

Company culture: information, scholarship, and the East India Company settlements 1660-1720s

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Company Culture:
Information, Scholarship, and the
East India Company Settlements
1660-1720s

Anna E. Winterbottom

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ABSTRACT

I explore how knowledge was created and circulated in and between the settlements of the early English East India Company. I aim: to demonstrate connections between scholarship and early colonialism; to highlight the role of non-elite actors in transferring skills and techniques; and to map global knowledge networks based on systems of patronage that cut across national, ethnic, and social boundaries. Chapter 1 uses the life of Samuel Baron, a half-Dutch, half-Vietnamese factor, spy, and broker for the EIC, client of the rulers of Siam and Tonkin, and author of the *Description of Tonqueen* to examine the importance of *passeurs culturels* or go-betweens to both the European trading companies and Asian rulers in the period and their role in transmitting geographical and ethnographic information. Chapter 2 examines the local and international botanical and medical networks of two Company surgeons in Madras, based on collections in the Natural History Museum and the surgeons' correspondence with the apothecary James Petiver. Chapter 3 looks in detail at the development of English scholarship on the Malay language: moving from wordlists and manuscript grammars to the first bilingual English-Malay dictionary, published in 1701. I use the texts to examine the early Company's policies of language-learning and teaching and the theoretical and practical basis of linguistic projects in the period. Chapter 4 follows the movement of a travel text, Robert Knox's *Historical Relation of Ceylon*, with its author on a series of later voyages. I explore the practical uses of such texts to inform bio-prospecting and the transplantation of crops in the Company's search for island bases in the Atlantic and Indian Oceans. Chapter 5 examines slaves' roles in the transmission of botanical, medical, and cultural knowledge between the 'plantations' of St Helena (South Atlantic) and Bencoulen (Sumatra), through both their work and their resistance.

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INTRODUCTION

Venturing for the first time into the vast archives of the English East India Company,¹ I was surprised to find them dominated not by lists of commodities and contracts, but by social and cultural affairs. The remaining records of the Company's 'factories' or settlements consist mainly of 'Diaries and Consultations', recording any events or discussions considered relevant, and their correspondence with agents and captains, other factories, representatives, and rulers, and with London, where the Court Minutes recorded the deliberations of the Directors. These documents contain lengthy discussions of the presents to be given to local rulers, delve into the personal affairs of their interpreters and representatives, speculate – often wildly – about the causes of disease and environmental conditions, enter into long descriptions of local politics and customs, and reveal almost constant struggles for power between the different and shifting factions, each accusing one another of debauchery, drunkenness, treachery, and even witchcraft. As Cooper and Stoler note, 'It is only when we focus on the production of the colonial archive and on the sorts of narratives contained within it that we find how much rumour, gossip and fantasy pervaded the official field'.² Analyzing the archive rather than merely mining it for information is a concern that began with the work of Michel Foucault.³ With the work of J.C. van Leur, scholars had begun to seek a common framework for the study of colonised and colonist alike, so as to do justice to indigenous agency and perspective.⁴ Responses included the 'subaltern' focus of historians like Ranajit Guha, Gayatri Chakravorty Spivak, and others,⁵ accounts like those of Bernard S. Cohn which subject colonial

¹ Hereafter referred to as the EIC or Company.

² Frederick Cooper and Ann Laura Stoler. *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997), p. 21. See also Phyllis Taoua, *The Anti-Colonial Archive: France and Africa's Unfinished Business*, *SubStance*, Vol. 32 (2003), 146-164 and Anne Stoler, *Along the Archival Grain* (Princeton: Princeton University Press, 2009).

³ *L'Archéologie du savoir* was first published in 1969. I used Michel Foucault, *The Archaeology of Knowledge* trans. by A. M. Sheridan Smith (Tavistock Publications, 1972, repr. Oxford: Routledge, 2009), p. 146 'The archive is...that which, at the very root of the statement-event, and in that which embodies it, defines at the outset *the system of its enunciation*...It is *the general system of the formation and transformation of statements*' [italics original].

