes him fit for the cosmopolitanism of world politics, he adds insult to injury. In modern times there have been different brands of imperialism ranging from the brutal and ruthless kind of the Germans and the Dutch to the mild variety of the British and Americans. But all at them forge fetters upon the people over whom they exercise authority. Whatever material gains may result from imperialism, there can be no doubt that it hurts souls. It is inimical to self-respect and self-development. It is synonymous with economic exploitation and political domination, however veiled these may be. For some years now British statesmen, including Sir Samuel Hoare of the notorious Hoare-Laval Pact, have been assuring us that the British Empire was fast transforming itself into a commonwealth, replacing coercion by mutual co-operation. But of late Mr. Winston Churchill, whose stubbornness is both his virtue and vice, has been trotting out the slogan "the British Empire and the Commonwealth of Nations." Suffice to say that, however eminent Mr. Churchill may be, he cannot both run with the hare and hunt with the hound. The clear implication of the "British Empire and the Commonwealth of Nations" is "the British Empire (i.e. the coloured part of it) for the sake of the Commonwealth (i.e., the white part)."

D. N. Pritt, the well-known Labour M.P. of Great Britain, has pricked the bubble when he says that all discussion regarding the surrender of absolute national sovereignty and the formation of world federation is not worth the paper on which it is printed if it is not preceded by the surrender of imperialism and the colonial system. Empire means war sooner or later, the crushing of individual and national self-respect, and economic exploitation. Imperialists may readily see the advantages that Empire gives in the realm of defence, trade and citizenship. But the enumeration of such virtues comes with good grace when it comes from the lips of those under imperial rule rather than from imperialists or their paid agents.

"The toad beneath the harrow  
Knows where each sharp tooth goes;  
The butterfly by the wayside  
Preaches contentment to the toad."

3. *Elimination of causes provocative of war*: The greatest curse of mankind to-day is war. On account of the shrinkage of space and the dreadful weapons of war used which bring death

and ruin to those near and far, and the far-reaching economic consequences, everybody becomes involved in war sooner or later. Modern warfare is ruthless in its effects, sapping the energy and vitality of people for years to come depriving them of nutritious food and necessary social services. The gains accruing from it are infinitely small, when compared with the incalculable losses it entails. If the combined wisdom and good-will of the statesmen of our day can prevent war even for the next fifty years, they will go down history as among the greatest benefactors of mankind.

The time to stop a war is not after it has broken or on the eve of its breaking, but twenty or thirty years before. Nations go to war for various reasons. But the chief reason is economic. The fact that certain countries possess vast colonial possessions which stand them in good stead in trade and commerce provokes to war those who are without those advantages, especially when they happen to be ambitious and feel sure of their own might. It is possible to have those economic inequalities adjusted by means of friendly negotiation. But a nation sure of its own physical strength feels that it can get much more by forcing the issue at the point of sword than by peaceful negotiation and palaver. Such being the case, the greatest contribution to peace which colonial powers can make is to put all their possessions into a common pool and work out a system which will place in the forefront the social, economic, and political interests of these possessions and obviate international rivalry for raw materials and markets for finished products. The economic waste involved in modern warfare is so great and the gains accruing from it are so miserably small that one wonders why nations do not agree to give up war, if not for any lofty moral reason, at least as an economic necessity.

Wars must cease if the ideal of a world community is to become a practical fact. Nothing short of a world federation with a world police force accompanied by total disarmament can finally prevent war. In the meantime one may try collective security which in the most critical times turns out to be collective insecurity, a balance of powers, and the disarmament of aggressor nations. But none of these is bound to succeed. The only final solution is the complete surrender of national arms and the policing of the world, by the world, and for the world.

4. *The Creation of an International Mind*:—If we want to abolish war and the causes provocative of it, the creation of an international mind is an urgent necessity. Jingoism and chauvinism

are altogether out of keeping with the needs of the time. The citizen of the future should be a good nationalist and a better internationalist. He should learn to combine genuine nationalism with genuine internationalism. Whatever internal differences the people of India may have, they have no quarrel with the outside world. They have no imperialist designs or any desire to force their culture upon others. All that they want is that they should be allowed to develop their national genius without any let or hindrance. They have their nationals scattered in different parts of Africa and the Eastern world and all that they want for them is freedom from discrimination. Among such a people it is easy to create an international mind and an international outlook. The people of the world should be trained to regard each other, in fact as well as in name, as members of a vast neighbourhood. In facilitating such a training there should be increased mutual intercourse between the various countries of the world, in the form of exchange of professors and students, of scientists and philosophers, of poets and artists, of workmen and technicians, and even of merchants and businessmen. The ideal of a world unity and world community can become a practical fact to-day if we can re-orientate our minds to the changed conditions of our day. Provincialism, chauvinistic nationalism, social pride and exclusiveness, and absolute national sovereignty are outworn creeds which can only be kept up by artificial props. Chief Justice Venkataramana Rao, in his Convocation Address to the graduates of the Madras University (1943) strikes a right note when he says: 'In the architecture of the new world we reverse the principle of the old. We begin with the conception of world society and go down to nation, community and citizen. We must make the world consciousness and unity permanent terms of our thinking and the basic factors in our social life.'

### *Scope for the Expression of Individual Personality*

We have said already that it is possible for a society to be strong and prosperous and yet its individual members may feel "cribb'd, cabin'd and confined." Such a society is a slave society. Social reconstruction is meaningless if it does not produce men and women of strong and upright character who can hold their heads aloft and who are provided with the fullest and freest scope possible for the expression of their personalities. National strength, military prestige, and favourable trade balance are but ashes if the individual members of a given society are not free to develop their best in them for their own satisfaction as well as for the



good of the community. This is particularly true in the case of a normal society which has not got to defend itself against marauders all the time.

All this means that a profound regard for human personality is the cornerstone of any lasting social structure. As a seventeenth century English writer observes: "The poorest he that is in England hath a life to live as the richest he;" and that is the sound basis of any true democracy. If human personality is sacred, there should be liberty for all for the expression of their personalities as well as equality within broad limits. Merely to say that men are born unequal in gifts and capacities and, therefore, equality is impossible of realisation is to beg the question. Our aim should be to reconcile the principle of equality with the fact of natural inequality. Society should be so organised that those who are favoured by nature with a superior intellect, skill or ability of some kind or another will not be allowed to levy a toll from the rest of the community. In order that they may exert themselves to the utmost, we may offer them slightly higher returns for their labour and greater social prestige. But the gulf between them and the ordinary people should not be as great as it is now.

#### *Food and Health.*

The elementary needs of every individual, particularly of the individual in India, are food and health; and any social order which neglects these needs stifles itself. Writing to the *London Times* (about June 1, '44) Prof. A. V. Hill says that "the rate of mortality in India is four to eight times that of England and the expectation of life in India is 26 years as against 62 in England. There are between 100 and 200 million suffering from malaria yearly in India; and tuberculosis, cholera, small-pox, plague, guinea-worm, filaria infection, yawa and kala azar take toll of life and health. More than half the population is underfed living on the verge of starvation. Chronic malnutrition acts with disease in a vicious circle producing poverty and inefficiency!"<sup>1</sup> According to another authority, in 1939 the mortality rate per 1,000 in British India was 22·5 as compared to 12·4 in England and 17·4 in Japan. Child mortality at different age periods is four to five times higher than in England. In 1937 the number of deaths in India was 6,165,234. Of these, fevers of one kind or another alone—malaria,

1. Quoted from the *Hindu*, June 2, 1944.

kala azar and enteric—accounted for 58 per cent. While England spends 22·7 per cent of the total revenue on medicine and public health, India spends only 3·4 per cent. A populous province like the U.P. spends only 1 anna per head per year on medical expenditure.

Ill health and poor and inadequate food act and react upon each other. No figures are necessary to show that the bulk of the people of India are under-nourished. According to Mr. Amery's own confession, the production of foodstuffs per head in India has declined in thirty years by more than one quarter. The same authority says that a million people have perished from famine in Bengal during 1943. According to Mr. S. P. Mookerji's estimate, two and a half million have died of famine and a million more on account of disease following famine. How many are maimed and crippled for life, passing on their physical and mental debility to their offspring, will never be known. What all this means is that attention to food and health ought to be the first duty of the builders of a new India.

2. *Educational Opportunity* :—Inasmuch as man does not live by bread alone, his mental and cultural needs also are to be satisfied if he is to develop his personality freely. In a primitive state of society a person can learn all that he needs to know by his own personal experience without any formal instruction. But that is a costly and prolonged affair in modern society. Education places at the disposal of youth a fund of useful knowledge without which a person will be at a disadvantage in the struggle for existence. It is the quintessence of the experience of the race. It enables a person to understand within the shortest time possible the environment around him and to make his individual adjustment. From another point of view, education is a process of drawing out of the individual his innate gifts and capacities.

If education is to serve this two-fold purpose of 'drawing out' and of giving the individual a fund of necessary knowledge in making his adaptation to life, it should be related to life conditions. Both the Wardha scheme and the Sargent scheme of education recognise this simple truth and seek to build education in the early stages round some craft or trade with which the child may be familiar. The chief advantage of this method is that education becomes tremendously concrete and practical. Its demerit is that it may become too utilitarian and crassly materialistic. But properly handled, education can both impart useful knowledge and cultivate an eye for beauty and a passion for truth. It will be a

bad day for India if education becomes so narrow and circumscribed that a person has no interest in the satisfaction of his intellectual curiosity for its own sake, in the solution of an abstract mathematical problem, in the unravelling of some mystery of the universe, in discussion regarding the existence and nature of God, in the appreciation of beauty, or in adventure and travel.

A place where education has failed in India is in not giving the educated a capacity for the enjoyment of life. Education from beginning to end becomes taskwork. We are so bound by curricula of studies, set examinations, and government restrictions that there is a woeful lack of originality in thought and expression and capacity to see life as a whole and derive the maximum benefit out of it. Education becomes a material investment. Poor parents stint everything and give a son or daughter higher education in order that he or she may later become a material asset to the family. A great many of the educated are swallowed up in government offices doing mechanical and routine work. Their supreme concern is the making of money and not the enjoyment of life or even of work. Very few cultivate hobbies while at school or later. They do not know how to use their leisure in re-creating themselves in body, mind, and spirit. What all this means is that we need boldness and a spirit of adventure in the planning of national education and its execution.

This does not mean that there should be no rules regarding a minimum of subjects which should be taught to every child. In our modern complex society, it is desirable that every child should be taught the three R's, simple facts of economics and domestic science, outlines of natural science, laws of public health, simple facts relating to electricity and drainage, the duties of citizenship and civic living, and the like. He should also be taught to use his eyes and be skillful in the use of his limbs, making use of such vocations as carpentry, blacksmithy, painting, drawing and mechanical engineering. He might even be taught to cook his own food and make a wise selection of the articles of consumption.

