Plate 1. Between 1750 and 1800, 3.5 million Africans left Africa for North and South America and the Caribbean as slaves. Between 1801 and 1867 an additional 3 million were transported to Brazil and Cuba. It was a voyage that lasted anywhere from 25 to 60 days. Of all the slaves transported during the period of slavery 6% went to British America, 17% to Spanish America, 38% to Brazil and 40% to the Caribbean. Statistics show that on average 16% of men women and children perished in transit, however, sometimes as much as half a ship perished. That would put the overall deaths that occurred in crossing the Atlantic at 1,040,000. (These numbers can only be higher.)
Buckborry (male), Sungkong (female), Nunhoky (f), Peerbox (m), Kut Dalero (m), Ora Hera (f), Ootim (f) and Blum (m) made the sea busy again the 1838. Some were artisans, along with the occasional domestic servant a few among them were also carpenters and bricklayers. This, one could not tell from their appearance. Once on board, and since then, the mask of labour, like a winding sheet around a corpse, has revealed as much about them as it has concealed. It was impossible to tell, just by looking, that Blum was a violent bitch and Ootim, a most melancholy whore from somewhere near Cawnpore. As per the newly recognized institution of ‘Depot Marriage’, they were as man and wife as the Kate Kellock’s young Indian surgeon, Bipin Beharry Dutt and his new bride. Ootim, a single woman, according to the ship’s surgeon had contracted a temporary union with Blum at the depot. On the other hand, it could have been the case that, as the Attorney General of British Guiana once remarked on the multiple forms of intimacy practiced by coolies, ‘It is futile to suppose that sexual desires where there is actual contact can be restrained by legislation’. In any case, that fact was noted on her emigration pass, and their union was recognized during the voyage so long as they behaved well and did not wish to separate. Recognised only for the duration of the voyage, theirs was truly a marriage of inconvenience. It could not last. And it would not. Eighteen months later he would use the same cutlass that was making a capital ghost of him to carve up the overseer and disfigure her beyond recognition. But they were, all of them, already beyond recognition. Instead of hanging him, like the law demanded, he was put back to work; this time with a different name: convict. Like weapon and tool, food and medicine, one imagination’s convict is also another’s labourer.

Looking only at the registers of the ships will confirm, for example, the view that indenture was acting to satisfy plantation capital’s demand for able-bodied male labourers; and, that the care taken in the Depots and aboard the emigrant ships were choreographed to deliver just that. There is an abundance of evidence to support this argument. For instance, the above-mentioned Coolies, before boarding the Maidstone, would have stayed up to 20 days in a depot. Because, as the Medical Examiner of Emigrants for the West Indies explained, ‘many came in an emaciated state’, they would have been fed. ‘Their slender form, lank limbs and obvious muscular weakness was remedied in a short time by the diet of the depot, (without medical treatment)’. At
first glance this may seem an odd choice for plantation labour, but it was not. Though writing about potential white colonisation of the tropics, Dr Manson struck the nail on the head when, he declared, ‘the successful colonisation of tropical lands is entirely a matter of knowledge, and the application of knowledge’. Frail though the coolie may have been, she too was invested (when convenient) with much useful knowledge: wages and contract, moral uprightness, knowledge of agriculture of course, and immunity. These were their qualifications. Labour after slavery was qualified labour. Everyone had to be suited for something, every tribe, caste, every convict... This obsession with qualification operated as it were, as a war against idleness.

The Coolies were proceeding to the plantations, recall, not because of their physical strength, but because they were suited for agricultural labour. The areas from which recruitment took place, for example, derived from or rather reflected this suitability. The earliest indentured labourers, therefore, were sought from amongst the ‘hardy agricultural races’. Whether they were or were not agriculturalists, matters little here, what is important to note is that they were deemed to be cultivators prior to their arrival on the plantation. Whereas slavery invested the black body with strength, indenture invested it with varying forms of knowledge. The brutality of plantation work, however, was not a figment of the imagination; it produced illnesses that literally broke bodies. While diet was not seriously considered as a cause of disease, it was seen as the main weapon against it. It is not insignificant, therefore, that the doctor above, and several others, prescribed food as medicines for the coolies.

The anxiety aboard the ships with the diet of the coolies was excessive to the point of being touching. Should it be chapattis or rice? was the biscuit agreeable, if it was, should it be served in the early weeks of the journey or later? which kind of dal, was uhur or mauskolly better? should all ships be on the Madras diet or the Bengal diet? In another instance, aboard the Blue Jacket, the captain attributed the outbreak of cholera to the pumpkins and immediately threw what had to have been hundreds of pumpkins into the ocean! The questions regarding diet and other issues related to coolie care recurred for much of the indenture period. The body we see arrives at the depot for

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transmission in a state that is not adequate. It needed to be worked on and the makeover began in the depots. Another doctor in charge of emigrants, repeated Scriven’s opinion about the healthy effect of depot life: ‘The influence of residence at the depot is, for the most part, that a large number of previously weak and ill from living low, are strengthened and fitted for the voyage, wholesome food is provided, and they are sheltered from the weather’ (emphasis added).

While the diet at the depot helped to rejuvenate a weakened and starved body there were other deficiencies that only medical intervention could address. The duty of the Medical Examiner was to ‘examine the emigrants before embarkation and to certify that each has been either vaccinated or inoculated, or has had the small-pox, and is in good health’.

Furthermore, Dr. Scriven described the medical examination as follows:

All single men are first examined by the native doctor, to see that they are not suffering from syphilis, gonorrhoea, hernia, or any other disease about the genital organs; those that he considers fit subjects are then marked with a stamp, and brought before me. I usually feel their pulses, look at their tongues, take their general appearance into consideration, examine for pits of small-pox, &c. ... Married men and women do not undergo the native doctor’s examination alluded to above.

‘The cases rejected’, according to the examiners, ‘are those who from any cause seem permanently unfit to labour’. To qualify to board the ship one must be fit to labour. Those in ‘obviously robust health are passed at once’, while those ‘such as are suffering from present sickness or its effects, or may have been weakened by low living or fatigue, and give fair promise of being fit to embark within a reasonable time’, are remanded to the depot for further fitting up.

Similarly, with specific reference to women and children, the demand for effective labourers, which meant able-bodied males, governed the extent of their migration. For example, the Committee appointed to investigate the mortality of emigrants to Mauritius were decidedly of opinion, that a cause of the increased mortality was attributable to the increase of women and children, whom it is more difficult to keep on deck, and therefore have the between decks clean. Dr. Scriven enunciated this opinion in the following terms:
I have already alluded to the enormous mortality amongst women and children. Now it is a well-ascertained fact, that amongst masses of people at sea, the women and children always suffer more than the men. The dirty habits of the Indian women and the difficulty of controlling them, while the men can be obliged to come on deck to obey the calls of nature; of course add greatly to the evil, interfering with the cleanliness of the between decks, and thus doubtless affecting injuriously the health of the men; accordingly we find the percentage of mortality great among the men, but high beyond all proportion among the women and children. ... the voyages, however, appear to be less successful, since the minimum of women was raised to 33 percent in 1855, having been formerly 15 percent. ... I would recommend that fewer women be sent with each batch; I would not say more than 15 per cent of the whole.

Mouat in his report endorsed this opinion and recommended 'the diminution in the proportion of women and children to 25 per cent. If possible, it is desirable not to embark pregnant females or those who are nursing infants at the breast'. This proposal was rejected and the repeated calls for more women and families reflected the confusion that surrounded indentured emigration: was it a settler, colonization scheme or not?

However, between the intent and the act always falls the shadow. Whether settlers or able-bodied labourers, they carried on board the ships no personal belongings of any significance. There is the matter of the 'green stone' Ootim was suspected of pilfering from the madam who owned her, and which, supposedly set her on the run, but that archival trace has led nowhere. Instead, in addition to the clothes in which they wrapped themselves, the extra piece of cloth to be used while bathing, the lota and plate, each numbered, and the blanket to protect against the vicissitudes of the middle passage, there was also talk of serge jackets and calico caps; those comforts aside, into the open hull of the 750 tonne ship, they, like their 330 fellow passengers, simply carried, for 21 weeks at sea, their secrets. Their words were few; that could have been because of the language barrier, cultural practices or uneven power distribution. Maybe necessity forced them to speak when no one was listening. In reference to one man who died, the captain of the ship remarked: 'it was only from the filthy state of his billet that he was found out'. Maybe it was a simple case of disorientation that produced the silence. Maybe, now as then, death and illness was acting as a voice.

Neither knew where they were going. He simply did not care and Ootim’s was the classic case of bait-and-switch. Many years later, with the help of the Marwari
Association, Ram Narain Tewary, son of Mohun Tewary of Kothi Parcha, Allahabad, by caste a Brahmin, aged about 28 years, at present residing in Matiaburz, Calcutta, declared before a Presidency Magistrate of Calcutta, that at 16 years old, ‘I sailed by the Steamer Ganges along with about 900 other men and women and during the voyage I learnt that we were bound for Damra Tapoo (Demerara Island)’ (emphases added). The extra blanket provided to Ootim in 1856, however, ought to have acted as a sign that this was not a voyage that would terminate at Mauritius, but one that would round the Cape of Good Hope, touch at St Helena, maybe, weather permitting, before continuing west. This was a West India ship whose destination was determined not only by the Cerberus of Prejudice, as would be the later claim, but as importantly as by the legitimizing force medical science lent to the political and economic aspects of British colonialism.

When Shabine, sailing from Monos to Nassau, took that fateful dive into the emerald Caribbean Sea, and surrounded by corals with such names as Brain, Fire, Sea Fans and Dead-men’s-fingers, saw instead ‘powdery bones ground white from Senegal to San Salvador’, the only thing he got wrong was the geography. Though they all disembarked, many did not survive. Peerbox would not. The 12 superficial feet of space allotted to him on the deck as his home for 21 weeks, was not an arbitrary allotment. It took upwards of 30 years of debate to be arrived at. Carefully calculated as per the Stirling Formula, it was made specifically for him, for his slender form and lank limbs. Had Peerbox known that the ships sailing past theirs, heading in the opposite direction, sailed also with emigrants who rested in berths of 15 superficial feet he may have chosen a different way of registering his distress. Instead he flung himself overboard. Mohiny, aged 25, died of rage, ‘this woman in a paroxysm of insanity threw herself overboard’.

It is Christmas eve and Sungkong is on the poop of the Kate Kellock looking out onto the sea and passing by in the distance is another ship heading east. Sungkong’s getting onto the poop was no easy affair. The captain’s wife, Mrs Bevan, objected to coolies on the poop. Knowing it to be the right of the coolies under the terms of the charter

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3 From Derek Walcott’s poem, The Schooner Flight.
party, and the emigration *rules*, Dr. Dutt insisted and after a series of exchanges between the two, the captain agreed to allow only the women and children. Captain Bevan had a soft spot for the women. Despite the objection of the Ship’s Surgeon and the women on board, for instance, he insisted on being present during every childbirth. The men on board did not approve of what they considered an objectionable exclusion from a place to which they felt they had as much right as their wives, and this especially as Mr. Bevan’s conduct, in not maintaining strict moral discipline on board, had not inspired them with much confidence in any arrangement tending to separate them from their female relatives. Consequently none of the coolies would go on the poop.