⁴ J. C. van Leur, *Indonesian trade and society; essays in Asian social and economic history* (The Hague: W. Van Hoeve, 1955); Leonard Blussé and F S Gaastra, *On the eighteenth century as a category of Asian history: Van Leur in retrospect* (Brookfield, Vt.: Ashgate, 1998).

⁵ Ranajit Guha, *Dominance without hegemony: history and power in colonial India* (Cambridge, MA: Harvard

culture to anthropological investigation,⁶ as well as Edward Said's famous explorations of the links between colonial power and myth-making in literature.⁷ The last thirty years have seen the emergence of many new ways of using the colonial archive to yield information not only about the subjects of colonial rule but about the cultural assumptions, prejudices, understandings and misunderstanding of its creators. Following these leads, I intend this as an anthropological account of the early Company's settlements and members, servants, and slaves that looks at the creation and distribution of knowledge in the context of the social relations within which it was produced and circulated.

Where does the history of the East India Company lie within this theorising of the colonial archive? While Hobsbawm began his 'age of empire' in 1875,⁸ others have divided the modern imperial age into as many as five periods.⁹ The East India Company received its first Charter in 1599, is traditionally regarded as undergoing a transition to an entity concerned with the rule of large tracts of territory after the battle of Plassey in 1757, and as having diminished in importance following the transfer of responsibility for the administration of the territories in Asia by the British government, after the Indian uprising of 1857. As Philip Stern points out, these conceptual stages have been mapped onto the larger theoretical division of imperialism, consisting of a 'first', primarily maritime, empire based on settlement in the American plantations in the West and 'adventuring' and trade in the East and a 'second' empire of Company rule in Asia after the Battle of Plassey in the mid-eighteenth century.¹⁰

University Press, 1997). Ranajit Guha and Gayatri Chakravorty Spivak, *Selected Subaltern Studies* (New York: Oxford University Press, 1988); Spivak, *In Other Worlds: Essays in Cultural Politics* (Routledge: New York and London, 1998).

⁶ Bernard S. Cohn, *An Anthropologist Among the Historians* (Delhi: Oxford University Press, 1987); Cohn, *Colonialism and its forms of knowledge* (Princeton: Princeton University Press, c1996).

⁷ Edward Said, *Culture and Imperialism* (London: Chatto & Windus Ltd., 1993).

⁸ Eric J. Hobsbawm, *The age of empire, 1875-1914* (London: Weidenfeld & Nicolson, c1987).

⁹ Piers Brendon, *The Decline and Fall of the British Empire* (London: Jonathan Cape, 2007).

¹⁰ Philip J. Stern, 'History and Historiography of the English East India Company: Past, Present, and Future!', *History Compass*, 7 (2009): 1146–1180. As Stern notes, this is part of the wider issue of the separation of the study of imperialism from British history, which still tends to be regarded mainly as springing from Anglo-Saxon, Classical and European precedents rather than shaped by the colonial experience. See also David Armitage ed. *Ideological Origins of the British Empire* (Cambridge: Cambridge University Press, 2000).

Histories of the Company have been generated since the appointment of Richard Hakluyt as official historiographer in the first years of its existence.¹¹ During the nineteenth and twentieth centuries, summaries of the Company's records¹² and histories¹³ were produced. While outmoded in their approaches, these histories continue to provide a wealth of information about the early Company. In the wake of decolonization, intellectual movements emphasizing 'history from below', comparative and transnational history, Marxist, and economic history¹⁴ generated new perspectives on the East India Company. The work of K.N. Chaudhuri, S. Arasaratnam, Michael Pearson, Kenneth McPherson and others, placed the European involvement in Asia within the wider perspective of Indian Ocean history.¹⁵ Focusing on the interconnections between the European and indigenous trade during the 'age of partnership' or 'contained conflict' exploded myths about the 'peddling' nature of the inter-Asian and Indian Ocean before the period of European expansion and the theory that the decline in this trade was due to the growth in the share of the market of the European