After this minimum knowledge is given, comes the time for specialisation. Instead of making every child go through a cast iron system, we should individualise each child and give him the kind of education and training best suited to his needs and capacities. This means that we should make an abundant use of psychological experts in studying each child continuously. It is folly to make a final pronouncement regarding a child's capacity when he is 11 or 12, for he continues to grow till 17 or 18. New capa-

cities which were undreamt of at an earlier stage might flower into existence later. This means that children have to be continuously watched and guided till almost the end of their teens. All this is impossible unless education becomes a national responsibility, as important as defence and the enforcement of law and order. In the civic training of children it is necessary to inculcate in them a general law-abidingness. They should be taught that duties are even more important than rights and that rights are not selfish claims but are based on a universal desire. They should also be taught the meaning and value of self-government. Children who show a capacity for organisation and leadership should be encouraged to use their gifts in the service of the community.

It is a thousand pities that education in India has not meant the stirring of our civic consciences. Civic sense is still very low owing to a multiplicity of causes. Partly as a result of the caste outlook of a good many Indians and partly as a result of little or no home training, hundreds of our boys and girls have no realisation of their responsibility towards others. Consideration for the feelings and conveniences of others is woefully lacking. Speaking loud in personal conversation, wild gesticulation, impatience in listening to another person's point of view, immoderate and uninformed criticism, and hitting a man below the belt—all these are far too common; and only an intensive civic training at home and school can rectify these defects. In matters of election to public offices, appointments and promotions, extraneous considerations often play a dominant part. Instead of judging a man on his personal merits, caste and communal questions are allowed to influence one's judgment.

If all this is to be changed, we need a people's government which will take up the question of popular education seriously. Children should be taught, while still young, their duties towards their neighbours. A sense of justice and fair play should be instilled into them. Earnest efforts should be made to eliminate unemployment and the high degree of competition which obtains to-day so that people will have the time and inclination to cultivate civic virtues. One chief reason why people are guilty of anti-civic and anti-social practices is that the struggle for existence is frightfully keen; and when this situation is changed, it is bound to lead to a greater degree of civic attainment and gentlemanliness. But what is one to say of such practices as dumping the garbage on public roads, spitting wherever one happens to be, bad table manners, and the like? The remedy for

these lies in the home and the school. Training in social living is one of their most sacred tasks; and without that active training India can never hope to take her place of equality and dignity in the family of nations. In the realm of passive virtues, such as instinctive friendliness, spontaneous hospitality, meekness, humility, intellectual tolerance, and reverence for life, we stand head and shoulders above others. But should we not aim at such eminence in the realm of active virtues as well—such virtues as straightforwardness, manliness, courage, self-forgetful service, and standing up for the rights of the poor and the oppressed? Are not inconsiderateness and willingness to put ourselves out for the sake of others some of our be-setting weaknesses?

3. *A National Programme of Employment*:—Merely to educate boys and girls without providing them opportunity to pursue gainful occupations is suicidal. When a young man is educated we open up large vistas before him; and if he is not to become disillusioned and thoroughly disgruntled, he should have no difficulty in securing employment which will give him both a life and a living. Like the provision of education, the provision of employment also calls for a scheme of national planning. While the Western countries have myriad openings for their educated young men, the number of such openings in India is very small indeed, except in war time. Conditions are bound to remain what they are till India becomes the complete master of her political and economic destiny. Some people to-day argue that the economic planning of India on a national scale can be effected even when there are no far-reaching political changes. Such people do not know what they are talking about.

Vocational guidance is one of the first duties of a progressive State. Every individual should be employed in doing a work which will not only bring him rupees, annas, and pies, but also give him genuine satisfaction and scope for the expression of his native gifts and capacities. It is not right that an army of our young men should be destined to spend the best part of their lives in driving the quill for a mere pittance. While there may be a few who like to do dull, routine, mechanical kind of work, a great many have some creative capacity or other which craves for expression. These should be given ample opportunity for planning, designing, and perfecting of the work entrusted to them. Only then can they derive joy and satisfaction from work. The highly industrialised civilisation of our day makes a rigid distinction between work and leisure. In a well-ordered society a person ought to be able to get at least a part of his enjoyment and

recreation from work performed amidst congenial surroundings. The relation between the employer and the employed should be changed from the master-servant relationship to one of partnership. As far as practicable, there should be a periodical change of occupations and surroundings for those whose work is not particularly congenial or which is a heavy drain on their physical and emotional resources.

If unemployment is to be completely wiped out and individuals are to be given as far as possible the kind of work which suits them, we need a vast State organisation which takes a human interest in its citizens. It may be that the ultimate solution for the problem of unemployment is a socialist society where private capital and private profits are reduced to the minimum possible. But until that time comes, the existing State should pay more attention than it does to the relief of unemployment in general and the placing of young people in suitable occupations in particular.

4. *Freedom of Expression*:—A man may have the best possible education, employment, food and shelter; but if he does not have the freedom to think, speak, and write what he likes he is among the most miserable of men. What distinguishes man from the lower animals is that he has a soul or personality which craves for expression and perfection. In recent years, especially with the advance of the authoritarian State, serious inroads have been made into the liberty of the individual to express himself. The present war will have been fought in vain if it does not result in the absolute vindication of the right of self-expression.

No one contends that there are not certain natural limitations to the right of self-expression. In the name of this right one is not justified in uttering blasphemous, libellous or slanderous remarks. Even in speaking the truth which may do much harm to another person's interests or prestige, one should be moderate in one's expression, and one's chief object should be the promotion of public good. To use a Biblical expression, one should speak the 'truth in love'. In times of war or similar national emergency certain natural restrictions have to be placed on the freedom of speech and writing. But this does not justify the administration in muzzling honest criticism or any point of view which does not happen to meet with its approval. In its own interest as well as in the interest of the nation at large, a war-time government should welcome well-informed criticism of its methods and policies. Otherwise, it is likely to be sitting on Olympian heights, far removed from the common level where people think and act, and

be guilty of doing most foolish things which may have disastrous consequences to the nation. It is only when there is free and frank discussion that truth can be discovered. Very few people have the capacity or the necessary means to know the entire truth of a matter. One person gets hold of one side of a truth and tends to exaggerate it. Others do the same. Therefore, if we are to have the whole truth and nothing but the truth, we must have free and untrammelled discussion. If the meaning of democracy is 'government by discussion,' complete freedom of thought, speech, and writing, subject to the general qualifications above mentioned, is its cornerstone.

5. *Freedom of Worship* :—Freedom of worship is a corollary which follows freedom of expression. Some one has rightly said that man is incurably religious. Whether any particular religion or sect is valid or not, the fact is that most men believe in some power outside themselves which is responsible for the creation and maintenance of the universe. They further believe that it is a righteous power and deserves to be worshipped.

Worship is both individual and communal. In either form it should be free so long as it does not offend the generally accepted moral code of the community and does not bring into contempt the religious beliefs and practices of others. Religious freedom means not only the freedom to profess one's faith but also the freedom to propagate it, using the art of persuasion and of moral appeal. It is exceedingly difficult to draw a line between proselytism and conversion; and public opinion, rather than the law of the land, should frown upon unworthy methods employed in conversion. If the freedom of expression is the inalienable right of every individual, so is the right to change one's religious faith. Therefore, to place legal impediments in the path of one's conversion is a serious violation of the law of personality.

While one may change one's beliefs regarding God, the universe, life after death, and the like, as one is guided by the spirit of God, one need not renounce one's social and national heritage, unless such renunciation is a logical corollary of one's change of faith. 'Religion in danger' is a meaningless cry. One need not take up the cudgel on behalf of one's religion; for if a religion has truth and vitality, it can take care of itself.

In a world which is crying for co-operation, understanding, and good will, religion ought not to be a divisive factor. It should be a unifying factor, bringing together all men and women of goodwill on a common platform in the fight against sin and evil,

selfishness and greed, insincerity and hypocrisy. There should be an inter-religious conspiracy for the improvement of all religions. More attention should be paid to religion as an instrument for the alteration of human suffering and the removal of injustice than as a means of grace or salvation. The more that Hinduism purifies and revivifies itself the more should the Christians and Musalmans rejoice. For we are not out to steal sheep from each others' flock, but to help and inspire each other so that all together may reach a higher level of religious and moral attainment.

*Mrs. Roosevelt's Four Freedoms*

Apropos of what we have said, especially on the side of the individual in a sound scheme of social reconstruction, and as a supplement to the four freedoms listed by her husband, Mrs. Roosevelt lists the following:—

1. Equality before law, which assures us of justice without prejudice, for Jew or Gentile, for any race or colour, as far as human beings can obtain justice.
2. Equality of education for everyone, because of the need for an equal opportunity in life.
3. Equality in the economic field, which means we are so organised in our communities and in our system of economics that all men who want to work will have work and that work will be suited to their capacity and will be rewarded without prejudice.
4. Finally, because we believe in the democratic and republican form of government, by which we are governed through the consent of the governed, we must give to all the citizens of a democracy a chance for equality of expression. We believe there should be no impediment which prevents any man from expressing his will through the ballot.



## EARLY EXPERIMENTS IN MUSIC

By

P. SAMBAMURTI

Much of the knowledge that we owe at present regarding the nature of scales and srutis (quarter-tones) is due to the experiments in music carried out by scholars in ancient and medieval times. These experiments performed with great care and accuracy led them to perceive the beauties of the scale of just intonation and the frequencies of subtle srutis. The early perception of the highly concordant notes, Panchama ( $3/2$  or 702 cents) and Madhyama ( $4/3$  or 498 cents) led them to work out the cycles of Fifths and Fourths to their logical conclusions. Although the cycle of Fourths is implied in the cycle of Fifths, the Fourth (Suddha Madhyama) being an inverted Fifth (Panchama) from sa, still it was found useful to work out the series of Fourths as well. The knowledge of the 22 srutis was obtained by working out these two cycles. The scale of equal temperament, which became a necessity in Europe on account of the exigencies of harmony, was unknown in India.

*Cycle of Fifths, or Spiral of Fifths* means a series of Fifths or Panchama svaras. (The Panchama svara is the third harmonic note and next to the octave is the most consonant interval). In this process, the Fifth of each note of the cycle is taken as the tonic note and its Panchama determined; the relation of the new Panchama to the original tonic note, shadja is determined. For instance, with the middle octave shadja as the starting note, we find its Fifth is the Panchama of the same octave, frequency  $3/2$ . Taking this Panchama as shadja, its Fifth is found to be  $3/2 \times 3/2 = 9/4$  or the Chatusruti Rishabha of the tara sthayi. The Fifth or Panchama of this note is found to be  $9/4 \times 3/2 = 27/8$  or Chatusruti dhaivata of the tara sthayi. The Fifth or Panchama of this note is found to be  $27/8 \times 3/2 = 81/16$  or the Chyuta Madhyama gandhara of the ati tara sthayi and so on. The process was continued till the 12th cycle in each case when it was found that the 12th note of the cycle in one case and the 11th and 12th notes of the cycle in the other were found to be higher or lower than Shadja or Panchama by the small interval of a comma or

*Pramana sruti*. These notes were ignored as not being of practical importance and the remaining 22 notes were retained and these are the 22 *srutis* of the ancient Indian scale. The further notes obtained in the two cycles were only of academic interest, since all the notes, important from the point of view of practical music were already obtained.