But on this night, Sungkong was happy to see a ship passing theirs. It too was a sail ship. Had it been Christmas eve ten years later, chances are what she would be looking at a steam ship while she would still be standing on the poop of a sailing ship. It was not until the turn of the century that steamers became a part of the fleet trafficking coolies between Calcutta to the West Indies. But this is December 24 1856 and it is the *Ticonderoga* passing by, headed for Hobson’s Bay, New Zealand.

The *Ticonderoga* will also have alarmingly high levels of mortality. As a matter of fact, both these ships produced such high levels of mortality as to cause major inquiries to be called to investigate into the causes.

Mortality rates aboard white ships peaked around the time of the Irish famine. At that time of crisis, it was not uncommon to have deaths in the mid teens. Thomas Page, citing US Census reports, Congress Records and other official records, wrote, 'In the years of the Irish famine the mortality at sea was ghastly: It is said that in 1846 out of 98,105 Irish emigrants 20,365 [21%] are know to have died; and in the following year the mortality was 17.5 percent of embarkation'.

Page, however, continues, 'as soon as the pestilence accompanying the famine ended, sanitary conditions began to improve'. They improved to such an extent and so rapidly that 'from 1855 to 1860 the death-rate for all immigrants was 1/6 of 1 per cent. In 1867 the death-rate was 11.61 in the thousand for all sailing vessels and 1.03 on steamships. Five years later it had

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been reduced by more than 50 per cent on both classes of vessels’. The use of steam vessels helped to bring down death-rates by reducing the length of voyages. ‘Steam vessels were introduced’, into the Australia route, ‘in the late 1870s and by the mid 1880s most immigrants were being transported by steamships which reduced the length of the voyage to less than two months’.5 This had the effect of reducing the death-rate among infants, for example, from one-quarter to one-twelfth.6

Had there been people on board the poop of the Ticonderoga, Sungkong may have had cause to ask herself, why were there only white people on board that ship? Similarly, she may have also wondered why all the ships that go to the tropics carry only black people?

Why white people weren’t sent to labour on the tropical plantations, it was argued and as we shall explore more carefully in chapter 4 that argues that there was indeed no reason for the indenture ship to sail, was due to the belief that tropical climate was inimical to white health.7 Facts based on science, however, were not enough to alter a colonial psyche that had been carefully crafted by hundreds of years of myths. This was a psyche that believed in the obligation, the natural right of the white man to rule the earth. In summing up the challenge before the men of science, expressed the politics behind the science of the day, one man of science remarked, ‘what we do want is the knowledge of how a limited number of Europeans may rule the tropics, because so inferior are all indigenous tropical races that there scarcely remains a single tropical country which is independent politically, or whose independence is not more or less threatened’.8 As another doctor put it, because ‘the black man needs someone to guide him’, science had to be put to the task of ‘organizing a governing European class that will rule and guide the black man’.

Colonisation, or, ‘re-occupation of the tropics by the long-since-migrated races’, was therefore imperative. Acclimatization thereby acquired imperial significance.

6 Ibid.
Acclimatization meant, as one Mr. Baines, quoting medical authorities, explained, 'a race must not only live, but be able to reproduce itself quite as efficiently as it does in its own country'. How to acclimatize was not the problem. Dr Sambon explained it could be achieved in two ways: sanitization and immunity. Instead, the problem before the men of science was to achieve acclimatization without degenerating. Going on, Baines stated, 'if we colonize at all, we do not want to degenerate'; instead, we must be able to 'raise up a white race in the tropics that will keep up to the European standard of efficiency'.

This degeneracy should not be confused, though it is linked, with the degeneracy that concerns Ann Stoler, for example. Stoler's is more of a focus on degeneracy that comes from a mixing of blood, from miscegenation. As a form of degeneracy, however, the dilution of white blood from its interaction with tropical soil and climate was another form of ‘miscegenation’. Still involving blood, it is the degeneracy of the white races by the germs of the tropics. To make the link to Stoler, either a broader definition of miscegenation is needed or else, immunology must be understood as the desire of abstinence.

Though this chapter will not argue that the management of death and illness on board coolie and white ships was determined solely on the sanitization and immunity axes – though it would be interesting to pursue – what seems obvious is that the particular ship one ended up on was determined in advance on these axes. While a study of life aboard individual ships has much to tell us about the general labour process during indenture, that is not all it has to tell. What distinguished slavery from indenture was the medical care given by the state to the body of the labourer. Though the instruments for settling, education, access to land and political rights, would come much later, the care for the body, as evinced on board emigrant ships, made indenture a settlement system from its inception. What in turn distinguished indenture from emigration and settlement was where that science was deployed. This last point may be helpful in deciphering the manner in which medical comfort was deployed on coolie emigrant ships.
Taking as its starting point that a distinction had to be made between the traffic in slaves and the traffic in ‘free’ labourers, this chapter focuses on the state’s provision of ‘medical comforts’ as one aspect of that distinction – the others being, as was highlighted in the previous chapter, the shift from the whip to the contract and the early talk of a more stable, self-reproducing labour force and as Prabhu Mohapatra has pointed out the repatriation clause in the indentured labour contract. The active interest of the State in the medical comfort of the labouring body, which began in the emigration depots and carried on aboard the ships, was one of the features that marked indenture from slavery. This chapter explores the many ways that the attention given to medical comfort manifested itself aboard indenture emigrant ships. Furthermore, it contrasts what transpired aboard coolie emigrant ships destined for the ‘tropics’ and white emigrant ships destined for the ‘temperate’ zones in the same period. The two investigations into mortality aboard emigrant ships discussed here, allow us to situate what was transpiring onboard indenture ships in a larger context. While, for example, the objective of Dr Mouat’s inquiry into alarming mortality that is the focus of this chapter was to find the causes of and to suggest methods to prevent death and illness among coolie emigrants passengers, i.e., to deliver to the plantations bodies healthy and thus able to labour, it coincided with the secondary effect of the larger medical project underway at the time in that it also produced bodies more amenable to settling

Plate 2. Ships on the Hugli river Calcutta, waiting to embark emigrants. On some ships over one third of the Indians died. (Plates 2, 4 & 6 and their accompanying captions are taken from Indo Caribbean News Reviews and Information. May 2003, Volume 3.)

Needless to say, the above, though factual, did not happen in the sequence and on the ships to which I have assigned them. The names of the persons that began this chapter, for instance, are all taken from the death registers of various ships. The detail regarding the ‘green stone’ is taken from an archival trace regarding a prostitute and her madam, who may or may not have ended up on one of these ships. The other details are, as we shall see, all taken from the archival records relating to the coolies traffic out of British India.

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in the new territories. A study of 'medical comforts' reveals that settlement was a promise, not a guarantee, concealed in the indentured emigration scheme. The study of life aboard these ships shows, however, that this journey attempted to bury much more.
Plate 3. Observe the provisions made aboard for a Chapel, Matron's Room, 2 Wash Tubs and School Master's Room.¹¹

I. MINIMUMS AND MORTALITIES.

The differences between the experiences of and provisions made for white and non-white emigrants were not limited to what they encountered upon arrival in the colonies. They began earlier, for instance, in the way they were housed on the ships that took them to the colonies. The *Ticonderoga*, shown above, sailing from Liverpool to Hobson’s Bay, New Zealand, attracted attention for the high mortality during its voyage in 1852. Charles Patey, under whose superintendence the vessel was fitted out for the voyage gave the following description of the ship:

In addition to the scuttles being cut every 10 feet fore and aft, on both decks, she had four large hatchways, to scuttles, 3 ft. by 1 ft. 6 in. between the fore and main hatchways; one 3 ft. by 2 between the main and after hatchway; another 4 ft. by 3 about the mizemasts, all of which were cut through both decks, and boarded up to within a few inches of the upper deck; besides all these openings, there were large ventilating tubes forward and aft.

The whole of the interior of the ship was twice whitewashed. She had two hospitals, one for males on the fore part of the main deck, and one for females on the after part. There were no less than 20 water-closets, all well supplied with water; and there were four baths, 6 ft. long by 2 ft. wide, lined with lead.

There is a plan of the ship... by which it will be seen that each passenger had more than 15 superficial feet; that the married couples’ berths were 6 ft. long and from 3 ft. 1 in. to 3 ft. 4 in. in width; those for the single men, 6 ft. long by 1 ft. 9 in. wide.\(^\text{12}\)

In addition, the list of stores included, India pork: 15,792 lbs., India beef: 5,040 lbs., Valencia rasins: 6,820 lbs., Patna rice: 6,725 lbs., Fine treacle: 6,820 lbs., Port wine: 144 bottles, Sherry wine: 72 bottles, Gin: 36 bottles, Bottled stout: 265 dozen.

\(^{12}\) Ibid. Letter to the Land and Emigration Commissioners, Chaired by T.W.C. Murdoch, dated 11th February 1855, p. 343.
Brandy: 37 gallons. And the list goes on. Finally, passengers took luggage along with them.

The data also contains evidence of hardship and neglect. For example, disease at times killed many white children; shipwrecks destroyed entire ships taking along with them all on board, white women, though at the forefront of the authority's minds, undoubtedly came in for a difficult time. However, what was deemed the minimum for whites was significantly and persistently higher than what was the minimum for non-whites.

### Mortality: Calcutta to West Indies & England to New Zealand and Australia

![Mortality Chart](chart.png)

**Chart 1:** Data taken from Dr. Mouat's report into the 'unusual mortality among Coolies sailing from Calcutta to the West Indies during the season 1856-57' and the 'unhappy mortality on board emigrant ships from Britain to New Zealand and Australia in the 1852 season'.

Note: *in 1848 27,939 emigrants went to Canada, and the deaths were one percent; in 1849, 39,516 emigrants went, and the deaths were 2.73 percent; in 1850, 32,352 emigrants went and 0.67 per cent died; in 1851, 0.64 percent of 41,076; in 1852, 0.46 of 39,176 and in 1853, 0.50 percent of 36,300. To New Brunswick the mortality has been even lower.' To Australia were sent out, "between 1847 and 1851, no less than 235 ships, carrying 61,696 emigrants, with an average mortality of 1.81 per cent.'

13 Dr. Mouat's report in contained in the Papers Relating to the West India Colonies and Mauritius of 1858 (hereafter Dr. Mouat's report) and the British mortality data is in the Reports Relative to the Mortality on Board Certain Emigrant Ships of 1854.