¹¹ Richard Hakluyt, *The principall navigations, voyages and discoveries of the English nation* (London : By George Bishop and Ralph Newberie, deputies to Christopher Barker, printer to the Queenes most excellent Maiestie, 1589). 'East Indies: January 1601', *Calendar of State Papers Colonial, East Indies, China and Japan, Volume 2: 1513-1616* (1864), pp. 118-121. (URL: <http://www.british-history.ac.uk/report.aspx?compid=68633> Date accessed: 22 May 2010). Jan. 29 1600, "Mr. Haklyut, the historiographer of the East Indies, being here before the committees, and having read unto them out of his notes and books divers instructions for provisions of jewels, was required to set down in writing a note of the principal places in the East Indies where trade is to be had, to the end the same may be used for the better instruction of our factors in the said voyage."

¹² John Bruce, *Annals of the Honorable East-India Company, : from their establishment by the charter of Queen Elizabeth, 1600, to the union of the London and English East-India Companies, 1707-8* (London: Black, Parry, and Kingsbury, 1810); Ethel Bruce Sainsbury, *A calendar of the court minutes, etc., of the East India Company*, with an introduction and notes by William Foster (Oxford: Clarendon Press, 1907-1938).

¹³ Henry Davison Love, *Vestiges of old Madras, 1640-1800: traced from the East India company's records preserved at Fort St. George and the India office, and from other sources* (London: J. Murray, 1913); James Talbot Wheeler, *India under British rule from the foundation of the East India company* (London: Macmillan and Co., 1886).

¹⁴ Eric Hobsbawn, *On History* (London: Weidenfield & Nicholson, 1997).

¹⁵ Ashin Das Gupta and Michael Pearson, eds., *India and the Indian Ocean, 1500-1800* (Calcutta: Oxford University Press, 1987); Michael Pearson, *The world of the Indian Ocean, 1500-1800: studies in economic, social and cultural history* (Burlington: Ashgate, 2005); Sinnappah Arasaratnam, *Maritime India in the seventeenth century* (Delhi: Oxford University Press, 1994) and *Maritime trade, society and European influence in South Asia, 1600-1800* (Aldershot: Variorum, 1995). For an overview of Indian Ocean studies, Marcus Vink, 'Indian Ocean Studies and the 'new thalassology'', *Journal of Global History*, 2 (2007), 41-62. K. N. Chaudhuri, *The English East India Company: the study of an early joint-stock company 1600-1640* (London: Frank Cass, 1964); *The trading world of Asia and the English East India Company, 1660-1760* (Cambridge: Cambridge University Press, 1978); *Trade and civilisation in the Indian Ocean: an economic history from the rise of Islam to 1750* (Cambridge: Cambridge University Press, 1985); *Asia before Europe: economy and civilisation of the Indian Ocean from the rise of Islam to 1750* (Cambridge: Cambridge University Press, 1990). For a critique of Chaudhuri's 'slavish Braudelism' see Subrahmanyam's introduction to Holden Furber, Sinnappah Arasaratnam, and Kenneth McPherson., *Maritime India* (Delhi: Oxford University Press, 2004).

trade.¹⁶ These studies also demonstrated the importance of the involvement of the Company in inter-Asian or 'country' trade, both officially and as a result of the private trade of its members.¹⁷ The period between c. 1600 and 1757 was therefore recast as one of 'considerable indigenous political, cultural, and economic life, and a continual jostling between locals and intruders for a share of traditional commerce, not an age marked by the death throes of indigenous enterprise.'¹⁸

While histories inspired by the 'world-systems' concepts of Wallerstein and Braudel situated European expansion within a larger economic, political, and sometimes environmental context,¹⁹ social histories of the late pre-colonial and early colonial period emerged which emphasized the local roots of the capitalist and colonialist institutions that developed in Asia, including the reliance of the European companies on local systems of finance and administration. These accounts also rise to the challenge of the critiques of Orientalism discussed above to produce a detailed characterisation of the actual workings of colonialism as well its mythologizing tendencies. Christopher Bayly focused attention on the importance of the creation and transmission of knowledge, arguing that, despite the 'haze of linguistic and cultural assumptions that limit observation', colonial systems of intelligence gathering borrowed from India precedents. Bayly examines the networks of spies, news gatherers and reporters that existed in the medieval Hindu kingdoms, the Mughal Empire and its rivals and the types of information that were distributed:

¹⁶ Although Arnold H. Lybyer, 'The Ottoman Turks and the Routes of Oriental Trade', *English Historical Review*, 30 (1915), 577-588 initiated debate about the impact of European expansion on the central Asian trade. Niels Steensgard, *Caracks, Caravans, and Companies: the Structural Crisis in the European-Asian Trade in the Early 17th Century* (University of Chicago Press, Chicago and London, 1973) claimed that the European companies' trade was responsible for a decline in the caravan trade, which he described as 'peddling'. Steensgard's argument have since been challenged by several scholars who demonstrated the persistence of the Central Asian trade well into the colonial era, most recently S. Levi ed. *India and Central Asia: Commerce and Culture, 1500-1800*, (Delhi: Oxford University Press, 2007) and Jagjeet Lally, 'The Pattern of Trade in Seventeenth-Century Mughal India: Towards an Economic Explanation', LSE, Working Papers Series No. 120/09, May 2009 (<http://eprints.lse.ac.uk/27868/1/WP120.pdf>, accessed 16 July 2010).

¹⁷ Holden Furber, *Private fortunes and company profits in the India trade in the 18th century* (Aldershot: Variorum, 1997); *Rival empires of trade in the Orient, 1600-1800* (Minneapolis: University of Minnesota Press, c1976)

¹⁸ Kenneth McPherson, *The Indian Ocean: a History of People and the Sea*, Delhi, Oxford University Press, 1998, p. 137.

¹⁹ Felipe Fernández Armesto, *Pathfinders: A Global History of Exploration* (New York: W.W. Norton, 2006).

including geographical and ethnographic descriptions, maps, medical texts.²⁰ He demonstrates that the Company partially took over Mughal systems of information and shows that this process was linked with scholarly enterprises such as James Rennell's cartographic survey.

Here, I follow Bayly in investigating the ways in which information was gathered, circulated in the earlier East India Company and how these methods borrowed from and overlapped with indigenous systems of knowledge. Chapter 1 shows that Samuel Baron provided similar services to his European and Asian patrons, supplying both with 'foreign curiosities'. By comparing his *Description of Tonqueen* with a Chinese text of the same period, I demonstrate the similarities in the types of ethnographic information collected by both the European trading companies and the expanding Manchu empire, both of which used travel texts as manuals for colonialism. Chapter 2 demonstrates how, by supplying botanical information and medical services, the East India Company surgeons in Madras built up networks of Asian and European patrons. Chapters 3 and 4, addressing Thomas Bowrey's *English-Malayo, Malayo-English Dictionary* and Robert Knox's *Historical Relation of Ceylon*, demonstrate how information gathered in Asia was compiled with the assistance of scholars in Europe before being re-circulated abroad by the Company for ends such as surveying territory for potential settlement, transferring agricultural techniques, and recruiting converts, allies, trading partners, interpreters, and representatives. Chapter 5, which examines the Company's attempts to found plantations staffed by slave labour, shows how people and plants or techniques were often transported together, and explores some of the unintended consequences that were often more crucial to shaping the development of Company settlements than orders issued from London.

Alongside Bayly's work, arose a body of scholarship examining the connections between science

²⁰ Christopher Bayly, *Empire and Information: Intelligence Gathering and Social Communication in India, 1780–1870* (Cambridge: Cambridge University Press, 1996).

and empire, which demonstrated the direct applications of exploratory sciences and the introduction of new technologies to economic gain and the entrenchment of colonial rule.²¹ During the colonial period, a major justification for imperial rule had been the idea of the benefits or 'improvements' conferred by the introduction of vaccines and agricultural techniques and the construction of railways and canals.²² The effect on the history of science was to produce 'diffusionist' models that ascribed the origins of modern science to Europe, from whence it was said to be exported via channels opened by colonial expansion.²³ This idea has been effectively corrected by a series of studies that have not only demonstrated that science was directed more towards the aims of conquest than the amelioration of the conditions of life for the majority of people in the world, but also that rather than being invented in Europe, modern science grew out of complex interactions between the knowledge traditions of different parts of the world which altered the character of both colonised and colonising societies.²⁴ A body of literature dealing with the colonial period in India has now emerged that focuses on specific areas of science and interrogates both the exchanges of knowledge and techniques and the unequal power relations within which they arose. Among several others, this includes the work of David Arnold, Mark Harrison, and Pratik Chakrabarti on medicine;²⁵ Matthew Edney and Kapil Raj on mapping;²⁶ Bernard S. Cohn and, more recently,