In the accompanying illustration, on P. 153 all the notes marked on the right of the thick central line, belong to the cycle of Fifths and those marked on the left, to the cycle of Fourths. The roman numerals indicate the order in which the several notes occur in the cycles of Fifths or Fourths. All compound intervals arrived at in working out this process are reduced to the middle octave for the purpose of easy comparison, the precise octave of the note however being indicated in notation against each note. In the scale of equal temperament, the octave is divided into 1200 equal parts or cyclic cents and each semitone comprises 100 cents. The illustration visually shows the points of difference in the frequencies of the notes belonging to the scales of just intonation and equal temperament. Since none of the notes of the scale of equal temperament are used in Indian Music, the unsuitability of the harmonium and other fixed-toned instruments (tuned to the scale of equal temperament), for playing correct Indian music is obvious. The limitations of the uncultivated human ear being what they are, it is too much to expect the average person to perceive the refined distinctions in the frequencies of the notes belonging to the two scales, but nevertheless these distinctions are solid and aesthetic facts.

Most of the conclusions arrived at by ancient scholars can be proved by modern methods. The beauty and symmetry underlying the scale of 22 *srutis* is clear from the illustration. There are the ten pairs of notes and these with the *sa* and *pa* give the 22 *srutis* of the Indian musical scale. The two notes constituting each pair are found to be uniformly separated by the interval of a comma or *pramana sruti*. The interval of a comma though small, is still recognisable by the trained ear. Of the ten sets of twin notes, the note of the lower pitch belongs to the cycle of Fourths and the note of the higher pitch to the cycle of Fifths and this is naturally so, since *ma* is a note less in pitch compared to *pa*. At the sixth stage of each cycle, a small but negligible correction of 2 cents is introduced to facilitate easy calculation. In the cycle of Fifths, two cents are subtracted and in the cycle of Fourths, two cents are added. All these delicate *srutis*, are the pride and glory of Indian music and are carefully treasured up in the compositions of great composers.

CYCLE OF FOURTHS

CYCLE OF FIFTHS

	Sa	
		-1200
Not used 160/81 1178 XII		
		—V 1110 Chyuta Shadja Ni 243/128 N
		-1100
N 15/8 <del>Kakali</del> Ni 1088 VII		
		—X 1018 Kaisiki Ni 9/5 N
		-1000
N 16/9 Bhairavi Ni 996 II		
		—III 906 Chatusruti Dha 27/16 D
		-900
D 5/3 Trisaruti Dha 884 IX		
		—VIII 814 Suddha Dha 8/5 D
		-800
D 128/81 Ekasruti Dha 792 IV		
		—I 702 Panchama 3/2 P
		-700
Not used 40/27 680 XI		
		—VI 612 or 610 Chyuta Pa
		729/512 or 64/45 M
M 1024/729 or 45/32 Prati Ma		-600
588 or 590 VI		
		—XI 520 Begada Ma 27/20 M
		-500
M 4/3 Suddha Ma 498 I		
		—IV 408 Chyuta Madhyama Ga
		81/64 G
		-400
G 5/4 Antara Ga 386 VIII		
		—IX 316 Sadharana Ga 6/5 G
		-300
G 32/27 Bhairavi Ga 294 III		
		—II 204 Chatusruti Ri 9/8 R
		-200
R 10/9 Trisaruti Ri 182 X		
		—VII 112 Suddha Ri 16/15 R
		-100
R 256/243 Gaula Ri 90 V		
		—XII 22 81/80 (Not used)
		0 Sa

## SUGGESTIONS ON INDIA—A UNION OF SOVEREIGN STATES ?

BY

K. VENKOBA RAO

1. *Division of India into Sovereign States: Which authority has legal competency to do?* If India is to be divided into 2 or more sovereign States that can only be done by the British Parliament which is the sovereign authority for India. This means that the totality of sovereignty has to be resumed by the Crown and redistributed among the new States.

2. *Boundaries of New States: Basis of.* The setting up of the new States will have to be on some equitable basis. It may be in line with the Lahore resolution or the Gandhi-Rajagopalachari formula. It cannot be on the basis of existing boundaries—especially as regards the Punjab, Bengal and Assam. For the text of the Lahore resolution see p. 80 of Part III of Prof. Coupland's "Constitutional Problem in India". As to the readjustment of boundaries on the basis of economic regionalism (a concept which has been successfully put into practice in the development of the Tennessee Valley River Basin running through several States in the U.S.A.) see Coupland Part III, Chapter X (and especially as regards the Tennessee Valley Authority pp. 117 to 119 of Coupland).

3. *Problem of Well-organised and considerable minorities living in contiguous areas.* Two examples of this might be given. In the Ambala Division of the Punjab there are 3,099,000 Hindus, 240,000 Sikhs and 1,318,000 Moslems. The Lahore resolution excludes Ambala from the Punjab. By this exclusion the Muslim majority in the Punjab is raised from 57.1% to 62.7%. Again, the Burdwan division consisting of 8,125,185 Hindus and 1,429,500 Muslims is also proposed to be excluded from the North Eastern India zone of Pakistan by the Lahore resolution. By this exclusion the Moslem majority in the North Eastern zone is raised from 54.7% to 65%. Would not giving effect to the Lahore resolution be a denial of the right of self-determination to the respective communities concerned? Dr. Ambedkar in the *Times*, May 13, 1943 suggested that this difficulty would be met if Parliament were

to pass an Act providing for two plebiscites in the areas for which partition was proposed, one among the Muslims and the other among Non-Muslims, the results to determine as far as practicable the subsequent demarcation of the frontiers by a boundary commission. Another solution of the difficulty would be to administer such areas directly through the central machinery that is to be set up under our scheme. They will occupy more or less the status of the present Chief Commissioners' provinces which are directly administered by the Central Government. But this would raise difficulties as regards Calcutta city which contains 1,531,512 Hindus, 497,535 Moslems and 79,844 other Non-Moslems. In the 24 Parganas district in which Calcutta is situated there are 2,309,996 Hindus, 78,210 other Non-Moslems and 1,148,180 Moslems. Thus, deprived of Calcutta with its great port and foreign trade, North East India would become a dubious proposition. The solution would appear to lie in providing that, though Calcutta will be administered by the Central Authority, it will have to pay some monetary compensation to the North Eastern Zone in which it is situate and from which it is cut off for loss of trade, etc. See Coupland pp. 80-90. A division of India into Hindustan, Pakistan and 2 or 3 additional regions on the economic or river basin system suggested by Prof. Coupland is feasible.

4. *Constitution-Making Body*: Details of: After separation has been effected by British Parliamentary legislation will come the question of constitution-making, a constitution for Pakistan, a constitution for Hindustan and a constitution for the central machinery. As far as the last is concerned the best course will be to leave it to a select committee of experts set up by the newly created, sovereign states. This committee will settle the details of the central machinery to be set up. A constituent assembly is rather impractical. Alternatively the task may be left to the British Parliament which may fulfil the role of an impartial umpire, but this may ruffle nationalist susceptibilities. See Coupland p. 35. In the interim period between the creation of the sovereign states and the inauguration of the central machinery the present executive will have to carry on the government or a provisional national government can be set up with British Parliamentary sanction.

5. *Constitution for Hindustan and Pakistan*. These should be on a democratic basis. We do not want any form of theocracy. There should be coalition ministries on some fair basis; perhaps

also with the necessary concomitants of separate electorates and reservation of seats. See Coupland pp. 63-64.

6. *Central Machinery: Composition, Powers, etc. of:* The Centre to be set up will have a limited number of functions but very wide powers in administering them. Since it is not to be a federation we must have at the centre a system of checks and balances and make the central machinery, the central judiciary and the units dependent on each other. As Munro says in his "Government of the U.S.A." p. 546: "A government organized on the principle of checks and balances derives both strength and weakness therefrom. Division of powers makes for safety. It provides the ship of state with watertight compartments. When one compartment floods the others hold firm keeping the craft afloat and on its course. So long as the balance of powers is preserved no one branch of government can arrogate itself to any dangerous excess of authority. But, on the other hand, the triple division of powers means that there can be no full concentration of responsibility for what is done. The public interest suffers whenever the 3 departments fail to work in harmony and the community as a whole has no effective leadership". But perhaps the defect in this system pointed out by Munro is the price we have to pay for the Muslim suspicion of a Hindu domination at the Centre in order that we may have some central authority though not of an ideal kind.

7. *President of the Indian Union.* The President of the Indian Union may be elected for a term of 4 years out of a panel of 3 members set up in rotation by the Hindustan and Pakistan and Indian States. Election may be according to the American Presidential election, i.e., the candidate who secures the majority of votes in any of the constituent units will have the entire votes of the delegates to which that unit is entitled. Munro explains the American Presidential election thus (p. 122). "In each State the political parties put forth their slates of electors nominated in whatever way the State laws prescribe. These electors are usually prominent party workers but must not be federal office holders. Their names go on the ballot in parallel columns and on the day set for national election in November the voters in each state decide which group of electors shall be chosen. When the voter marks his ballot for a certain group of electors, however, he is in reality indicating his preference for one or other of the

candidates already named by the national conventions. The ballots do not bear the names of these presidential candidates or if they do it is merely to guide the voters in voting for the desired group of electors. To all intents nevertheless the ballot is just as direct as though there were no intervening electors at all. The real election takes place on the Tuesday after the first Monday in November. What occurs later unless something untoward happens is nothing but a formality. The people pay no attention to it".

8. *Vice-President of Indian Union: Advisability of having post of:* In America the Vice-Presidency was established as a consolation prize to be bestowed on the candidate getting the second highest vote in the nomination conventions of the party. The Vice-President meets with promptness unexpected emergencies created by the President's death, resignation or inability to discharge the duties of office. The Vice-Presidency in America goes as a rule to balance the ticket geographically or to someone who can placate a disgruntled or disappointed faction of the party or bring some doubtful State into line or secure large contributions to the party's campaign funds. In India it may be laid down that if the President is a Hindu the Vice-President should be a Moslem and vice versa.

9. *President of the Indian Union and Indian States.* If Indian States join the Indian Union what is the method by which they are to be associated in the election of the President? Direct election of delegates to the Presidential convention from the Indian States would be asking too much of the States who have in some cases not yet completely shed off real or seeming despotism and who have yet to don the democratic garb. It may be provided that the ruler of each State (or if there are smaller states a group of states) can nominate an agreed number of delegates to the Presidential convention.

10. *Removal of President from office.* The President may be removed from office by a motion made by the central legislature of Pakistan or Hindustan which is carried by a 3/4 majority and made before the Supreme Court.

11. *Board of Commissioners to assist the President.* The President shall be assisted by a Board of not less than 4 or more than 6 commissioners to administer a few matters of common interest like foreign relations, defence, communications, food,

customs, etc. Since the scope within the centre is to function is circumscribed the President with his Board of Commissioners may serve both as an executive and legislative organ within that field. See Coupland p. 133. The President shall choose the Commissioners from a panel of names submitted by the Hindustan and Pakistan legislatures and by the rulers of the States. In the case of smaller states they can have representation on the Board by rotation. On the Board Hindustan and Pakistan shall have representation on a 50-50 basis for 25 years from the inception of the Union.