14 1854 Proceedings Volume XIII. The further details for the Australian emigration are: 1848: 71 ships, 17,754 passengers, 1.73 percent mortality; 1849: 77 ships, 19,428 passengers, 1.89 percent mortality; 1850: 26 ships; 6,830 passengers, 2.25 percent mortality; 1851: 45 ships, 11,693 passengers, 1.97 percent; 1852: 97 ships, 34,095 passengers, 4.48 percent mortality; 1853: 84 ships, of which, details were only received for 45 ships, of those: 15,280, 1.82 percent mortality. It is useful to note the explanation given for the unusually high mortality experienced in 1852. T.W.C. Murdoch, Chairman of the Emigration Board, testified as follows: "When the gold discovery was first known in this country, it was known also that the effect had been to produce desertion of all agricultural and pastoral pursuits in the Australian colonies. There was accordingly a very great desire among those connected with the colonies to have a large emigration set on foot, and that the emigration should be of people not likely to desert the regular employments; not likely, in fact, to go to the gold fields. At the close of 1851 or at the beginning of 1852, the desire to emigrate in this country had fallen to a very low point, so much so that it was with great difficulty we could fill the ships we were then taking up. At that time, and for
numbers with those reported for the voyage from Calcutta to the West Indies: "...the average to the close of 1856 having been only 4.71 per cent. In 1857 and 1858, it was no doubt very large, having been 17.34 per cent. in the former and 13.16 in the latter year."15

The above two sets of ships had, in the eyes of the British Emigration authorities, one thing in common: alarmingly high levels of mortality. (The frequent incidents of shipwrecks were one thing that distinguished the North American traffic16 from its West Indian counterpart.17) As was the practice of the time, inquiries were initiated. I will only briefly summarise the methodology and findings of the inquiry into the mortality aboard the white ships.

The Select Committee set up to investigate the mortality aboard white ships consisted of fifteen persons. The Committee called twelve persons to testify over seven days between 16 March and 6 April 1854, including, one woman, Mrs. C. Chisolm, as to the arrangements on board, in particular for women and children. The Chairman of the Emigration Board, Mr. T.W.C Murdoch, testified over a period of two days. Also called were a member of the Press; two medical men, one ship surgeon and the medical superintendent at Grosse Island, the quarantine depot in Quebec; a ship owner and Broker; one passenger; two persons connected with the mercantile marine department of the Board of Trade; and, the Emigration Officer at the Port of Liverpool.

The well-informed evidence provided by the witnesses reveal a high level of transparency in the emigration proceeding from Britain. Mrs. Chisolm, for example,

16 "Of 7,129 vessels which left this country[Britain] in the course of ... five years, only 44 were wrecked." PP 1854, Col. xiii, Select Committee on Emigrant Ships, p. 168.
17 I have come across only one incident of shipwreck in the India to West Indies trade. It occurred in 1871 when the vessel Souvenance wrecked while rounding the Cape of Good Hope bound from Pondicherry to Martinique losing all 376 coolies on board. The Cape Standard and Mail of 20th June 1871 found it “remarkable that all [14 of] the white bodies escaped the voraciousness of the sharks, but they were dreadfully bruised by being dashed against the rocks.”
was prepared with information on the size of berths and diet; she also gave her informed opinion on whether ships from Liverpool were preferable to ships from London. She even spoke to the supply and the sufficiency of medical attendance. Others came before the Committee prepared with ample statistics and far ranging and pertinent legal information.

Of the 3,281 questions asked of the witnesses, including the Chairman of the Emigration Board, which also oversees the emigration from India to the West Indies, not one question was asked about the coolie traffic. No allusion was made to it. As far as white emigration was concerned black emigration did not exist. The one mention of non-white people was in response to a question regarding the selection of crews for white emigrant ships. The answer was, ‘they should not be Africans or Asiatics’.\(^\text{18}\)

After looking into issues of diet, space, ventilation, medical care and finding them generally of acceptable quality and quantity, the conclusion, though not conclusive, seems that the danger lay in transporting people in large number and families with more than three children.

**Mortality Aboard White Ships to Australia: Adults vs. Children**

![Mortality Graph](chart.png)

*Chart 2*: Children as per the report was anyone below the age of 14, sometimes this is refined to make a distinction between those below 4 and those above, but not consistently to allow for meaningful graphing.\(^\text{19}\)

\(^{18}\) *PP* 1854, vol. xiii. Select Committee on Emigrant Ships. Testimony of Frederick William Beechey, of the Mercantile Marine Department of the Board of Trade. p. 129.

\(^{19}\) Data taken from *PP* 1854, vol. xiii. Select Committee on Emigrant Ships, testimony of T. W. C. Murdoch, Chairman of the Emigration Board. p. 35.
White women apparently did not die in numbers different enough from the men to warrant statistics being kept. Mrs. Chisolm, questioned extensively on the fate of women on board, never drew attention to the mortality of white women aboard these ships. Though emigrants are generally referred to as having ‘very dirty habits’, on board these ships those habits were not investigated as a source of disease-causing death; neither were women singled out as more dirty than men. Women’s separation from the men, which was discussed, focused on a break down of morality aboard when single women and men were forced to cohabit. The ‘unlimited intercourse’ complained of in the ships in this inquiry, are exclusively between the single female and male emigrants; not between the crew and the women. Furthermore, there is no mention made of assaults being made on the women, as characterized the complaints on board coolie ships. On board white ships policing morality was the prime concern. One witness testified ‘I saw on two occasions, in the day time, persons in very indelicate positions’. To which the Chairperson of the Committee asked: ‘Of different sexes?’ The response ‘Yes’, appears to have satisfied him because he then moved on to questions about fittings on board.

**Mortality: Britain to New Zealand and Australia**

![Graph showing mortality rates](chart3.png)

**Chart 3:** This graph is useful because it shows the numbers boarded and the corresponding mortality. Even though White ships boarded more than twice as many passengers as Coolies ships, their mortality was marginal.

Mortality rates aboard white ships peaked around the time of the Irish famine. At that time of crisis, it was not uncommon to have deaths in the mid teens. Thomas Page, citing US Census reports, Congress Records and other official records, wrote, ‘In the
In 1872 the steamer the *Enmore* arrived in Calcutta bringing return emigrants from Demerara. It was only the second steamer to convey coolie emigrants between the colonies and Calcutta.\(^{23}\) That same year a proposal to initiate a steam service to ferry emigrants to the West Indies through the Suez Canal was rejected on grounds that the cost outweighed the benefits.\(^{24}\) In arguing against the proposed steam service, the Chairman of the Emigration Board in London, the same individual who oversaw the emigration to North America and Australia, Mr. T.W.C. Murdoch had the following to say:

> In respect to the probability of the employment of steamers by the Cape route... If full power steamers were employed they would probably shorten the voyage as compared with sailing vessels by at least three weeks, and would make the time of arrival in the colonies nearly certain. This would be an advantage scarcely less to the planter than to the emigrants themselves. But it would involve a considerable addition to the cost of passage, and it may be doubted whether the planters are prepared at present to accept such increased cost. The question is one for their decision in the first instance.\(^{25}\)

The debate on whether or not to use steamers to convey such emigrants was then set aside only to be revived again in 1882, at which time the British Guiana and Trinidad governments declined the offer of Messrs. Tyser and Company to establish a Steam Service for the conveyance of Coolie Emigrants to those Colonies. When Tyser and Company’s offer was rejected in 1882, it was argued, because the fixed schedule of departures and arrivals took away the flexibility needed to delay the departure of an emigrant sailing vessel until the full complement could be procured.\(^{26}\) In 1883, the Katz Brothers, Merchants and Ship Owners of Penang, again proposed a line of steamers for the conveyance of coolies from British India to West Indies. As they put it:

> It is the intention of our firm to start a regular line of first class steamers, provided with the latest improvements and appliances for the comfort of deck passengers, to run from British India to the British Colonies in the West Indies, and thence to New York, and *vice versa* in connection with a branch line from the Straits Settlements to British India, with the following objects: (a) to provide for a quicker and better mode of transport for emigrants, who

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\(^{23}\) Revenue, Agriculture and Commerce Department (hereafter *RAC*) Emigration 1872 17-19, December, Steamer *Enmore* with return emigrants from British Guiana.

\(^{24}\) *RAC* Emigration 1872 10-11, December *Regarding the use of the Suez Canal route by steamers carrying emigrants to the West Indies*. Dated Emigration Board, the 13\(^{th}\) June 1872 From Sir T.W.C. Murdoch to R.G.W.T. Herbert, Esq.

\(^{25}\) Ibid

\(^{26}\) Revenue & Agriculture Department (hereafter *R&A*), Emigration Branch, September 1882 9-10, *Refusal of the Governments of British Guiana and Trinidad to accept Messrs. Tyser and Company’s proposals to establish a Steam Service for the conveyance of Coolie Emigrants to those Colonies.*
are at present carried by sailing vessels, (b) to establish regular steam communication between the East and West Indies and America, which in view of the present extension of trade has long been a want, but does not exist as yet, and (c) to foster and increase thereby the trade existing between the respective countries.\textsuperscript{27}

That proposal was also rejected for similar reasons. It was not until the turn of the century that steamers became a fixed part of the coolie trade.

Plate 5. Plan of the ‘Bourneuf’.

II. DR. MOUAT’S INQUIRY.

The ‘difficult inquiry’ into the mortality aboard the coolie ships was awarded to one man, Dr Mouat, ‘Inspector of Goals and Government Dispensaries’, as ‘it would not be easy at the present time to make the services of other competent officers under this Government available for the purposes of a committee’.\textsuperscript{28} Dr Mouat was a man of tremendous energy and commitment. While conducting the investigation into morality aboard coolie ships he was also serving as president of the President of the Andaman Committee, looking into ‘the matter of the selection of a suitable site for a Convict Settlement’\textsuperscript{29} and would go on to become the Inspector-General of Prisons, Bengal. A few years later he was made the Foreign Secretary and Delegate of the Statistical Society and traveled extensively in Europe and America as its representative. His area of interest and specialty was prisons. He was, however, not only a man of action, he

\textsuperscript{27} R&A Emigration 1884 5, May. Proposed establishment of a line of steamers for the conveyance of coolies from British India to West Indies. Dated Penang, the 28th December 1883, from Messers. Katz Brothers, Merchants and Ship-owners of Penang, to - The Secretary of State for the Colonies.

\textsuperscript{28} Dr. Mouat’s report. Memorandum, p. 426.

\textsuperscript{29} Home 1858 Public March, Fort William. p. 561. No. 12. letter from F.J. Mouat, Esquire, President of the Andaman Committee, to C. Beadon, Esquire, Secretary to the Government of India, No. 13, dated 6th January 1858, and Beadon’s reply, dated 24 March 1858, thanking Mouat for his ‘exertions in the object of your mission, and for the very satisfactory manner in which your duty has been performed’. 

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also published extensively about his work. In one of his articles on prisons, Mouat wrote, ‘Crime may well be likened to an epidemic or a contagious disease. It is in truth a moral disorder peculiarly apt to be spread by contagion, and much more easily stamped out *in origine* than when it has taken hold of an individual or a class’. Though it was published ten years after the investigation into death and illness aboard coolie emigrant ships, this approach accurately captures methodology and tenor of the inquiry Mouat conducted in 1857. He searched high and low for the origin of the causes of death and illness that appeared on board these ships.

Dr Mouat, in a memo dated 15 October 1857 regarding the ‘great mortality which occurred during the past season among the coolie emigrants on their passage from Calcutta to the West Indies’, was informed that ‘the Lieutenant Governor has selected [him] to hold the important investigation which it is necessary to make into the causes which lead to such lamentable results’. He was to also make ‘suggestions of such measures as may be calculated to prevent similar disasters hereafter.’ Mouat, in submitting his report, restated his assignment as follows: ‘to ascertain if the lamentable mortality were due to exceptional causes which could not have been discovered, and of which the effects could not be foreseen; or whether it might have resulted from discoverable causes, had proper care been taken to ascertain them, and to provide against their fatality’. The letter to Dr Mouat, while reposing ‘full reliance’ in his aptitude for duty set before him, went on to explain that that reliance was based on his ‘information and experience with cognate subjects’.

Mouat was charged to investigate the following six points:

1\(^{st}\), the state of the people when they were embarked; 2\(^{nd}\), the measures that are taken in Calcutta to ascertain that the emigrants selected are sound, healthy, and fit to undergo the risks of a long voyage; 3\(^{rd}\), the present mode of fitting up ships for coolies; 4\(^{th}\), the recent alterations in the dietary of emigrants; 5\(^{th}\), the effects of detention in the River Hooghly after the people


are on board; and lastly, the reason of the healthiness of the Madras coolies embarked at the same season, and subject to the same regulations.32

Recall that by 1857 under the system of indenture that began officially in 1838 the British had shipped, in tens of voyages to at least a half dozen destinations ranging from Mauritius and British Guiana and places in between,33 thousands of coolies from what is today called India.34 Yet the colonial authorities could not understand why in the 1856-57 season, for example, on a ship carrying 385 coolie emigrants as many as 120 (32%) had died. Why also was dysentery killing people in such alarmingly large numbers? Furthermore, why Indians were behaving at sea in ways that directly contributed to their own ill-health and often death? Opinions were plentiful and varied.

The causes ranged from the food provided, to ventilation, to the location of privies and the kind of non-human cargo carried aboard these ships, to the coolies’ habit of concealing their diseases, the weather, the race, sex and region of origin of the coolies. The surgeon on board the *Bucephalus* that sailed to Demerara between November 1856 and February 1857 had the following to say about conditions aboard that ship:

Instead of being surprised at the extent of sickness and mortality, I am astonished that any escaped. The state of health of those embarked must have been unusually good to have enabled them to resist the deadly influence of filth, animal and vegetable exhalations, and a vitiated atmosphere such as would have bred a pestilence in the healthiest spot on the face of the globe.35

32 Dr. Mouat’s report. Memorandum, p. 426. These instructions were sent from London by T.W.C. Murdoch, Chairman of the Emigration Board.
33 These numbers would dramatically rise in the next few years. As per the Revenue, Agriculture and Commerce, Emigration Branch index at the National Archives of India, by 1875 the British would have sent or were contemplating sending Indians to at least 35 different countries around the world.
34 “From 1842 to 1870, 365,482 men, 103,070 women and 65,043 children [for a total of 533,595] emigrated from India as labourers to French and British territories” – *PP* 1874, vol. xlvii, Geoghegan’s “Report on Coolie Emigration from India.”
35 Dr. Mouat’s report. Memorandum, p. 430.
Mortality aboard Coolie Ships from Calcutta to the West Indies 1856-57

Chart 5. These twelve ships sailed in the 1856-57 season and formed the focus of Dr Mouat’s investigation.

It is truly astonishing the amount of concern shown by the British for the welfare of the non-white emigrants aboard emigrant ships in the 19th century. It was uncommon for a year to go by without some official lamenting the mortality aboard these ships. The factors identified as the causes of death and illness aboard these ships, however, remained unresolved throughout the 19th century.
III. THE POLITICS OF BOARDING.

In 1837 a ship, the Adelaide, carrying seventy two labourers from India to Mauritius lost twenty four men at sea, (not counting the one ‘lost overboard’, and three shortly after docking), i.e. 40% of its human cargo.\(^{36}\) Though it was not uncommon for the mortality rate aboard coolie ships to exceed twenty per cent., the high number of deaths aboard the Adelaide was unusual. The experience of the 1837-shipping season was enough to raise an alarm in the Colonial Secretary’s Office in Port Louis, Mauritius. G.F. Dick, Colonial Secretary in Port Louis, pleaded on behalf of the labourers and drew particular attention to the absence of medical facilities on board the ships transporting labourers from Bengal to that colony. Dick’s letter to the Government of Bengal gives us an idea of how transportation was conducted prior to 1838. In it he raised concerns that would haunt the transportation of indentured labour for much of its future history.

It is impossible … that the Indians could have had proper accommodation, nor the means of that protection from the weather, which on such a voyage ought to have been secured for them. What their treatment personally may have been on board it is difficult to say, but there was no medical officer, nor any person to attend to their welfare, or to see them duly cared for and therefore, prima-facie, much doubt may reasonably exist as to the manner they were treated.\(^{37}\)

Dick’s observations regarding the medical care given to labourers on board did not go unnoticed. That he repeatedly stressed the issue of medical care, concluding ‘indeed it is very evident that until the Indians have a person on board to attend to their interest there, it is not probable that either full justice will be done to them, or complaints be made where they may be ill treated’,\(^{38}\) reflected the general attitude that characterized the indenture traffic as compared to the slave trade: that science was the answer.

\(^{36}\) Fort William, Proceedings Volume, 7\(^{th}\) June 1837.
\(^{37}\) Ibid.
\(^{38}\) Ibid.
When the indenture system formally began in 1838, it was required by law that all ships transporting labourers have on board one medical officer. The debate over who would provide this medical attendance was revealing in that it exposed one of the ways in which race influenced science: through its personnel. The system started with employing strictly white surgeons with European qualifications. However, the problems of language and lack of familiarity with the diseases common in Asia hindered the work of these surgeons and lead Mouat in 1858 to recommend that medical officers should have 'some knowledge of the treatment of the diseases of natives of India, and of such only as are capable of understanding the coolies. Young Surgeons fresh from Europe, and youths who have just completed their professional education should not be employed in this duty'.

The Captain of the *Shah Jehan* testified before Mouat that he 'is of opinion that the Australian Emigration system, with a European surgeon, is the best plan to adopt in coolie ships'. However, the Medical Superintendent differed, 'so peculiar are the circumstances under which Native Emigrants embark in Calcutta', that hardly 'can any parallel be drawn with Ships carrying European Emigrants to Australia'.

The French pushed the debate a little further in 1861 when they questioned the required race of the surgeon by asking of the British 'whether the words *an European Surgeon*, contained in Section XIV of Act XLVI of 1860, are intended to be interpreted literally to the exclusion of an *Eurasian Surgeon*'. The Governor General responded that the surgeon did not have to be European 'so long as the East Indian has received a Collegiate Training in the European System of Medical Science itself and is considered qualified, the spirit of the Act will be observed'. This rule was further revised to allow for the 'appointment of nominees who have attained Diplomas from any of the constituted Medical Colleges'. Finally, it was decided that the Native Indian Surgeon could be a

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39 Home 1858 Public Nos. 25-29. From C. Beadon, Esquire, Secy. to the Govt. of India, To A.R. Young, Esquire, Secy. to the Govt. of Bengal. Dated Council Chamber, the 23rd of September 1858.
41 Home 1862 Public A 37-39. From Arthur Payne, Esq., M.D., Medical Superintendent, Emigration to Mauritius, to H. Bell, Esq., Officiating Junior Secretary to the Government of Bengal,- No. 46, dated the 4th February 1862.
42 Home 1861 Public A 32/33. Letter from the Junior Secretary to the Government of Bengal to the Secretary to the Government of India Home Department, fort William, the 23rd April 1861.
43 Ibid. From the Home Department 17 May 1861 to J.D. Gordon, esq., Junior Secy., to the Govt. of Bengal.
44 Home 1862 Public A 47-48, Fort William Home Dept, 30th July 1862, from Govt of Bengal to the Acting Chief Secretary to the Govt' Fort St. George, No. 3842.
‘pensioned Apothecary’. Though T. W. C. Murdoch – remember him from the inquiry into mortality aboard white ships cited earlier – would state in 1871 that ‘it is clear that a native Surgeon, whatever his professional qualifications, would lack the moral weight with officers and crew – probably also with the coolies – that a European Surgeon would possess’.

Similarly, the racial make up of the crew who provided much of the day-to-day care of the emigrants was cause for concern. For example, it was specified, ‘the master and the first and second officers shall be possessed of certificates of competency and shall be Europeans. The third officer may be either a European or an East Indian, and shall be nominated subject to the approval of the Protector of Emigrants’. The employment of lascars as crews for these vessels was objected to on the ground that ‘similarity of color and caste would give lascars greater facilities or intrigues with the female emigrants; and that they cannot be depended on in cases of emergencies and danger’. With regards to topazes, it was the usual practice to hire emigrants to do this work. However, Doctor Mitra, the Surgeon on board the steamship Loodiana, recommended that only ‘skilled men accustomed to sea life’ should be employed for this job as the emigrants are usually down with sea sickness for the first half of the voyage when the services of cleaners are most needed. The Protector of Emigrants however, disagreed, revealing that it was more economical to hire the emigrants themselves for this job, and besides the ‘experienced sea faring men’, i.e. white men, were prone to ‘interfere with the single Indian women’.