12. *Is it necessary to have a central legislature?* If the plan in para 11 of combining in one body the legislative and executive functions at the Centre is not feasible because deference has to be paid to popular sentiment which always favours the outward tokens of democracy a small central legislature on the U.S. Congress model (unicameral) consisting of 40 to 50 members may be constituted. Members can be elected indirectly from the Hindustan and Pakistan legislatures and nominated by the rulers of States.

13. *Orders of the President: How to be executed:* Prof. Coupland suggests that the interregional centre of his plan (p. 130) should give its own orders to its soldiers and officials and pay its own way. Such a centre would be more than a confederacy in which the decisions on which the units are agreed are executed only by the units at their own expense but less than a normal federation. But it is submitted that acceptance of the Coupland plan would not be relished by those who always harp on the dangers of a strong centre. On the other hand, the mere equation of the central machinery with a confederacy or a league or loose alliance would provide no sanction by which the units would be forced to adhere to their compact. So a middle course is suggested. Defence furnishing a whiphand through the centre may coerce a recalcitrant unit into submission, the orders of the President in regard to defence should be directly executed by the central machinery. But this necessarily implies that the central machinery will have to find funds to foot the bill. Defence expenditure is Rs. 46,18,00,000. This can be met if customs and income-tax are also directly administered by the central machinery. The revenue from customs is Rs. 40,50,53,000 and from income-tax Rs. 13,74,44,000. See pp. 191 and 196 of Coupland. But it may be argued that the cutting off of these large slices from Pakistan revenues would tend to make Pakistan an unsound proposition financially. The remedy for this is (1) Pakistan should cut down



expenditure; (2) it may tap some elastic sources of revenue like estate duty, sales tax, etc; (3) subventions and contributions from the central machinery may also be considered. Unless the vital subject of defence is administered in fact as well as in name by the central machinery (with the corollary that customs and income-tax should also be similarly, administered to enable the Centre to pay the way) each unit's will will be law and no practical co-operation among States in matters of common interest is possible. Thus the orders of the President can be executed only through the agency of Hindustan and Pakistan and State Governments except in matters of defence, customs, income-tax and minority rights where the orders of the President shall be enforced directly.

14. *Commander-in-Chief.* He shall be appointed by the President for a term of 4 years from Hindustan and Pakistan and States by rotation. Representation for Hindus and Moslems on defence forces may be roughly in the proportion of 60 and 40.

15. *Declaration of War.* If Hindustan or Pakistan or a State is attacked by a foreign power it may at once declare war without the permission of the President, but in other cases declaration of war rests solely with the President. See Newton "Federal Governments".

16. *Central Services.* In the central services Pakistan and Hindustan may be represented on a 1 to 3 basis. State representation also may be provided.

17. *Acquisition of citizenship.* Five years' residence may be required for the acquisition of citizenship in the States. Any business started in Hindustan or Pakistan should have at least 50 per cent of its assets and management in that state. See pp. 119 to 124 of Keith's "Constitutional Laws of the British Empire" (1933).

18. *Supreme Court.* There should be a Supreme Court to adjudicate on disputes arising out of matters of common interest and especially as regards minority rights which will be incorporated in the constitution. Membership of the Court may be 4 from Pakistan and 6 from Hindustan and some state representation. The judges should be appointed by the President and be ineligible to get titles or any other honours and should not have taken any active part in politics. They should hold office for life and should be liable to be removed by a 3/4 majority vote of Hindustan or Pakistan legislature. See Munro pp. 401-417.

19. *Operation of Checks and Balances.* In this system of checks and balances the President controls the Supreme Court by appointing the judges; he controls the units by directly executing his orders in regard to customs, income-tax, defence and minority rights. The units control judges because they can remove them by a  $\frac{3}{4}$  majority vote; they control the President because all his orders (except in regard to defence, customs, income-tax and minority rights) have to be enforced by them and they can refuse to do so. The supreme court controls the President by deciding on his removal and declaring the legislation passed by him or the units as unconstitutional.

20. *Inviolability of constitution.* The two states shall agree to declare this constitution providing for the centre as inviolable for 30 years and to be reenacted periodically after that with such changes as are mutually agreed upon. Within the 30 years changes may be made in the constitution by a majority of votes in each state and by a  $\frac{2}{3}$  majority of the total number of votes.

21. *Responsible Government in Indian States.* The constitution shall contain a clause recommending to the Indian States which agree to join the Union that they should as far as practicable try to bring their legislature, judiciary and executive up to the standard obtaining in Hindustan and Pakistan.

## NEXT STEPS IN SOCIAL LEGISLATION

By

V. JAGANNADHAM

Existing social legislation in India is far too meagre to achieve its purpose. Gross inequalities, oppressive poverty, devitalizing diseases and mass illiteracy still keep large sections of people below the margin of decent civic life. The abolition of these hardships is the first task of future social legislation. Such legislation should remove the disabilities of women and children and of caste; should provide minimum economic needs, promote the well-being of the people and create a favourable atmosphere for sound mental and moral culture. In short, it should provide opportunities for the development of human personality, for contented homes and social solidarity.

The removal of the disabilities of women and children should receive immediate attention. The status of women is absurdly low. In order to raise it, one of the important steps is the abolition of the double standards of morality between men and women. Monogamy should be made a universal rule and polygamy should be abolished. The Hindu and Muhammadan personal law should be changed in this respect. Where marital life turns out to be unhappy either owing to initial wrong selection of the life partner or to some supervening circumstances after marriage, freedom to dissolve marital union should be granted by recognising the right of divorce for both sexes under certain circumstances.

In the present condition of India, the task of improving the status of women is all but impossible owing to infant marriage. Early and frequent maternity and child widowhood are the direct results of such marriage. The Age of Consent legislation proved futile in putting down this evil. Public apathy and the indifference of Government have rendered the Child Marriage Restraint Act of 1929 ineffective in practice. The Act should be so amended as to make the performance of child marriage a cognisable offence and rule out such marriages as unlawful *ab-initio*. Marriages between old men and young girls are not infrequent and law should prohibit them. Reasonable ages of parties for marriages should

be prescribed. The Widow Remarriage Act should be so amended as to delete the forfeiture clause, recognise the rights of the widow to guardianship over her children and declare the aurasa sonship of sons born after remarriage.

Sagotra and Sapravara marriages should be legalized. The status of women may also be improved by bringing the heavy claims of dowries under legal control. Legislation in this respect raises the crucial problem of enforcement. A practical solution for the problem may be found in the provision available in the Muhammadan law, requiring the return of dowry to the wife either on separation from or death of her husband, and creating a charge for such amount on the husband's estate. Legislation should require compulsory registration of births and marriages. Such registration would facilitate the repudiation of false evidence adduced as regards the age of married couple and bring the matter of marriage to the notice of administrative authorities. It would make the enforcement of Sarda Act easy and effective; and facilitate the prevention of marriages between the old and young. A civil law of marriage embodying these suggestions would make marriage law simple and uniform. The Marriage Codification Bill largely satisfies these suggestions and should be passed immediately. Instead of marriage being regarded as compulsory for every individual especially in the case of girls, Marriage may be left to individual option. Like *Brahmacharya*, voluntary spinsterhood for the purpose of spiritual realisation or the service of the community may be regarded as noble.

The rights of Hindu women in respect of property should be enlarged. The Hindu Law of Succession Bill recently introduced in the Central Legislative Assembly is satisfactory in this respect. Its scope however should be enlarged so as to create absolute rights over property for women. Further the Provincial Governments should supplement it by providing corresponding legislation applicable to agricultural property in each province.

Children of the present generation are citizens of the future. Legislation relating to them should provide ample opportunities for their growth. As soon as children are conceived begin their rights over society. The pregnant mother needs special attention by way of nourishing food, medical examination and freedom from long hours of work. The safe delivery of the child should be ensured by providing skilled medical aid and nursing facilities.

For the proper growth of children nursing mothers should be given milk and nourishing food where necessary. The provisions of the Maternity Benefit Acts in respect of working class mothers should be popularized and vigorously enforced. Creches for children, accompanying their mothers to places of work should be provided in those places. Education in kindergarten schools for children below five years should be provided by the State. Where the family means are too meagre to ensure the proper growth of children, financial benefits should be given.

Though the practice of employing children in industries subject to Factories Acts is declining, unregulated industries still employ them in considerably large numbers. Special legislation should be passed in all the provinces on the lines of the C.P. Unregulated Factories Act.

There is a crying need for passing Children's and Young Peoples Act on the lines of a similar Act passed in England in 1932. Juveniles courts should be established in greater number and Children's Aid Societies should be organised in every district. The defective and dependent children should be protected against exploitation by providing institutional care. In the case of necessitous children in schools midday meals should be given free.

The division of Hindu Society into numerous castes and sub-castes is a stumbling block to social unity. Their rival jealousies and petty outlook eat into the vitals of Hindu society. Modern industrial life and political democracy have done much to undermine the foundations of caste. The state should establish social democracy by abolishing caste restrictions and the galling civic disabilities of Harijans. The axe must be laid at the root of caste outlook (i) by the removal of legal disabilities and (ii) by the elevation of the lower castes to a higher status.

Civic Disabilities Removal Legislation should be passed in all provinces and should be vigorously enforced. Inter subcaste marriages, though not unlawful, are not popular. Means should be adopted for popularising them. The special Marriage Act recognises intercaste marriages but this provision is not widely known. The provision relating to intercaste marriage in the Marriage Codification Bill are satisfactory and the Bill should be enacted into law. Interdining can be popularised in hostels, public places and community gatherings. Temple entry legislation as

a symbol of our determination to abolish caste outlook should be extended all over the country.

In elevating the lower castes two methods may be adopted: (1) Educational and (2) Economic. If universal literacy becomes the order of the day caste barriers will break asunder. And if, to add to it, economic status is also raised by providing equitable opportunities to all, caste exclusiveness is bound to disappear, for, economic equality is the surest way to social equality.

In the case of the depressed classes additional welfare measures are necessary. Debasement customs like carrion eating, trading in the skin of dead animals and scavenging should be prohibited. Special treatment should be given to the depressed classes by providing munificent scholarships for education, free-boarding in hostels, technical training for employment in industries and a certain amount of preference in the matter of appointments.

One chief object of social legislation is to narrow down the gulf between the rich and the poor. Protection of the common people from the risks and hazards of life in the complex industrial society and the making available for all the benefits of modern science and industry are inspiring forces behind social legislation in advanced Western countries. The need for such provision in India is no less urgent. There is no security of work. Fear of unemployment scares the worker every day of his life. Wages are inadequate and housing conditions miserable. To remedy this state of affairs a comprehensive Social Security Act should be passed and avoid repeating the miseries of early industrial civilization in the West. By learning from the experience of others the time-lag can be abbreviated and unnecessary hardships avoided. The Social Security Act should provide relief against the numerous risks and hazards of industrial life such as unemployment, sickness, old age and accidents. The premature death of the earning member renders the family destitute. Extra expenditure on special occasions like marriages and funerals leads labourers into the deep-waters of unrepayable debts and interest charges. Addition of children to the family unaccompanied by enhanced earning power lowers the standard of life. In these cases, a well-worked out Social Security Act will be a great blessing.