45 Home 1862 Public A 6-8, From J.J. Franklin, Esq., Protector of Emigrants; to A.J. Arbuthnot, Esq., Acting Chief Secretary to Government, Fort Saint George, dated 9th July 1862, No. 25.
46 On board the Rajasthan, "the Doctor, ... had not only been generally negligent and harsh towards the immigrants during their passage, but also committed the following offence:— That he had tied a man by his thumbs, and, having hoisted him up to spars eight feet above the deck, left him there for several hours with his feet barely touching the deck; and that this man who, when taken down, was kicked, died shortly afterwards." - Home Public A 1864 54-56, 20th December, From H.N.D. Beyts, Esquire, Protector of Emigrants, to the Hon'ble E. Rushwort, acting Colonial Secretary, &c., &c., &c., - No. 149A, dated the 30th September 1864.
48 R&A Emigration Branch, 1884 21-22, February, Amendment of the Madras Emigration Rules under Act VII of 1871 in respect of the Crews to be carried by Emigrant Vessels.
49 R&A Emigration Branch, 1884 17-20, February, Employment of Lascar Crews on Emigrant Vessels proceeding to Fiji and the West Indian Colonies.
50 R&A Emigration Branch, 1895 16-17, December, Selection of Topazes for emigrant vessels.
51 Ibid.
Starting with Dick’s recommendation ‘that the labourers brought here in future should have been either vaccinated, or have had the disease’, which was adopted, the special preparations required to transport the non-white body began with its medical examination prior to embarkation. Mouat requested Dr. Scriven, Medical Examiner of Emigrants for the West Indies, to furnish responses to the following questions:

1) The nature and extent of your duties in connexion with the Emigration depot.
2) The times usually in which coolies reach the depot, and the means at your disposal for the treatment of the sick.
3) The state usually in which coolies reach the depot, and the influence of residence at the depot upon their health.
4) The seasons at which they are mostly sick, the nature of the diseases from which they suffer, and the average actual mortality among them.
5) The classes and castes most prone to sickness, and those who suffer most at sea, if you have information on the subject.
6) The nature of the medical examination to which you subject them prior to embarkation, stating when, where, and how it is conducted, in detail.
7) The means which you take to ascertain the concealment of sickness, and what cases are rejected and remanded to the depot.
8) Who assists in, and is present at the examination, and what power, if any, he possesses of objecting to your selections.
9) Whether in your belief there are any seasons of the year, or any classes of emigrants at which, or whom it is undesirable to embark for transmission to the West Indies or elsewhere.52

Scriven responded that of the coolies who come to the depot, ‘many come in an emaciated state, (though there are also healthy ones)’. ‘The lack of food’, he pointed out, ‘is the cause of this, and it is remedied in a short time by the diet of the depot, without medical treatment’. When ‘contrasted with Europeans’, the medical officers characterized the Indian body as being of ‘slender form, lank limbs, and obvious muscular weakness’. The body we see arrives at the depot, for transmission, in a state that is not adequate. It needs to be worked on and the depot is designed to begin this makeover. ‘Their residence at the depot is generally beneficial, as it is, on the whole, a very healthy and desirable place’. Another doctor in charge of emigrants, repeated Scriven’s opinion about the healthy effect of depot life: ‘The influence of residence at the depot is, for the most part, that a large number of previously weak and ill from living low, are strengthened and fitted for the voyage, wholesome food is provided, and they are sheltered from the weather’ (emphasis added).53

52 Dr Mouat’s Report. J. B. Scriven, First Assistant Surgeon, General Hospital, Medical Examiner of West Indian Emigrants to Dr F. J. Mouat, 23 October 1857. p. 461.
53 Ibid.
While the diet at the depot helped to rejuvenate a weakened and starved body there were other deficiencies that only medical intervention could address. The duty of the Medical Examiner was 'examine the emigrants before embarkation and to certify that each has been either vaccinated or inoculated, or has had the small-pox, and is in good health'. The examination that allowed the Medical Examiner to determine the health of the coolie, Scriven described as follows:

All single men are first examined by the native doctor, to see that they are not suffering from syphilis, gonorrhoea, hernia, or any other disease about the genital organs; those that he considers fit subjects are then marked with a stamp, and brought before me. I usually feel their pulses, look at their tongues, take their general appearance into consideration, examine for pits of small-pox, &c. ... Married men and women do not undergo the native doctor's examination alluded to above.

'The cases rejected', according to the examiners, 'are those who from any cause seem permanently unfit to labour'. To qualify to board the ship one had to be fit to labour. Of those not flatly rejected, those in 'obviously robust health are passed at once'. There were, however, those who 'are suffering from present sickness or its effects, or may have been weakened by low living or fatigue', and therefore could not be boarded immediately. The high demand for labour made it impossible to completely reject anyone. In this interstice between supply and demand, science intervened and gave its 'fair promise of [them] being fit to embark within a reasonable time'. Science thereby provided the promise upon which capital could profitably speculate.

...There was evidently something going on between the master and the crew... On Christmas night I made my usual round in the 'tween decks, and being satisfied myself that the coolies were comfortable for the night, I returned to the hospital on the upper deck. I had not been there long when I heard a rush of a number of coolies, who made for the hospital door, and complained that the sailors were pelting them with bones. I explained to them that being Christmas night they were probably only injun, and meant no harm.

While I was thus explaining, Mr. Bevan sent for me. I met him at the cuddy door, mustering some of his men, who to my surprise carried weapons. Mr. Bevan then, to my further surprise, declared that the coolies were in a state of mutiny, and for the moment absolutely stupefied me with astonishment by asserting that I was the cause of it. I am unable to express the

54 Ibid.
55 Ibid. p. 462.
57 Dr Mouat’s Report. J. B. Scriven to Dr F. J. Mouat, 23 October 1857. p. 462.
58 Dr Mouat’s Report. Dr. Arthur Payne to Dr F. J. Mouat, 29 October 1857. p. 463.
feeling of disgust, I may say contempt, with which, on recovering from the shock of so grave a charge being laid against me, I regarded Mr. Bevan's conduct.

The plot was now in some part revealed to me.

...For almost immediately after armed sailors were ordered to watch the hatchways leading into the emigrants' deck, while others kept guard in conspicuous places all over the ship, much to the wonderment of all of the coolies, and to the alarm of many poor creatures among them, who were too frightened even to visit the water closets on deck.

The ridiculous farce of armed men pacing about the decks against an imaginary enemy was kept up to the time of our arrival at Ascension, when I was placed under arrest and confined to my cabin.

Dr. Bipin Behari Dutt, L.R.C.P. and S. (Educational) Royal Colleges of Physicians and Surgeons in Edinburgh Surgeon Superintendent of the Emigrant Vessel Kate Kellock, 5th November 1874

Science intervened at several points in the management of indentured emigration. It determined the qualification of the crew and the decided who was fit enough to be an emigrant. Beginning, for example, with vaccinations and medical examinations in depots, the history of indentured emigration is also the history of the medicalization of the coolie body. This process would continue aboard the ships and as we shall see in the remainder of this chapter through the focus on food and air the history of these voyages highlights the failure of science to demonstrate its autonomy from economics and politics.

IV. CONCEALMENT AND CONSUMPTION.

It is pointless to repeat that those administering the traffic perceived the coolies as having 'unclean habits'. It is more interesting to ask how people endured such otherwise unwholesome conditions. The ship and the sea, the evidence seems to suggest, were entirely alien spaces to the emigrants. As Bipin Bihari Dutt expressed it, 'it is needless to say, though numerically strong, are utterly helpless and at sea when once away from their native land and on the deck of a British ship'. They were spaces that had to be negotiated for the majority for the first time.

The testimony of surgeons and captains of ships provide us insights into the conditions in which the coolies lived during the voyage. For example, one man was

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59 RAC Emigration 1875 16-20, Conduct of Dr. Bepin Behari Dutt, Surgeon Superintendent of the ship "Kate Kellock," bound with emigrants from Calcutta to Surinam.

60 Ibid. Letter from Dr. Bipin Behari Dutt, Late Surgeon Superintendent of ship Kate Kellock, to the Protector of Emigrants, Calcutta, dated the 5 November 1874.
found with ‘worms crawling in the midst of the filth in his clothes’\textsuperscript{61}; that ‘many of the coolies voided their excrement in their clothes, and on the spot where they slept, which could only result, as it did, in the most abominable stench through the lower deck’ \textsuperscript{62}. The situation was so bad at times that ‘the crew refused to go down’ and that it became difficult to find topazes, (sweepers for cleaning the vessel), willing to go down to remove the filth.\textsuperscript{63} Other times it was ‘found necessary to stop provisions or water to enforce regularity and cleanliness’.\textsuperscript{64} Dirt posed such a serious threat that it was recommended that surgeons be selected who had an ‘eye for dirt’.

One Medical Examiner of Emigrants declared the diseases afflicting people aboard endemic rather than epidemic. And ‘what are the endemic causes of these three diseases [dysentery, typhoid fever and cholera]?’ he answered, ‘they are emphatically diseases of filth and impure air’.\textsuperscript{65} Women, who, for several reasons, were already undesired, were considered a major source of filth.

The dirty habits of Indian women, and the difficulty of controlling them, while the men can be obliged to come on deck to wash and to obey the calls of nature, of course add greatly to the evil, interfering with the cleanliness of the between decks, and thus doubtless affecting injuriously the health also of the men. Accordingly, we find the percentage of mortality great among the men, but high beyond all proportion among the women and children.\textsuperscript{66}

As mothers, women were also connected to the larger issue of diet aboard the ship. Diet had otherwise attracted a fair bit of attention and would continue to do so throughout the period of indentured emigration. The focus on diet was began innocently enough with the question of what emigrants would eat on the voyage. The discussion regarding meat is one example of range of knowledge that was drawn on to ensure the transportation of healthy coolie emigrants. Dr Mouat, drawing on information collected about the ‘diet of prisoners in Bengal’,\textsuperscript{67} made the following revelation,

\begin{quote}
The only meat eaten by Hindoos, and that rarely, is sacrificial goat’s flesh. Mahomedans eat no pork, and those in indigent circumstances cannot afford
\end{quote}

\textsuperscript{61} Dr Mouat’s Report. J. B. Scriven to F. J. Mouat, 21 July 1857, p. 450.
\textsuperscript{62} Ibid.
\textsuperscript{63} Ibid.
\textsuperscript{64} Dr Mouat’s Report. Oral Testimonies of Persons examined in Calcutta, p. 486.
\textsuperscript{65} Dr Mouat’s Report. J. B. Scriven to F. J. Mouat, 21 July 1857, p. 449.
\textsuperscript{66} Ibid, p. 451. No mention is made the risks women took by going to wash though incidents abound of women being assaulted while going or coming from the privies. Evidence also suggests that the enclosures of the privies were deliberately ill maintained.
\textsuperscript{67} Home 1861 Public B 107. Letter from Mr. Murdoch, to Sir Frederic Rogers,- (dated 13th May 1861).
to buy meant at all. Coles and Sonthals eat every kind of flesh, including that of rats, dogs, cats, and snakes, but are chiefly vegetable feeders from poverty. 68

Mouat would go on, under the head of “Medical Comforts”, to ‘strongly recommend preserved meats’ for the emigrants among which it is safe to assume that rat, dog, cat and snake meat were not included indicating the limits to the hospitality. ‘With a view to ascertain their mode of living in India’ and ‘although’, as he noted, ‘much dependence cannot be placed on the veracity of their replies’, Mouat had ‘individually questioned every one of the Coolies, and taken down their answers in writing. In so doing he found out that, ‘Betel, dry Tobacco’ were almost universally used, ‘country grog by about one-half’, and ‘Gunjah by one-fourth of the number’. Though he made an allowance for ‘betel, chera and dry Tobacco’ ‘to promote contentment’, gunjah and country grog, unlike opium, were not to be found on the list of medical comforts. 69