For every able-bodied worker the State should guarantee the 'right to work'. This implies imparting such education to every

citizen as would fit him for work in which he can realise his best self. It also involves the responsibility of the State to direct them to places where able-bodied citizens can find work. In practice this responsibility can be discharged by the State acting as an intermediary between the employer and the employee. Through organising Labour Exchange Bureau, the State in India can fulfil that responsibility. The right to work also logically implies the right to adequate wage; and the State should enforce it through minimum wage legislation. Workers should have a right to participate in the profits of industry. The benefits of co-operative movement should be extended to them. Where there is diminution of a person's earning capacity, either due to social or natural causes, the State should provide adequate monetary assistance. Where the disability becomes so great that a person is unable to support himself, the State should provide institutional care as in the case of dependents and defectives. Where employment cannot be found for all, the State should organise work-houses abolishing beggary altogether. The State should train disabled men and women in appropriate arts and crafts and create in them a new hope and a new sense of personality.

Advances in Science have placed in our hands tremendous powers for prolonging life and promoting the well-being of people. Diseases which were formerly regarded as incurable can now be cured. A comprehensive Public Health Law should be passed in all the provinces. Such a law should provide for environmental service like water-supply, conservancy and drainage and good and adequate housing. Through Town Planning legislation the State should beautify the towns and cities and require factories to be located outside municipal areas. Workers should be housed in decent colonies at a safe distance from factories. Through rapid means of communication they may be enabled to come and go from places of work to their quarters. The State should prescribe standards of nourishing-food and make such food available for all. By bringing about an increase in the purchasing power of the people health standards should be raised. Health rules should be made popular and relief facilities through Rural Dispensaries and General hospitals should be extended. For those who cannot afford costly medical treatment; especially skilled medical aid, it should be provided free of charge. School children should be medically examined thrice every year.

The need for the abolition of Devadasi system is long over due and legislatures should brook no more delay. The adoption

of girls by professional prostitutes should be disallowed. The obligation to do service in temples as a condition for enjoying the temple property should be withdrawn and their estates should be enfranchised. Amendments to the Madras Suppression of Immoral Traffic Act should be carried out so as to make its administration effective. It should be extended to all the districts. Rescue homes should be provided on a larger scale and rehabilitation of prostitutes should proceed apace. By relieving congestion in the cities the State can banish some of the potent causes of prostitution.

The recent suspension of Prohibition is in the face of strong public opinion; and is suicidal to the cause of reform. As soon as popular ministries assume office prohibition law should be reenacted and extended to all areas in the country. India should be a dry country at the earliest possible date.

Social legislation should improve not only the physique of the members of a community and their economic interests but also their mental powers. In this respect the next immediate step is the liquidation of illiteracy. The scheme of Education suggested by Mr. John Sargent, Educational Adviser to the Government of India, is comprehensive and should be implemented without delay. Reference has already been made to the imperative need for providing vocational training. The education of women should receive special attention, for without women's education little progress can be expected. The blind and the deaf-mute should receive education suitable to the development of their faculties.

Unoccupied leisure is a source of potent danger. With the development of large scale production, the problem of leisure has become more acute. The State should provide opportunities for healthy recreation and amusements and thereby prevent dissipation in amusements like gambling and races. It can open public libraries and parks in large numbers; it can encourage travel to places of historic interest; it can produce educational films and inculcate through them sound values of social life. By changes in the system of education it can create in pupils a love of hobbies.

To carry out these suggestions, bold imagination and planning are necessary. A five year or ten year plan should be drawn up. But any scheme without prospects of immediate realisation has no greater value than the paper on which it is drawn. To carry any planning successfully there must be a popular government



at the helm of affairs. Even such government will be failing in its task if it adopts mere palliatives and enacts window-dressing legislation. Every piece of social legislation must be implemented in practice. The financing of social services is the crux of the problem. Without touching the pockets of private capitalists, landlords, zamindars and Rajas, no bold programme of social legislation can be implemented. In fact, the government should assume control over the means of production and public utilities; it should implement democracy in the sphere of industry and social relations. It should encourage the developments of personality by providing equitable opportunities to all and the basic needs of civic life.

# MUNICIPAL AUDIT

By

V. VENKATA RAO

Audit is the final aspect of financial administration. It is at the end of a long sequence of events commencing from budgeting and ending with the payments of monies. By auditing we mean a "systematic examination of the books and records of a business or other organisation in order to ascertain or verify, and to report upon the facts regarding its financial operations and the results thereof" by a person who had no part in their preparation.<sup>1</sup>

*Kinds of Audit.*—Audit is of three kinds, post audit, pre-audit and administrative audit. Post audit is performed at the end of a given period. It is some times referred to as "locking the barn door after the horse is stolen"<sup>2</sup> That is, post audit is conducted after the payment of monies in satisfaction of claims. It discovers and not prohibits the misuse of funds. With a view to secure the latter end pre-audit has been instituted in some countries. Pre-audit is conducted before the payments are made. Of the two, pre-audit is the most effective. It checks wastefulness. It compels the executive to stick to budgetary provisions. In other words, money will be spent economically and according to the wishes of the budget sanctioning authority.<sup>3</sup> However, post audit is in use in a great majority of the countries. Post audit may be either a detailed audit or a test audit. Test audit scrutinises a part and not the entire financial transaction and is satisfied if the portion selected for the purpose reveals no irregularities. The basis of test audit is confidence in the administration. For instance, the audit of profession tax items and the receipts of the secondary schools is a test audit. Administrative audit occurs prior to the payment of monies and is done by the accounts section and the executive.

1. White. Introduction to the study of Public Administration.
2. Buck. Municipal Finance. p. 110.
3. Willoughby. Principles of Public Administration Pp. 630-35.

*Basic objectives of Audit.*—The basic objectives of municipal audit are three. The first object is the “settlement of and adjustment of claims”. In other words, the auditor must satisfy himself that all the sums due the council have been properly brought to account. It is called in popular language the ‘audit of receipts’—rather a misleading term. By settlement of and adjustment of claims we mean the executive authority determines the claims, the auditor checks these claims and settles them. Thus the assessments and levies made by the executive authority are provisional in character and the auditor is authorised to go into the facts of these assessments and closely scrutinise and discover any omission in assessments or wrongful assessments. For instance, if the council levies a tax or a fee which is otherwise illegal, the auditor may direct the refund of the amount to the person concerned. If a claim falls short of the amount due, the auditor may direct the person concerned to make good the loss. But it is not the business of the auditor to see that sums due to the council are collected. All that it must concern itself is to determine and settle the claim.

The second object is to see that the funds have been expended on purposes for which they are intended and in accordance with the conditions prescribed by rules and regulations and discover any fraud or embezzlement committed or any wrong application of funds. This is called the audit of expenditures. In performing this function he should bring to light not only cases of irregular expenditure but also expenditures which in his judgment appear to be improper and wasteful even though the accounts may be in order and no obvious irregularity has been committed. In discharging this function he may fix up standards of expenditure to which the council must conform.<sup>4</sup> The mission of audit is therefore not merely to discover cases of bad faith but also to “protect the rate-payers from the effects of honest stupidity or unpractical idealism.”<sup>5</sup>

The final object of audit is to surcharge persons responsible for the irregular expenditures disclosed by audit. Here also audit decides the question of quantum. It determines how much of an

4. A Century of Municipal Progress. p. 434.

5. Lord Sumner's judgment in the famous Poplar Wage Case.

item of expenditure is lawful and how much is unreasonable and unlawful and therefore recoverable. Power to disallow a payment *prima facie* includes power to allow a severable part of it. Thus the auditor occupies the position of a judge and determines what is legal and what is not legal.

*Relations with the Provincial Government.*—The Local Fund Audit Department, from its inception was under the control of the Auditor-General. With the introduction of the Reforms of 1919, the Local Fund Audit was declared a provincial subject. At present it forms a part of the Finance Department, Government of Madras. The Examiner is the Ex-officio Under Secretary of the Finance Department. But he is independent of Government in the sense that he is endowed with authority by the Act to exercise control over municipal accounts, and to issue surcharge certificates on persons responsible for irregular expenditure or for short collections of the claims due to the council. Even if Government gives a direction to him not to surcharge a particular item of expenditure, the auditor may ignore such an order and proceed to surcharge the person or persons concerned leaving it to Government to pass such orders as it pleases on the statutory appeal that may be preferred by the aggrieved party. Therefore Government has no power to interfere with the discretionary powers vested in the Examiner. Further an order of the Government condoning an illegal expenditure can only succeed but cannot precede an order of surcharge. From the above facts it must be evident that the auditor is not expected to seek and the Provincial Government is not expected to offer advice as regards the propriety of surcharge in any given case.<sup>6</sup>

*Limitations.*—There are, however, certain limitations which the auditor should observe. Firstly, as the audit is conducted on behalf of Government the auditor should not criticise the orders issued by Government. Nor should he prescribe the rules that

<sup>6</sup>. Speaking about the relationship between himself and the Auditor, the Minister for Public Health said in the House of Commons, "It has been said that the Auditors are my Auditors. They are not my Auditors. They are entirely independent of me. I have never attempted to give a District Auditor instructions as to what he should do; I have never sought to influence a District Auditor in carrying out his duties. . . . As a matter of fact the action of the District Auditor has often been the cause of some embarrassment". Speech of Mr. Neville Chamberlain, Hansard, 13—12—1927.

should be observed by the councils. Secondly, he should not survey or review the administrative functions of the various departments. He should confine himself to the criticism of the accounts placed before him. Thirdly, he should not suggest new sources of taxation. But he may make a running commentary on the financial position of the council. Fourthly, the auditor is prohibited from conducting independent enquiries from private individuals for obtaining information connected with audit.<sup>7</sup> Whatever information he wants he should ask the executive authority to furnish and if he fails to do so he may issue summons to him in the following form.

To,

Mr. A. B. C.

Municipal Commissioner,

E. F. G.

Sir,

You are hereby required to produce or cause to produce before me on the 4th Day of December 1944 at 12 o'clock the following documents, the perusal or examination of which is believed to be necessary for the elucidation of accounts of the year 1943-44.

Yours

H. K.

*Auditor.*

Fifthly, it is not his business to pass judgment on the wisdom or intelligence or diligence of an employee of the council. Sixthly, while financial rules and orders must be observed, he should not enforce them rigidly and literally lest the audit may degenerate

7. But the auditor may summon any person to produce any book, deed, contract, account, voucher, receipt or other document which he believes necessary for the elucidation of accounts, and answer any question relating thereto. It should be remembered that there is a distinction between enquiry and summons. See Rule 57, Sch. IV, Madras Act V 1920.

into an unintelligent audit. Undue insistence on trifling errors and technical irregularities should be avoided and more time should be devoted to important aspects of financial administration. Finally, all his observations in regard to the irregularities noticed in the course of audit, should be accurate, dispassionate and couched in courteous language. Innuendo is prohibited.