Mouat based his recommendations regarding diet on his ‘knowledge of the effect of diet upon the 25,000 prisoners under my general care’. 70 He suggested the ‘Madras diet scale’, which required ‘six sheep or goats to be supplied per every hundred men for the voyage’, be adopted for all voyages to the West Indies. 71 Since, in Mouat’s opinion, Madras scale did ‘not differ very essentially from the Calcutta scale’, there was need only to for one change to the Madras diet ‘as regards the natives of Behar and Goruckpore’. 72 That was to ‘substitute eight ounces of flour for twelve ounces of rice, leaving the rest of the diet as it is’. 73 Furthermore, the Madras scale did not exceed the Calcutta in cost. 74 Bearing in mind that ‘so much sameness of diet is also to be reprobated’, it was thought that ‘if the principle of a daily change of diet followed in the arrangements of Her Majesty’s Emigration Commissioners, for European Emigrants were adopted as far as practicable, it would equally tend to promote the health and well being of East Indian Emigrants’. 75 Coolies were provided two meals: ‘a day meal in the morning with the chief meal in the afternoon is the

68 Ibid.
69 Ibid.
70 Dr Mouat’s report Dr. Mouat to C. T. Buckland, Junior Secretary to the Government of Bengal. Fort William, 10 May 1858. p. 442.
71 Ibid.
72 Ibid. p. 443.
73 Ibid.
74 Ibid.
75 Home 1861 Public B 107. Letter from Mr. Murdoch, to Sir Frederic Rogers, dated 13th May 1861.
usual practice of most Natives of the classes from which the Coolies come'. The morning meal was served at 9 am and the afternoon meal at 2 p.m. Mouat's proposed diet consisted of:

Monday: Chapaties, 10 oz; flour, rice 12 oz; Salt fish, 4 oz; Yams or potatoes, 8 oz; Tuesday: Biscuits, 8 oz; fine flour or Rice, 12 oz; Dholl, 3 oz; preserved meat, 3 oz; Wednesday: Chapaties, 10 oz; rice, salt fish and yams or potatoes; Thursday: Chapaties, 10 oz; rice, dholl and preserved meat; Friday: biscuits, rice, salt fish and pumpkins, 4 oz; Saturday: Chapaties, rice, dholl and preserved meat; Sunday: tea 1/2 pint with 1/2 oz, sugar, choora 8 oz., sugar 1 oz, rice 15 oz, dholl 3 oz, fresh meat curry made into Kitcharee.

In addition to which they were allowed a daily ration of:

- firewood 2lb, ghee 1 oz, salt 1 oz, tamarinds 1 oz, turmeric 1/2 oz, onions 2 oz, chillies 1/2 oz, black pepper 1/2 dwt. [i.e., deadweight tonnage or pennyweight. 1 dwt. = 1/20 oz.], mustard seed 1/2 dwt., coriander seeds 2 dwt, garlic 1/2 dwt, water 1 gallon, tobacco 7 oz, mustard oil 3 1/2 oz, betel nuts 7 oz.

As far as the cooking was concerned, leaving the coolies to devise their own system for preparing their own food was considered the most economical. As one emigration agent explained:

I do not consider it necessary to appoint professional Cooks or Bandaries. I have never heard of any complaint on the present system of providing Cooks. It is an appointment sought after amongst the Emigrants, and these professional Cooks would unnecessarily swell very seriously the expense of the heavy staff of Surgeon, Compounder, Interpreters, and Topazes now placed on board.

Cost informed all of Mouat's recommendations for improving life on board. In this he found a sympathetic ear in Murdoch. In 1861, when asked by Murdoch, Mouat recommended cost cutting measures in almost every area of emigrant life aboard the ship. Instead of the Normandy distilling apparatus that one Dr Dyer recommended for purifying water on ships, Mouat, citing cost, suggested the use of a 'hose' to supply water from the nearby tanks. This Murdoch also endorsed. Coolies, it was reported, often confused the river with the sea, not realizing the difference until it was too late: 'An ignorant up-country native would have no hesitation in drinking the salt water if

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76 Ibid.
77 Ibid.
78 Ibid.
79 Home 1862 Public A Nos. 5-7. Letter from Hunt Marriott, Esq., Emigration Agent for British Guiana, to Captain C. Eales, Protector of Emigrants at the Port of Calcutta, No. 435, dated the 28th March 1862.
fresh were deficient', and if this happened it was a 'most fruitful source of sickness', mentions a footnote in Mouat's report. As a result, water, starting with that of the Hooghly, received much attention. The brackishness of its water, which was in the early years of indenture used for drinking water during the voyage, was diagnosed as a 'cause of bowel complaints' among the coolies. It took years, but eventually Murdoch was convinced of the need for a Normandy's distilling apparatus on each ship.

Similarly, due to excessive cost, Mouat recommended a 'small lota and plate for children would be a measure of economy', while all plates and lotas were to be 'numbered and given out according to the ship number'. Since 'Palmer's lamps and candles are expensive in India', he proposed, 'with proper care a very simple, secure, and efficient oil light can be furnished, which would last an ordinary night without trimming'. In a further measure of economy, Mouat considered the idleness of the coolies on board and suggested,

> For the unskilled, junk might be sent on board to be made into oakum. This labour, besides the immediate benefit of diverting the mind, would, at the end of the voyage, be found remunerative. Specimens of the size and shape likely to prove saleable could be placed in every ship.

To this end,

> with a view to give the people some occupation during so long a voyage, I have thought it would be well to supply a quantity of twine in Calcutta, for the purpose of being manufactured into nets, eeltraps, bags, network for beds, hammocks, &c, numbers of these people previously possessing much skill in this occupation.

Finally, while considering the effects of the cold weather at the Cape, Mouat could not decide whether the extra dhotee he felt compelled to give each coolie should be a linen one for warmth or a cotton one for bathing.

Weather also had an impact on the diet, demonstrating one of the ways in which the journey made itself felt. In bad weather for example, usually encountered when rounding the Cape of Good Hope, cooking could not be done on board and so the

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81 Home 1861 Public B 107. Mr. Murdoch, to Sir Frederic Rogers, dated 13th May 1861.
82 Ibid.
83 Ibid.
Indians had to make do without accustomed food; they were served biscuits and sugar. In the final summation, however, it was agreed that the coolies, from the time they arrived at the emigration depots, were eating better than they did when they had to feed themselves.

The discussion of diet led to further comparisons between the coolie and European emigrant. For example, when describing the diet of Indians at sea, one medical officer made the following observation: ‘How different is the practice with large bodies of Europeans at sea, ... who are at once put upon salt provisions with little or no vegetables’.\(^{84}\) It was, however, with the nourishment of new mothers and children that the differences between coolies and European emigrants narrowed.

The statistics gathered indicated that women and children suffered most on the coolie voyages. Mouat, in an addendum to his official report, sent a few months after submitting his report, stressed that since ‘special provision in the case of European mothers and children has been felt and acted on’, the need for such provisions was ‘equally, if not more imperative as respects Native mothers and the children of Coolie Emigrants.\(^{85}\) At the same time, however, based on advice senior officers connected with the emigration from India he recommended ‘the diminution in the proportion of women and children to 25 per cent. If possible, it is desirable not to embark pregnant females or those who are nursing infants at the breast’.\(^{86}\) After blaming the ‘filthy habits’ of women and children and having the recommendation that their recruitment be curtailed rejected, it was decided that they should be provided with a diet similar to their European cousins. The diet for European children and nursing mothers on their way from India to England at the time was as follows:

> Every child between the age of two and six years, should three times a week be allowed, in addition to the rations of butter, bread, and preserved potatoes, laid down for a child of six; but, in lieu of the one third of the common ration, from three to five ounces of fresh meat, or of meat preserved in lard. On the alternate days these children should receive one ounce of raisins, three ounces of flour, and half a pint of preserved milk, in addition to the allowance of butter, bread and preserved potatoes.

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\(^{85}\) Home 1858 Public Nos. 25-29. From Dr. F.J. Mouat, Inspector of Jails, Lower Provinces, to A.R. Young, Esq., Secretary to the Government of Bengal, No. 907, dated the 31st July 1858.

\(^{86}\) Home 1858 Public Nos. 25-29. From C. Beadon, Esq., to the Govt. of India, To A.R. Young, Esquire, Secy. to the Govt. of Bengal. Dated Council Chamber, the 23rd of September 1858.
Mothers of all children under two years of age are to receive three times weekly in lieu of their own ration of salted beef or pork, twelve ounces of fresh meat and daily in lieu of their allowance of biscuit, ten ounces of bread and three ounces of roasted flour or soojee and one pint of preserved milk. In cases of children of two years of age, who may have unfortunately lost their mother, the diet must be left mainly to the discretion of the Medical Officer, according to the varying conditions of their health.\(^\text{87}\)

Mouat recommended that the rations given to coolie nursing mothers and children improve as follows:

In addition to the ordinary rations shipped, I recommend that for every Native mother with a child at the breast, a pint of preserved milk be allowed daily over and above her ordinary scale of diet; and for every child under two years of age who has no mother, or whose mother is unable to nurse it, a daily ration of a pint of preserved milk.

26. In excess of the above a stock of soojee, oatmeal, sago and arrow-root should be added to the Medical comforts, equivalent to a consumption of six chittacks daily for every child between two and six years of age, with a proportionate increase of sugar, the whole to be issued entirely at the discretion of the Surgeon, as in the case of the orphans of European Soldiers.\(^\text{88}\)

The investigation into ill health, however, ran into difficulties because there existed a class of disease that was not easily detectable: the concealable diseases. As one doctor explained: ‘when the object of persons examined is to represent themselves as sound and healthy … they are one and all prepared to deny the existence of any symptom of illness that they may be questioned upon’.\(^\text{89}\) These illnesses were most often diseases of the bowels. Regarding these the Medical Examiner admitted, ‘to detect which, the only means I have is the observation of the native doctor’, who carries out ‘regular inspection(s) of them in their houses’.\(^\text{90}\) However, this was not foolproof when the coolies are ‘generally speaking, anxious to conceal their maladies, and this for two reasons; 1\(^\text{st}\), because the natives of India are, as a rule, averse to the European mode of medical treatment; and 2\(^\text{nd}\), because they know, that if discovered to be sick, they will not be allowed to embark’.\(^\text{91}\) As another Captain wrote in his journal, ‘it is with much trouble and almost force that the Doctor can get them to take Port Wine and Quinine or any other medicine. In fact, all refuse to confess themselves ill until they can no longer prevent its being seen’, and concluded that on the ship ‘this is the most serious

\(^{87}\) Home 1858 Public Nos. 25-29. Dr. Mouat to A.R. Young, dated the 31st July 1858.

\(^{88}\) Ibid.

\(^{89}\) Dr Mouat’s Report. Suggestions by Dr. Arthur Payne regarding Emigration to the Mauritius. p. 454.

\(^{90}\) Dr Mouat’s Report. Report from Dr. Arthur Payne, Medical Examiner of Emigrants to Mauritius to Dr F. J. Mouat, 29 October 1857. p. 463.

\(^{91}\) Dr Mouat’s Report. J. B. Scriven to Dr F. J. Mouat, 21 July 1857. p. 449.
The native Indian was, as a result, treated with suspicion, 'the word of the native so prejudiced, cannot be depended on, and nothing remains to guide the doctor except the absence or presence of physical signs of disease; and of some diseases, there are none at first'. The aspect of confession, central to western medicine, was effectively nullified. This distrust of the coolie may also explain why there is so little direct testimony of the emigrants themselves. It is important to note what the doctors deemed concealment. For example, 'if a man have diarrhoea a day’s standing, he may appear to the doctor to be in perfect health, none but himself being cognizant of the fact that he has had more frequent evacuations than usual. Now this very disease, so insidious in its onset, and so readily concealed, is not only a serious one in itself, but is the very form in which the still more fatal ones, dysentery and cholera, generally begin'. The medical regime that the coolie entered by boarding the emigrant ship, not only required that he know his body but that he also know how to describe it in ways that science understood it.

Important to Mouat’s investigation was to be able to determine where the disease originated: whether on land or on board ship, whether the agents in charge of emigration on land and the conditions at the depot were to blame for the mortality and illness or whether it was due to the neglect of officers on board ship or else the way the ship was fitted. For answers to these questions, however, Mouat could not ask the one person who knew most, the coolie.

This habit to ‘conceal’ was not limited to hiding disease. Some, for example, were ‘accustomed to the use of opium, and that, when deprived of the habitual stimulus, they immediately they begin to suffer from bowel complaint. This habit, of course, is easily concealed’. Similarly, ‘the filthy habits of the people act powerfully in disseminating disease, and the concealment of dirt is greatly facilitated by scanty

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92 Home Public October 1858. Minutes of a meeting held at the Office of the Immigration Agent General on the 16th May 1857, pursuant to the order of His Excellency the Governor to enquire into the cause of mortality on board the Immigrant ship Merchantman, from Calcutta. From the journal of George Turnbull Brown, Master of the Ship Merchantman, p. 194.
94 Ibid.
95 Ibid.
Concealment, British officials believed, was part of a larger problem whose source lay in the very nature of the coolies. The 'comparative want of intelligence of Indian, compared with European Emigrants', the different habits of Europeans and Natives at Sea render different precautions necessary for the two classes. 'The European', for example, 'will always choose the open air in preference to the confined space between-decks; and the greater the heat of the atmosphere the more will he remain on deck. The Native, on the contrary, will find relief to his lassitude only in coiling himself in the most retired corner below, where he feels the smallest risk of being disturbed'. Concealment, therefore, was a convenient and appropriate trope to deploy in the traffic of coolies. It was needed to allow the administration to absolve itself of its responsibilities to the emigrants but it also, as we shall see in the subsequent chapter, aptly describes indentured emigration as hidden within the larger system of emigration operating at the time.

V. All That Is Solid Melts Into Air.

The allocation of space and ventilation aboard emigrant ships were linked insofar as ventilation, i.e., getting fresh air in and foul air out of the deck in which the passengers were housed, was the answer to cramped space. In addressing this issue, Captain W. H. Longman, of the Adelaide, advised, 'it would be well to have special ships fitted and devoted expressly to the transport of coolies, as a regular branch of trade'. Dr Mouat also concluded his report by suggesting, 'it is deserving of consideration whether it would not be desirable to employ a different class of vessels for the conveyance of emigrants', but quickly questioned 'whether it would pay, as a commercial speculation'. This section will try to show that the concerns with ventilation emerged to address the lack of uniformity of design between emigrant

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96 Home 1862 Pub. A Nos. 34-41. From Dr. Payne, Medical Superintendent, Emigration to Mauritius, to Thomas Caird, Esq., Emigration Agent to Government of Mauritius, - (No. 44, dated the 16th October 1861.)
97 Home 1858 Public Nos. 26/31. No. 9, from W. Dicey, Esquire, Officiating Protector of Emigrants at Calcutta, to C.T. Buckland, Esquire, Junior Secy. to the Govt. of Bengal. Dated Protector's Office, Fort William, the 15th February 1858.
98 Home 1862 Public A 37-39. From Arthur Payne, Esq., M.D., Medical Superintendent, Emigration to Mauritius, to H. Bell, Esq., Officiating Junior Secretary to the Government of Bengal, No. 46, dated the 4th February 1862.
99 Ibid.
101 Dr Mouat's Report. Dr. Mouat to C. T. Buckland, Junior Secretary to the Government of Bengal. Fort William, 10 May 1858. p. 447.
ships; an inconsistency that was felt by each emigrant in the actual space she was allotted and made to inhabit for the duration of the voyage.

Dr C. Finch, Examiner of Emigrants in Madras, in his “Hints to Surgeons in Charge of Emigrants on their Passage from India to the West Indies”, recommended the following on the subject of ventilation:

Every day when the weather permits, all the Emigrants should be invited to come upon deck, while their berths and sleeping places are swept, cleansed and ventilated.

Advantage should be taken at all times of fine weather to thoroughly ventilate the berths of the Emigrants by opening the ports and admitting a current of fresh air between decks.

In the tropics and at all times in oppressive weather wind sails should be provided and deemed indispensable night and day.\(^{102}\)

Proper ventilation was essential because foul and noxious air was produced inside the ship itself. Ventilation on board the ship was provided ‘through air funnels and tubes, windsails, ports and scuttles’, as well as ‘hatchways and cawl-headed tubes’.\(^{103}\) While attempts were made to blame the coolies themselves for the foul air in the ships, the cargoes that were transported in coolie ships also exhaled injurious fumes. As Mouat admitted, ‘all organic bodies, vegetable as well as animal, undergo chemical changes from the combined action of heat and moisture... [to produce such emissions as] compounds as carbon and oxygen, and sometimes of sulphur, hydrogen and nitrogen’.\(^{104}\) He went on to add, ‘all of these are more or less injurious to health even when present in small quantities in the atmosphere; some of them are deadly poisons in a concentrated or moderately diluted state’.\(^{105}\) Mouat stopped short of recommending the ban on such cargoes even though he admitted,

The classes and types of disease caused by them [the abovementioned gases] are exactly the adynamic typhoid fevers and bloody fluxes, which destroyed so many of the coolies in the voyage to the West Indies, during the year which forms the subject of the present inquiry.\(^{106}\)  

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\(^{104}\) Dr Mouat’s Report. Dr. Mouat to C. T. Buckland. pp. 443-444.

\(^{105}\) Dr Mouat’s Report on the Mortality of Emigrant Coolies on the Voyage to the West Indies, in 1856-57, Dr. Mouat to C. T. Buckland, Junior Secretary to the Government of Bengal. Fort William, 10 May 1858. p. 444.

\(^{106}\) Ibid.
These were the fevers that the Master of the Merchantman, George Turnbull Brown, fought valiantly against in 1857, writing in a note of desperation in his journal, ‘the ship is now infected with this fever’. Brown’s journal was a calendar of death. The ‘prevalence, of fevers led him to write,

many of the cases of fever in the hospital of a low and serious description, the Doctors attention is constant day and night, he has had the hospital changed to a more airy part of the ship … when I speak of the hospital I mean a part of the midship platform, but there was no part of the ship regularly divided off. The healthy and sick had free access to one another, and lived in the same atmosphere … the whole ship is a Hospital.

Such was the importance of good quality air that in 1859 it was finally recommended that even though it would ‘undoubtedly add somewhat to the expense of freight’, so as to ‘conduce both to the health and safety of the emigrants’, ‘vessels employed in this [cooler] trade [be] strictly prohibited from taking any cargo at all, it would’. Dr Mouat, focused more on economics than on science, while admitting of the ‘prejudicial influence of grain cargoes’ remained ‘not a little perplexed’ regarding the effects of such cargo emissions in emigrant ships.

Mouat’s recommendation to improve the quality of air was that the ‘removal of the platforms, and the restoration of the old flush decks’. This remedy connected the entire ship and trade with the 12 superficial feet of space in which coolies lived for the duration of their voyage.

In 1858, there was resistance to the proposal to ‘assimilate [the British law regarding space allocation] more to that obtaining under the French Government’. The difference between the two was that ‘the French law stipulated for no particular space to be allocated to each emigrant. It only admitted one emigrant to each ton of the

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107 Home Public October 1858. Minutes of a meeting held at the Office of the Immigration Agent General on the 16th May 1857, pursuant to the order of His Excellency the Governor to enquire into the cause of mortality on board the Immigrant ship Merchantman, from Calcutta. From the journal of George Turnbull Brown, Master of the Ship Merchantman, p. 194.
108 Ibid.
109 Home 1859 Public 34/40. Commander J. Rennie, C.B. Superintendent of Marine, to W. Grey, esq., Secretary to the Government of India, No., 10,708, dated the 7th December 1859.
110 Dr Mouat’s Report. Dr. Mouat to C. T. Buckland. p. 443.
111 Dr Mouat’s Report. Dr. Mouat to C. T. Buckland. p. 447.
112 Home 1858 Public Nos. 26/31. Government of India Home Department Public Consultation June 11 1858, No. 29 - Extract from a letter from J.J. Franklin, Esquire, Colonial Emigration Agent, to T. Pycroft, Esquire, Chief Secretary to the Government of the Fort Saint George, dated the 14th January 1858.
vessel’s registered burthen. The English law likewise restricted the number with reference to tonnage, the proportion being one adult emigrant to every two tons.\textsuperscript{113} This particular way of deciding space allocation was deemed problematic for the following reason:

The slightest consideration must show, that this mode of calculating the capacity of a vessel for accommodating passengers is based on an erroneous principle. The actual space given up for their use on the lower deck should form the basis of the calculation. It frequently occurs that a vessel can give the regulated space for more than half her registered tonnage. There are at present three modes of calculating tonnage, viz. by old measurement, by new measurement, and by new new [sic] measurement; the last being the latest regulation promulgated. Three vessels of exactly the same burthen may be registered under these three modes at different rates of tonnage, and consequently be limited to different allotments of coolies; and perhaps the one with the most lower deck accommodation, and consequently able to carry the greatest number with comfort, may be permitted only to carry the least.\textsuperscript{114}

The confusion evident from the above quote was further compounded by the fact that simultaneously, space allocation ‘in the West Indian Act, is set down at twelve superficial feet for each adult’.\textsuperscript{115} The one adult per every two tonnes requirement was contained in the Act XV of 1842 while Act IV of 1852, adding further to the confusion, stipulated seventy-two cubic feet per adult.\textsuperscript{116} The 72 cubic feet rule, arose under the circumstances of ships tendering their services, but having less than an average height of 6 feet from deck to deck, or deck to platform, which was in some cases attached to the lower part of the hold beams, in such cases the provisions of Act XV did not attach, and the requisite space and ventilation could not be secured, hence the special enactment of cubical space as a rule for the guidance of the Protector’s Office.\textsuperscript{117}

What did these numbers actually mean? The 72 cubic feet rule was based on there being 6 feet between decks. That meant that the ‘superficial’ space allotted to each adult, the space they slept in, was most likely six feet by two feet. The ships engaged in the traffic of coolie labour were not uniformly built:

ships having great height of between decks can scarcely claim exemption from the Rules under Act XV as the Legislature could hardly have

\textsuperscript{113} Ibid.  
\textsuperscript{114} Ibid.  
\textsuperscript{115} Ibid.  
\textsuperscript{116} Between 1837 and 1922 there were no less that 15 Acts regulating emigration from India: Act XXXII of 1837; Act XIV of 1839; Act XV of 1842; Act XXI of 1844; Act VII of 1847; Act IV of 1852; the Convention with the French of 1\textsuperscript{st} June 1861; Act XIII of 1864; Act VII of 1871; Act VIII of 1876; Act V of 1877; Act VII of 1881; Act I of 1882 (re: inland emigration); Act XXI of 1883 and; Act VII of 1922. This is an incomplete list.  
\textsuperscript{117} Home 1858 Public Nos. 26/31. W. Dicey, Esquire, Officiating Protector of Emigrants at Calcutta, to C.T. Buckland, Esquire, Junior Secy. to the Govt. of Bengal. Dated Protector’s Office, Fort William, the 15\textsuperscript{th} February 1858.
contemplated putting an adult on less surface than twelve feet, which must be the case if cubical measurement is made the rule in vessels having from 7 to 10 feet in height between decks.