*Historical Background.*—Let us now turn our attention to the historical development of audit. Under the Town Improvements Act of 1871, the Provincial Government had power to determine the persons by whom and the manner in which the municipal accounts should be audited. However, in practice, the 'commissioners' (now called coupcillors) appointed local auditors to audit municipal accounts. As auditing of accounts by local auditor was lax, the Committee on Local Self-Government, 1883, recommended that they should be audited by the Inspector of Local Fund Accounts.<sup>8</sup>

Under the Act of 1884, the Inspector of Local Fund Accounts, a subordinate of the Accountant General was appointed to audit municipal accounts. Under him there were about ten Assistant Inspectors with headquarters at Madras and in each district there was a district auditor. The accounts of the bigger councils were audited by the Assistant Inspector assisted by the district auditor and the accounts of the smaller councils were audited by the senior clerks of the district audit office. The audit was an annual one. It was found to be unsatisfactory and gave place to a half-yearly audit in 1903.<sup>9</sup> After the 2nd half year's audit, a report containing the results of audit for each council was sent to Government. This was the position in 1920.

The main defect of the audit was that it was not concurrent. It took place once in a half year and over-payments and frauds generally associated with non-official administration came to light long after the event. It afforded opportunities to persons dishonestly inclined to practise frauds and to make up false vouchers. The Financial Relations Committee accepting the principle laid down by the Government of India that the audit of municipal accounts should not in any way be less strict than that

8. Report of the Local Self-Government Committee, 1882 p. 57.

9. Report of the Financial Relations Committee. p. 43.

applied to provincial expenditures, recommended the centralisation of audit under the immediate supervision of the Examiner. That is, all the vouchers were to be forwarded periodically to the Examiner's office at Madras for audit.<sup>10</sup>

The Accounts Committee did not accept the recommendations of the Financial Relations Committee. It came to the conclusion that the maximum of efficiency would be obtained only by centralizing audit at each district headquarters. They therefore recommended the appointment of district officers to be in charge of all local funds audit for each district and a number of Assistant Examiners to supervise the work of these district officers and to assist the Examiner in the discharge of his duties as a presidency officer.<sup>11</sup>

A scheme for the re-organisation of the audit department on the lines recommended by the Committee was prepared by the Examiner. The main features of the scheme were, the presidency should be divided into three circles and each circle should be placed in charge of a gazetted officer. One of these three should be designated as Deputy Examiner of Local Fund Accounts with headquarters at Madras. Secondly, there should be in each district a senior officer called the Inspector of Local Fund Accounts. Thirdly, the audit should be concurrent in the case of headquarter municipalities and quarterly in the case of other municipalities.

The Government accepted the scheme as prepared by the Examiner, but deferred its execution to a later date due to financial reasons.<sup>12</sup> In 1924 Government ordered quarterly audit for the outlying municipalities and concurrent audit for the headquarter municipalities.<sup>13</sup> Later on the entire scheme of the Examiner was put into execution.

At present the audit department is organised as follows.

10. Ibid. p. 44.

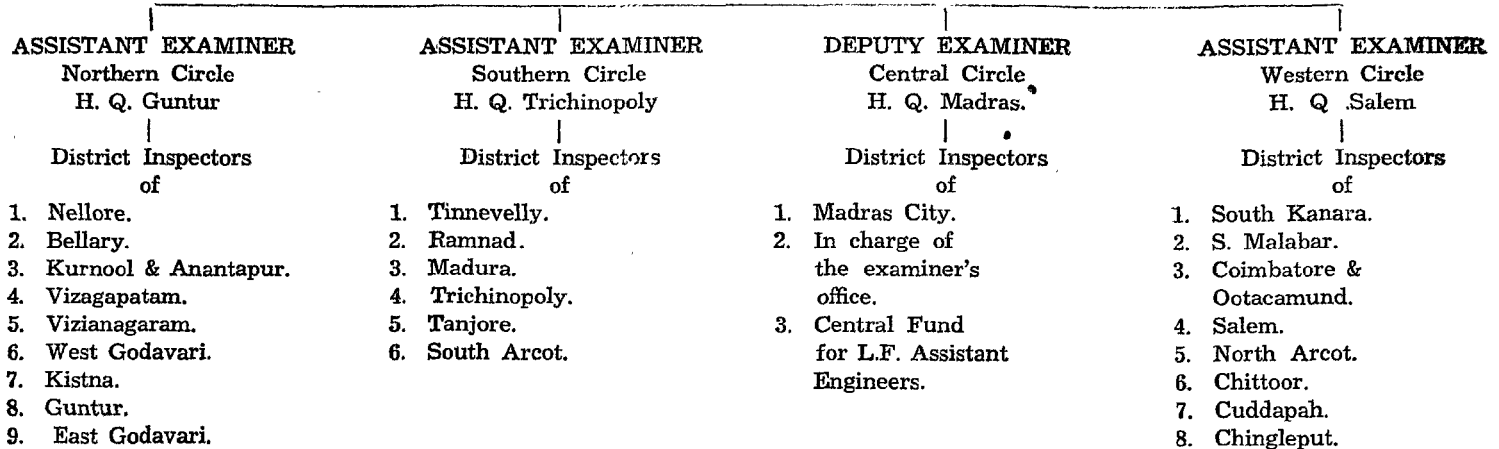
11. Report of the Accounts Committee.

12. G.O. No. 1016. F. 27—11—1922.

13. G.O. No. 3155. L.M. 8—2—1924.

**EXAMINER OF LOCAL FUND ACCOUNTS**

Head Quarters, Madras.





The diagram given above is self-explanatory. The Deputy Examiner is immediately under the Examiner to assist him in the administration of the department.

As regards the functions of the various officers the Examiner is a presidency officer. He supervises the general administration of the department; he inspects the offices of the Assistant Examiners and the District Inspectors. He exercises the powers of disallowance and surcharge.

The Assistant Examiner supervises the work of the district officers, scrutinises and approves the audit reports prepared by the district officers; he inspects the accounts of the councils once a year; he reviews the latest audit report and discusses the pending objections at the time of annual inspection with the executive authority.

The duties of the District Inspector of Local Fund Accounts are arduous and responsible. He is given several items of original work. He is also responsible for all the audit conducted by his subordinates. Often he is required to arrive at decisions on important questions arising in the course of audit.

The difference between the audit conducted under the Madras District Municipalities Act and the audit conducted under the Local Government Act of 1933, England is that the Minister for Public Health in England has power to order an extraordinary audit of any account. But the Madras Act does not make a similar provision.<sup>14</sup>

*Procedure.*—We now come to the procedure adopted for conducting municipal audit. It is an obligatory function of the executive authority to prepare accounts in the prescribed form before the prescribed date and submit the same to the auditor.<sup>15</sup> After the receipt of accounts the auditor informs the executive authority of the probable dates when he will take up the audit.<sup>16</sup>

14. *Tulasiram. vs. Chairman Municipal Council, Madira.* 62. M.L.J. 77.

15. G.O. No. 4264. L.M. 4—11—1927.

16. The procedure adopted in England is as follows. At least seven days before the date fixed for audit, the accounts of the council must be made available for inspection by any interested person; and all such persons are at liberty to take extracts or copies from the same without paying any fee. If the officer concerned either refuses or neglects to allow any person for the inspection of records he shall on proof be liable to a penalty of £ 5.

The auditor is generally assisted by an assistant. Both of them divide the work amongst themselves. Generally the auditor takes the expenditure side and the clerk the revenue side of the accounts. While checking the revenue side of the accounts it is particularly seen whether all the out-standing items of revenue have been verified by the executive authority and entered in the arrear demand register; whether the bills relating to the outstanding items are intact; whether the demand notices for all taxes were issued in time; whether the bills were checked before they were issued either by the Revenue Officer if there is one or by the executive authority;<sup>17 & 18</sup> whether there was periodical check of the outstanding bills by some responsible officer; and whether any improper collections were made by forged bills.

Further, he must also see that the levy of taxes has been authorised by law and that the prescribed procedure has been observed; that the rate of tax levied has not exceeded the prescribed limits; that there have been no omissions in assessment; that exemptions have been granted only to persons eligible to receive them; that the growth of revenue has been watched; that the amounts written off were really irrecoverable; that the remissions were given in accordance with rules; that all collections have been remitted by the bill collectors in time in the municipal treasury; and that the arrears of revenue have not been allowed to become time-barred.

While checking the revenue derived from the properties leased out, it must be seen whether the properties usually leased out have been leased out; whether all the leases have been publicly auctioned after sufficient publicity; whether the highest bid has been accepted by the council; whether a registered agreement has been obtained from the lessee and whether the amounts due from the lessee have been realised according to the agreement.

Finally, he must see whether all the grants due from Government have been claimed in time.

The right to inspect accounts includes the right to employ accountants for the purpose of taking notes and extracts. Further any rate-payer or owner of a property may present himself at the time of audit and object to the entry of any item in the accounts. See Robson Local Government Audit, p. 22.

The auditing of expenditure side of the accounts consists in checking all the paid vouchers. All the vouchers are sorted out into several categories, viz, establishment vouchers, public works vouchers, contingencies vouchers. The establishment vouchers are audited by reference to the entries in the establishment audit register. While auditing public works vouchers it must be seen whether an estimate has been prepared for each work; whether it has the sanction—technical and financial—of the competent authority; whether tenders have been invited publicly and the lowest tender has been accepted; whether the work has been measured and checkmeasured and whether it has been executed to the satisfaction of the checkmeasuring officer.

After the audit is over the auditor must personally discuss the results of audit with the executive authority and settle as many objections as possible, and then decide as to which of the objections are to be included in the audit report and which of them in the audit objection statement.

*Audit Report.* The audit report on the general funds is divided into four parts. The first part deals with the financial position of the council, whether it is deteriorating or improving. If the financial position is bad the auditor should comment upon it. The second part deals with the financial administration. It informs us whether all the revenues have been realised; whether any expenditure has been incurred in excess of the budget provision; whether the interests of the council have been disregarded; whether illegal payments have been made; whether earmarked funds have been diverted for purposes for which they were not intended; whether all the surplus funds have been invested and whether there have been defalcations. If defalcations have been rendered possible as a result of the relaxation of rules, the fact should be mentioned. Defalcations detected during audit should be reported fully. The third part deals with the accounts irregularities, i.e., with the preparation of accounts, violation of account rules etc. In the last part the results of audit are mentioned. It simply says whether the financial administration was 'satisfactory' or 'fairly satisfactory' or 'unsatisfactory'. In characterising audit, complete objectivity must be shown and it should be fully supported by omissions and commissions noted in the report.

Minor irregularities are noted in the audit objection statement.

The Audit Report and the Audit Objection Statement must be sent to the council concerned within six months from the end of the financial year the accounts of which were audited.<sup>19</sup> The executive authority should rectify the defects noted in the report and the statement. He must also prepare answers to the objections raised in the report and the statement, place them before the council for its consideration,<sup>20</sup> and forward the report together with the replies and a copy of the council resolution, to the Examiner of the Local Fund Accounts within two months from the date of its receipt.<sup>21</sup> If the report, together with the replies is not returned to the Examiner within the prescribed time, Government may proceed to take such action as they deem fit.<sup>22</sup>

The Examiner forwards the replies received from the executive authority to the Secretary to Government, Local Administration Department, and the Education and Public Health Department as the case may be<sup>23</sup> together with his remarks in which he may draw the attention of Government to the serious irregularities noted during the audit; he may request the intervention of Government to enforce an audit objection; he may suggest disciplinary action against an officer responsible for gross negligence; or he may ask for the interpretation of rules which are contested.