If a ship had 7 feet between decks that meant that each adult was allotted 5.1 feet by 2 feet, when being most generous. If that height reached 10 feet then the superficial space would have shrunk to 5.5 by 1.3 feet.\textsuperscript{118}

Other methods were tried to increase the number of coolies transported. One was to switch from sailing ships to steamers.\textsuperscript{119} Another was to introduce platforms into the ships. Platforms were added to the lower deck creating in effect a second tier of housing. The ‘platforms are of bamboo-work, closely arranged, and raised about three feet from the deck. Upon them are chiefly placed the women and children, the men sleeping below’. Platforms were not used in the ships leaving from Madras. While several captains\textsuperscript{120} approved of the platforms and considered them ‘wholesome,’ there were others who found them to be a source of disease.\textsuperscript{121}

While in the oral testimony collected most of those interviewed found no objection to the use of platforms, the opinion of the medical team associated with Mouat’s inquiry and protectors of emigrants objected to them. In the end, while Mouat found ‘the evidence as to the influence of platforms on the health of emigrants is tolerably balanced, some considering them a desirable innovation, others regarding them as

\textsuperscript{118} It was only in 1871 that Sterling’s Formula for measuring Emigrant ships was adopted, after having ‘been in force in England for a long time’, and brought uniformity to the way emigrant ships were measured, i.e., uniformity between the ships leaving from India and those leaving from Britain. This even though it was argued by the Protector of Emigrants at Calcutta that ‘it would be a retrograde step to abandon the rules followed in Calcutta, especially as the difference in the results obtained by the Emigrations Commissioners’ rules is in favour of the ship and against the emigrant, who is deprived of space. This may be seen in the example illustrated by the accompanying rough diagram. According to the Emigration Commissioners’ rules, the deck measures for 363 \(\frac{1}{3}\) statute adults, whereas, according to the rules employed here, it measures for only 358 \(\frac{1}{3}\) statute adults’.

\textsuperscript{119} Recall, the steamer \textit{Enmore} that sailed in September 1872 from Demerara to India was only the second steamer to transport emigrants between the colonies – \textit{RAC Emigration Branch, December 1872 17-19, Steamer Enmore with return emigrants from British Guiana}.

\textsuperscript{120} In the interviews conducted by Dr Mouat, the Captain of the \textit{Shah Jehan} said he ‘approves of the platforms, and considers them wholesome’; Captain of the \textit{Adelaide}: ‘considers the platforms to be useful at the sides of the ship, but to be useless amidships’; Mr. Chennell, surgeon of the \textit{Wellesley}: ‘approves of the platforms, and considers them wholesome’; Captain Parish of the \textit{Wellesley}: ‘I consider them useful’.

\textsuperscript{121} For example, Captain Wright, assistant protector of emigrants: ‘does not approve of platforms, thinks they impede air circulation, prevent the cleaning of the decks, interfere with free ventilation, and cause those sleeping under the tubes to lie in draughts, which renders them very sickly’.

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impediments to ventilation, harbourers of dirt, and essentially unwholesome’, he in the end sided with those that objected to the platforms.

Having carefully examined their construction and arrangement... and that since their introduction in Bengal, sickness and mortality have undoubtedly increased, I am disposed to concur with the latter, and recommend that the old plan of flush decks be resorted to at once.  

To this Mouat added that ‘they certainly obstruct very materially and injuriously the air of the space beneath them’.  

He found in the platforms a reason to object to the transportation of women and children: ‘Indian women and children are more dirty in their personal habits than the man of the same race, and their sleeping above the men must have been productive of nuisances injurious to health, and destructive of cleanliness’. As stated earlier, however, Mouat’s proposal to restrict the emigration of women was rejected and though they continued to emigrate in limited numbers, when they measures were adopted to ensure the ‘complete separation of the unmarried male emigrants from the single women and married couples onboard ship’. The partitions erected for that purpose, however, had to respect the flow of air: ‘the partition in the between-decks should, of course, be of open wood-work to ensure ventilation, and nothing should be done to restrict the free movement of the women during the hours the coolies are permitted to remain on deck’.

Coolies could actually feel the political economy of space in the air they breathed. The conflicting impulses that moved them from shore to shore – e.g., the desire on the part of the ship captains for higher profits, the planters’ demand for more bodies to be delivered, the planters’ and colonial officials’ want that the bodies delivered be alive and healthy – often made their lives rougher than the seas they sailed upon.

CONCLUSION.

The different responses to the challenges presented in the transportation of emigrants were conditioned by the roles these people were to play in colonies of their respective destinations. A look at what transpired aboard emigrant ships in the 19th century vis-à-vis...
vis 'medical comforts' reveals that these journeys were also journeys of discovery in unexpected ways. This chapter while attempting to learn what life was like during the voyage has also sought to highlight some of the 'maps' that these voyages produced.

The investigations into mortality aboard coolie ships resembled mapping exercises insofar as they produced a picture of death and illness in space and time. These studies revealed, for example, how the body behaved on land in the depots, on board the ship while it was still anchored in the Calcutta harbour, in the river, that is in the river Hooghly before it entered the ocean, at sea but before it reached, at and after it rounded the Cape of Good Hope. They sought to discover whether disease was already present in the bodies or emerged only once the body put to sea. Diseases, instead of being restricted to a biological origin, was explored for their possible links to the 'habits' of the emigrants, and along the way were bestowed a socio-logic. The space was also charted in the quest to connect disease to the space allotted to the emigrants on board, to particular parts of the ship, and to the design of the ship itself.

In an effort to explain why the sea consumed so many lives between Calcutta and the West Indies, the effect of the emigrants’ consumption of air, water, food or other material elements of the environment in which the emigrants were housed also came under scrutiny. These concerns lead to a consideration of the effect of the weather and climate at different points at sea upon the bodies of the emigrants. Finally, did disease erupt because of time; i.e., either in the delay that often preceded the eventual departure of the ships or in the length of the voyages. Why, for instance, were the emigrants proceeding from Madras healthier upon arrival? Was it because the voyage was shorter or was it because they were a race of Indians whose habits and physiology was better suited for sea travel? These are some of the ports through which this chapter has sought to enter the study of this vanished journey. The end of indenture, coinciding with the shift in emigration laws to favour 'skilled' as opposed to 'unskilled' or agricultural workers, marked the decline in the legal traffic of non-white emigrant bodies at sea.

Non-white bodies did not begin travelling at sea in large numbers in 1838. The transportation of blacks from Africa to the Americas marked the beginning of this history. The exit of the British from the slave trade in 1807 and their subsequent policing of the seas necessarily saw a global reduction in the traffic at sea in labouring
bodies. Starting in 1838, however, not only did the traffic in labouring bodies increase, the distance these bodies travelled also grew. Furthermore, this post-1807 traffic was now traffic in *bona fide* labouring non-white human bodies. Prior to 1838, on a much smaller scale, Indians travelled by ship as pilgrims, slaves (a term used here in its specific Indian context), labourers and were transported as convicts. For example, they were leaving what is now India to labour on plantations in far away places such as Mauritius and Penang. The traffic to Mauritius was conducted by and for the benefit of the French while the traffic east, to Penang, was conducted by natives of India for work on spice and tapioca plantations owned by native planters. The traffic to both destinations was unregulated. Furthermore, Hugh Tinker has provided evidence of Indian slaves outside India and reminds us that on the first overseas British penal settlement established at Bencoolen in 1818, there were 500 Indian convicts. Indians also served, prior to this time, as lascars aboard ships navigating the colonial seas.\textsuperscript{127} Indenture, starting in 1838, altered this state of affairs. 1838 marked the beginning of the ‘democratization’ of sea travel for non-whites. It was in this year that health aboard the ship, for example, became the state’s responsibility. This, whether intended or not, was the beginning of a change in the way in which the non-white emigrant, in this case the coolie, would relate to and understand their body’s health. For many, in addition to this being the first time seeing the sea, it was also for most their introduction to the hospital and allopathic medicine. In this way the voyage was a preparation of what was to come, as the State’s obsession with the body of the labourer would not abate for the entire period of their indenture.

In addition to the lingering memory of slave ships at sea, the presence of other ships at sea, ships carrying other ‘emigrants’ had a bearing on lives of those aboard these 19th century emigrant ships. The evidence suggests that the ship served as a laboratory in which an experiment to find minimums was conducted: minimum space, minimum diet, minimum light, minimum air etc. The search for the minimum required to deliver a maximum. That the traffic in non-white bodies did not occur in a vacuum affected this experiment. These ships did not sail a solitary, hermetic voyage. It was not only the ‘dirt’ produced in these coolie ships that caused changes to be made aboard. The

paths of coolie ships crossed with other ships at sea and the conditions aboard those other ships affected the conditions aboard these. The minimum deemed necessary for whites along with the need for uniformity at times helped raise the minimum for non-whites.

Similarly, the presence of other colonial empires, reacting to each other and with ideas of their own about nature of labour and man made this period one of rapid and intense transformation. As I have tried to capture in the opening of this chapter, the bodies themselves, caught in the middle of cross currents, determined the tide in which they sailed. The cause of the deaths and illnesses aboard these early emigrant ships remains, to this day, a mystery if not of science, then of history. Nonetheless, the abolition of slavery in 1838 set in motion what by the end of the 19th century would be the most mobile body of the 20th century: the non-white emigrant body.