The Government reviews the replies furnished by the executive authority and the forwarding remarks of the Examiner and passes orders.

*Warning Letter.* Apart from the audit report the Examiner issues warning letters to the individual persons who are responsible for any improper expenditure or illegal remission. The warning letter invites the attention of the person concerned to the irregularity noticed by the auditor and informs him that if he does not rectify the same within a period of two months from the date of receipt of the letter, action would be taken against him under

19. G.O. No. 3204. L.M. 22-8-1927.

20. G.O. No. 2449. L.M. 25-5-1929.

21. G.O. No. 4000. L.M. 14-9-1926.

22. G.O. No. 1639. L.A. 26-4-1939.

23. G.O. No. 1373. L.M. 25-8-1924.

the surcharge rules. The letter is accompanied by particulars of the irregularity. If the person concerned fails to rectify the defect, to the satisfaction of the Examiner, action may be taken against him under the surcharge rules.<sup>24</sup>

The persons who are surcharged are normally the councillors. But such of them as did not attend the meeting of the council when the subject of surcharge was considered and such of those as voted against the subject are not surcharged. Further surcharge certificates should not be issued against the legal heirs of the deceased person. But if the surcharge proceedings had been served on the person concerned before his death it should be enforced against his heirs to the extent of his assets in their hands.<sup>25</sup> Again Municipal Commissioners should not be surcharged and such cases should be taken to the notice of the Inspector of Municipal Councils. If the commissioner happens to be a member of the Indian Civil Service or of the provincial civil service, the matter should be referred to Government.

The surcharge certificate should be in the following form :

“I, A.B. Examiner of Local Fund Accounts, Madras do hereby certify under Rule No. 60 of the Schedule IV of the Madras District Municipalities Act as amended that sum of Rs....being the loss caused to the...council is surchargeable on and due from Sri.....Chairman,,.....Council, ex-Councillors..... Municipality named below jointly and severally for the reasons set below.”

Before 1930 it was a peremptory duty of the auditor “to disallow every item contrary to law and surcharge the same on the person making or authorising the making of illegal payments.” But in that year it was made a discretionary duty by an amendment to the surcharge rules,<sup>26</sup> for the reason that the auditor had no option in the matter of surcharge and the surcharge certificates had to be issued even for small items. In order to save the Examiner from this unprofitable labour and to relieve the executive

24. G.O. No. 7010. L.M. 26-1-1929.

25. Memo. No. 2986. L.A. 20-9-1940.

26. G.O. No. 3144. L.M. 4-8-1930.

officer from the consequent annoyance, the issue of surcharge certificates was made a discretionary function. The discretion thus conferred on the Examiner is unfettered. However, the Examiner is required to observe certain instructions issued by Government. For instance, no surcharge certificates should be issued against the servants of the council; secondly, no surcharge certificates should ordinarily be issued in respect of items involving a total amount of Rs. 50. But this concession does not apply to the councils which are habitual offenders,<sup>27</sup> or to councils which were grossly negligent in financial matters.

*Surcharge and Disallowance.* Let us now examine the principles on which a surcharge is made. It is well at this stage to know the distinction between the two terms, surcharge and disallowance. Disallowance broadly means the refusal of the auditor to allow an item of expenditure to stand in the accounts. Every disallowance must be followed by some consequence and the exact consequence depends on the circumstances. It may be a recovery of the amount disallowed or it may be a mere transfer from one account head in which it is improper to another account head in which it is proper. Surcharge means broadly charging the person responsible for the loss incurred or the deficiency caused by the negligence or misconduct of that person. That is, before issuing a surcharge certificate it should conclusively be proved that there was gross carelessness or wilful defiance of rules on the part of the person concerned. Otherwise there would be no negligence or misconduct within the meaning of the term.<sup>28</sup> Mere imprudence is not enough, or grave error of judgment is not enough or mere want of judgment is not enough.<sup>29</sup> For instance, mere payment of penal interest does not entitle an auditor to issue a surcharge certificate. If the council had funds and even then payment was not made in time, then prima facie it is a case of negligence. Otherwise not.

Supposing provident fund amount recovered from the employees was not remitted in the postal savings bank before the 4th of the month as required by rules, due to a bona-fide mistake

27. G.O. No. 1424. L.M. 30—4—1931.

28. *R. S. Naidu vs. Examiner*, I.L.R. 1943. Madras. Pp. 282-90.

29. Robson. Local Government Audit,

in the interpretation and application of rules or to an honest belief that it was proper to retain the amount for meeting the current expenses, there is no case for the issue of a surcharge certificate.

Again incurring of expenditure without the previous sanction of the competent authority cannot be a ground for the issue of a surcharge certificate. It does not matter whether the sanction is obtained previous to or subsequent to expenditure. All that is required is the sanction of the competent authority.

A question has been raised whether the payment of monies for works for which tenders have not been invited is legal, and whether a surcharge certificate can be issued against persons who make such payments. Here the learned Advocate General held the view that if it is possible to fix the exact loss caused as a result of not inviting tenders surcharge certificates may be issued. If it is argued that inasmuch as the terms of the statute have not been observed, requisite for a valid contract, the contract itself is unenforceable and therefore any payments made in pursuance of the contract is illegal and therefore surchargeable, it raises a delicate question. If the council received 'quid pro quo' it has benefitted itself to that extent. To surcharge it under such circumstances is neither reasonable nor just. If there is no 'quid pro quo' the payment is illegal and it may be surcharged.

Supposing the executive authority does something relying on the confidence of his staff and if that results in loss to the council it cannot be said that the executive authority was negligent. "Business cannot be carried upon the principle of distrust" observed the learned judge. "Men in responsible positions must be trusted by those above as well as those below them, until there is reason to distrust them. . . . If every one is distrusted, it is impossible to have any intelligent devolution of labour".<sup>30</sup>

The grounds on which surcharge certificates may be issued are several. Firstly, a council may be surcharged if it allows the taxes and fees due the council to become time-barred. The Bezwada Municipal Council for instance failed to recover the electricity fees due from a councillor, even though the audit department specially

30. *R. S. Naidu vs. Examiner of L. F. Accounts*, I.L.R. Madras. 1943. Pp. 282-90.

requested it to do so, and allowed the amount to become time-barred. Subsequently the council wrote off the amount. The audit department objected the write off and surcharged the councillors concerned.

Secondly, relaxation of account rules resulting in loss to the council may occasion the issue of a surcharge certificate.<sup>31</sup> For instance, the executive authority of the Tinnevely council permitted the lessee of the municipal market to enter on the municipal property and exercise the rights of a lessee without taking the lease deed. The lessee defaulted in the payment of the lease amount and the court held that in the absence of a registered agreement the council was entitled to recover only the sum equivalent to the advantages received by the contractor and not the entire lease amount. As the executive authority relaxed the rule by permitting the lessee to enter on the property without taking the lease deed and thus caused loss to the council, he was surcharged.<sup>32</sup>

Any expenditure incurred in connection with an appeal against a surcharge certificate, without the previous sanction of Government is surchargeable.<sup>33</sup>

Any expenditure incurred on conveyance for the use of councillors or inspecting officers for the inspection of municipal institutions is illegal and therefore surchargeable. The Bezwada council hired a taxi to take the District Educational officer for the inspection of municipal schools. The expenditure incurred on the taxi was disallowed and surcharged.<sup>34</sup>

Fee concessions granted, not in conformity with the educational rules and the loss thereby caused to the council is surchargeable.<sup>35</sup>

The closure of schools on days other than holidays recognised by the Education Department and the consequent expenditure incurred on the establishment on those days is illegal and wasteful and therefore surchargeable.<sup>36</sup>

31. G.O. No. 315. L.M. 25—1—1927.

32. Examiner's Office L.F. No. 26. dated 20—6—1941.

33. G.O. No. 2490. L.M. 10—6—1926.

34. G.O. No. 4425. L.M. 14—10—1926.

35. G.O. No. 3109. L.M. 15—3—1927.

36. G.O. No. 2235. L.M. 7—5—1934.



Any expenditure incurred on educational institutions which are not recognised by Government is illegal and therefore surchargeable. The Guntur Municipal council resolved to introduce national system of education during the non-co-operation days in all the institutions under its management; to dispense with grants and to conduct municipal elementary schools without Government supervision or control. The Government informed the council that the expenditure on such school was not legal. The auditor surcharged the chairman and the councillors for incurring an expenditure which had been declared to be illegal by Government. The surcharge was upheld by the Madras High Court.<sup>37</sup>

Any expenditure incurred in connection with the employment of unqualified or dismissed persons is illegal and therefore surchargeable.<sup>38</sup>

Filing of law suits even though advised by legal opinion not to do so and the consequent expenditure on them is wasteful and therefore surchargeable. For instance, the Revenue Department claimed the payment of ground rent from the Coimbatore council for the land occupied by the municipal market. The council objected to the claim and threatened to file a suit. The Collector of the district, the legal adviser of the council and Government advised the council to pay the ground rent. The council did not pay heed to the advice rendered and filed a suit in a court of law and the decision of the court was not favourable to it. The auditor surcharged the council on the ground that the decision to file a suit against the Revenue Department was taken in defiance of the rules even after its attention was drawn to them by Government, the Collector and the Municipal Vakil.<sup>39</sup>

Acceptance of a higher tender without adequate reasons may occasion the issue of a surcharge certificate. The Guntur Municipal council accepted a higher tender for laying a Shellcrete road on the ground that the tenderer was an Andhra. In selecting tenderers, other things being equal, the lowest tender should ordinarily be accepted. The lowest tender may be rejected only if the tenderer is not a solvent person or has not enough technical

37. *Belgrami Sahib vs. Sadasiva Rao*. I.L.R. 49. Madras. p. 57.

38. G.O. No. 3028. L.M. 26—6—1927.

39. Examiner's Office L.F. No. 440. dated 24—4—1934.

equipment. The community or domicile of the tenderer does not and cannot in any way affect the satisfactory execution of the contract. Therefore the ground on which the lowest tender was rejected was not sound. The chairman and the councillors were surcharged for accepting a higher tender.<sup>40</sup>

Payment of salaries in excess of the scales fixed by Government or payment of gratuity to persons not eligible to receive it,<sup>41</sup> or expenditures on lunches even of a moderate character are all illegal expenditures and therefore surchargeable.

*Appeals.*—Any person aggrieved by a surcharge may appeal either to a court of law with original jurisdiction or to Government. That is, a person who prefers an appeal to Government cannot have recourse to legal action after having received an adverse decision from Government. But if the surcharge certificate itself is not validly issued, the person aggrieved has a right to go to a court of law if Government does not give him adequate relief.<sup>42</sup>

The court or the Government have power to confirm, vary or squash the surcharge certificate of the auditor. If the order of surcharge is reversed all the persons surcharged will be benefitted. If it exonerates one as not responsible for the act done, he will be benefitted.

Further, Government has power to waive at any time the recovery of the whole or any part of the amount certified to be due by the auditors. We are unable to understand the need for the possession of such an extensive power by Government,

40. Examiner's Office. L.F. No. 3634, dated 6—9—1929.

41. *Ibid.* L.F. No. 3970, dated 2—9—1941.

42. *Tulasiram vs. Municipal Council Madura*, 62. M.L.J. 83. The facts of this case were, Government ordered a special audit of the accounts already audited. The contention of the appellant was that the Act does not contemplate a second audit. The defence counsel held that the appellant had no right to appeal to a court of law after having once appealed to Government. The court held that inasmuch the Act does not contemplate a second audit, the surcharge certificate issued by the examiner as a result of it was not valid. The learned judge observed, "it is idle to suggest that force and effect is to be given to a so called certificate given on an audit unauthorised by rules and further to suggest that the aggrieved party has no remedy against this illegal demand being enforced against him under the summary procedure of certification except that provided by the rules which are framed for an entirely different purpose."

especially when a considerable provision has been made for appeal. In the writer's opinion this power is intended to be exercised when cases of surcharge upheld by a court of law come before them. This power enables the Government to reopen such cases and waive the recovery of the amount certified to be due. The possession of this power by Government is not desirable, for they are exposing themselves to the possibility of pressure of an unpleasant kind from party men. In order to prevent Government from exercising this power injudiciously, an amendment was proposed that whenever an order is issued waiving the recovery of a surcharged amount, the reasons for the same should be recorded in writing and laid on the table of the House.<sup>43</sup> The Minister for Local Administration did not accept the amendment on the ground that it is difficult to place them (the reasons) on the table of the House and demanded for a *carte blanche* and the House without demur acceded to the demand.<sup>44</sup> The House does not seem to have realised the dangers involved in conceding this power to Government.

The above survey reveals the position which the Examiner occupies. Not only he is given power to issue surcharge certificates but also to determine what is lawful and what is unlawful. The system as it stands at present may give opportunities to the auditor to over ride the views of the elected councillors. It may therefore be asked whether the Examiner has the necessary training and knowledge of local affairs to exercise this enormous power. Dr. Robson argues that the auditors are not fitted by any training to exercise such extensive powers over the financial administration of the council; that they do not possess a knowledge of the local affairs; that their outlook is excessively narrow and lacking in vision.<sup>45</sup> He therefore suggests the establishment of an audit commission, consisting of representatives of all the local authorities, the Ministry and the Finance Department. The Commission will inherit all the powers now exercised by the Local Administration Department.

Dr. Robson's suggestion if accepted will result in the creation of a complex and costly machinery. Further he seems to

43. Speech of Mr. G. E. Walker, M.L.A.P. Vol. 12 p. 256.

44. Speech of Mr. B. Gopala Reddi. Ibid.

45. Robson. Development of Local Government.

exaggerate the abuse of powers by auditors. The writer has made a careful study of a number of surcharge certificates issued by the Examiner, some of which have already been quoted in the previous pages and he is convinced that there was no such abuse of authority by the auditor. This conclusion is supported by the fact that the number of surcharge certificates issued was comparatively few and the amounts involved were also infinitesimal when compared to the total amount brought under audit. The table given below illustrates the point.

Year.	Number of surcharge certificates issued.	Total Revenue of the councils in lakhs.	Amount surcharged.	Appeals filed before		Number of certificates set aside.		Amount Recovered.	Amount Waived by Govt.
				Court.	Government.	Court.	Government.		
1	2	3	4	5	6	7	8	9	10
			Rs.						
1931	2	—	1059	—	2	—	2	100	959
1932	2	196.05	396	—	2	6	1	281	15
1933	21	203.16	8424	4	14	2	11	1413	372
1934	21	204.07	8075	3	15	3	14	1814	5681
1935	5	216.42	930	1	2	1	2	229	610
1936	7	209.49	4489	3	4	1	4	411	1979
1937	13	222.73	6007	4	8	4	4	—	3370

During the years 1938-1944, only 37 surcharge certificates were issued involving an amount of Rs. 16,256. The total number of surcharge certificates issued during the period 1st June, 1931 to 10th August, 1944, was 108. That is, on the average 8 certificates were issued annually. To go into the details is still more interesting. Of the 108 certificates, 56 were issued to the councils situated in the Andhra districts, 50 to Tamil Nad and the remaining two to the West Coast. Of the 82 councils, only 37 of them received all the 108 certificates. Of the 37 councils, the Guntur council had the unique honour of receiving the largest number of them viz, 14. Chidambaram got 8, Coimbatore 6, Conjeevaram and

Palni 5 each; nine councils got 4 certificates each, two got 3 each, seven got two each and fourteen got one each. Some of these councils got this honour during the chairmanship of particular individuals. For instance most of the surcharge certificates issued to the Guntur, Chidambaram and Madura Councils related to the period when Messrs. N. V. L. Narasimha Rao (Guntur) Venugopala Pillai, (Chidambaram) and R. S. Naidu and L. K. Tulasiram (Madura) were the executive authorities of the respective councils.

Of the 108 certificates, 34 were challenged in a court of law and 60 before the Provincial Government. The court set aside 13 of the 34 certificates and the Government allowed 39 appeals fully and 13 partly and confirmed the remaining 8.

All these facts show that the number of surcharge certificates issued were few and the amount involved was not even one-twenty-fifth per cent of the total revenue audited even in the year when largest number of certificates were issued; that the number of appeals set aside by courts either fully or partially did not exceed 33 per cent of the total number of appeals filed before them and a careful reading of the judgments of the Madras High Court show that most of the appeals were allowed merely on technical grounds. Therefore, there was no abuse of authority on the part of the auditor in issuing surcharge certificates. It is true that Government allowed 70 per cent of the appeals filed before them. But this does not mean that there was an abuse of the discretionary authority vested in the auditor. Far from that. On the other hand, the surchargees found the filing of a revision petition before Government to be less costly and less difficult with greater chances of getting the surcharge certificates set aside. If only we can get at the political relationship that existed between the surchargees and the Minister for Local Self-Government and the forces and motives which impelled the latter to allow the appeals we are sure to get at the most interesting materials. But space and time forbid us to go into these details. Suffice it to say that Government were not always guided by altruistic motives in allowing appeals.

As regards the charge that auditors have no knowledge of local affairs and therefore not fitted to exercise the powers of surcharge, we fail to see the need for the possession of local knowledge or of local politics. It appears to us that the absence of such knowledge is very essential for conducting audit in an

impartial manner. Further the auditor is concerned with the municipal accounts and we fail to understand the relation between local knowledge and municipal audit.

In conclusion it must be said that the audit administration was thoroughly efficient during the period under review (1920-37). But for the audit large amounts would have been defalcated and many cases of corruption would not have been brought to light. The auditor had a difficult time when the executive authority was the non-official chairmen. He did not get adequate co-operation from them.<sup>46</sup> The councils did not submit their replies to the audit reports in time,<sup>47</sup> and some of the councils showed persistent indifference in the settlement of audit objections.<sup>48</sup> However, there is an improvement in the situation with the appointment of commissioners. But one thing appears to be lacking. There does not appear to be that mutual trust and co-operation between the auditor and the municipal staff. Some of the auditors seem to have that mentality of a police officer who always distrusts human nature and thinks that all human beings are habitual criminals. They are under the impression that municipal administration is largely incompetent and corrupt—an impression formed by them when the executive was the non-official chairman. They still carry this impression with them. Further they assume that they are the agents of the Provincial Government sent to check, to control and to teach the erring council. The Municipal staff on the other hand look upon the auditor as an intruder, an alien and not a friend, philosopher and guide and adopt at times an unreasonable attitude of non-co-operation. We trust that in course of time these clouds of suspicion and mists of misunderstanding will be removed and a perfect understanding of each other's function will be established.

46. G.O. No. 578. L.M. 12—2—1932.

47. G.O. No. 1474. L.M. 27—6—1933.

48. G.O. No. 2622. L.M. 18—6—1926.

## REVIEW

COMMUNAL SETTLEMENT—By Dr. Beni Prasad, Professor of Politics, University of Allahabad. Pp. 48. Hind Kitab, Bombay.

The future constitution of India is at present taxing the ingenuity and occupying the time of the best legal and political brains in England and India and since the whole question hinges on a satisfactory solution of the communal problem in India the brochure under review, which is a thought-provoking and lucid contribution on the subject, is timely. Dr. Beni Prasad is against any grant of unbridled sovereignty to the Units. For, as he points out (p. 21), "In any international crisis the small States may find their independence as illusory as the independence of Iran, Iraq and Egypt, not to speak of European States like Latvia, Lithuania, Esthonia, etc.". Hence Dr. Beni Prasad envisages a federation with the key subjects of foreign affairs, defence, transport, currency and exchange and customs under central control. As he observes on p. 24, "It is no casuistry to suggest that the curtailment of complete independence and sovereignty suggested here for autonomous units is indispensable to the spiritual flowering that the protagonists of Pakistan rightly have at heart". In regard to social insurance, industry, commerce, etc., the Centre will pass normative legislation to enact Statutes within the normative frame. The residue is to belong to the units on the American model.

Dr. Beni Prasad's thesis may be unexceptionable so far as logic is concerned, but one has to remember that though copy-book maxims have their value in philosophy and axioms have their value in mathematics, law and politics do not always conform to logic. It has been experience. The proved necessities of the times and the prejudices which judges and politicians share with their fellowmen have shaped the course of law and politics more than maxims and axioms have ever done. The fact that the very mention of a strong centre and federation makes some fear the danger of Hindu domination at the Centre seems to have been completely overlooked by the learned writer. The only reasonable

position to take is this: the dangers of a confederation have to be avoided and the suspicions of a federation have to be allayed. This can be done by restricting the powers of the Centre to 2 or 3 important subjects like defence, custom and income-tax and making it an agency centre as regards other matters of common interest. Such a harmonious blending of the federal and confederate ideals induced by the necessities of the Indian political situation would be a unique contribution of India to constitutional development.

As regards the vexed question of boundaries, Dr. Beni Prasad dismisses the Lahore Resolution, the C.R. formula, the compulsory transfer of population, and the treating of minorities as hostages. As regards C. R.'s scheme of plebiscite he says (p. 42), "Such a plebiscite is superfluous if it can reasonably be assumed that all Moslems will vote in favour of partition and non-Muslims against it. But if the assumption is unwarranted the plebiscite may inflict a grave and enduring injury on Hindu-Muslim and Muslim-Sikh relations". "The communal outbursts which may accompany the canvassing for and against partition may provoke general reaction in favour of rule by a third party" (p. 43). Even though Dr. Beni Prasad, marshals all the arguments against these alternative modes of deciding the boundary issue, he refrains from putting forward any constructive proposal in regard to this matter. The suggestion of Dr. Ambedkar that plebiscite should be restricted to certain areas like Ambala, Burdwan, etc., deserves consideration. Of course Dr. Beni Prasad favours coalition ministries at the centre and in the Units.

In these days of acute political passion when calm thinking is at a discount, it is refreshing to find a scholar of Dr. Beni Prasad's eminence summing up the essential facts of the situation with coolness, candour, and courage.

K. VENKOBA RAO.