²¹ Deepak Kumar ed., *Science and Empire: Essays in Indian Context* (Delhi: Anamika Prakashan, 1991)

²² Ranajit Guha, *A Rule of Property for Bengal: An Essay on the Idea of Permanent Settlement* (Paris: Mouton, 1963); A Rahman, 'Problems and Perspectives', in Kumar, *Science and Empire*; Richard Drayton, *Nature's Government* (New Haven: Yale University Press, 2000); David Arnold, 'Agriculture and "Improvement" in Early Colonial India: A Pre-History of Development', *Journal of Agrarian Change*, 5 (2005).

²³ Most famously, George Basalla, "The Spread of Western Science," *Science*, 156 (1967), 611–622.

²⁴ Christopher Bayly, *Imperial Meridian: the British Empire and the World, 1780-1830* (London: Longman, 1989); Kapil Raj, 'Colonial Encounters and the Forging of New Knowledge and National Identities: Great Britain and India', *Osiris*, 15 (2000), 119-134 and Raj, *Relocating modern science: circulation and the construction of scientific knowledge in South Asia and Europe, 1650-1900* (Basingstoke: Palgrave Macmillan, 2007).

²⁵ David Arnold, *Colonising the Body: state medicine and epidemic disease in nineteenth-century India*, (Berkeley: University of California Press, 1993); David Arnold ed. *Warm climates and western medicine: the emergence of tropical medicine* (Amsterdam: Rodopi, 1996); Mark Harrison, *Climates and Constitutions: Health, Race, and British Imperialism in India 1600-1850*, (Delhi: OUP, 1999); Mark Harrison, Margaret Jones, Helen Sweet eds. *From western medicine to global medicine: the hospital beyond the West* (New Delhi: Orient BlackSwan, 2009); Pratik Chakrabarti, "Neither of meate nor drinke, but what the Doctor alloweth": Medicine amidst War and Commerce in Eighteenth-Century Madras' *Bulletin of the History of Medicine*, 80 (2006), 1–38; Chakrabarti, 'Empire and Alternatives: Swietenia febrifuga and the Cinchona Substitutes', *Medical History*, 54 (2010): 75-94; Chakrabarti *Materials and Medicine: Trade, Conquest and Therapeutics* (forthcoming, 2010), I am grateful to Dr Chakrabarti for allowing me to consult sections of this work.

²⁶ Matthew H. Edney, *Mapping an empire: the geographical construction of British India, 1765-1843* (Chicago: University of Chicago Press, 1997); Raj, 'Colonial Encounters'.

Joseph Errington on linguistic scholarship;²⁷ and Lucile Brockway and Emma Spary on botany.²⁸

With some important exceptions, most of these works of scholarship tend to focus their discussions mainly on the period after 1757 when colonial science had assumed a more official character, with dedicated expeditions and funding, paralleling the increasing bureaucracy of the Company's administration in India. While natural enough, this focus can obscure the unique characteristics of the earlier period. It is important to note that the Company in the seventeenth and early eighteenth century should be treated neither as the proverbial collection of 'mere merchants' nor simply as a precursor to the later Company state. While the myth of colonialism arising in a 'fit of absentmindedness' has hopefully been exploded,²⁹ there is also a danger in projecting backwards Orientalist attitudes that belong to the later period. This is to lose precisely the anthropological focus that thinkers like Cohn advocate. In Chapter 3 in particular, I address this issue with reference to the study of language by demonstrating on one hand that many of the early Company's servants were neither ignorant of nor disinterested in Asian languages and on the other that the methods and motivations for creating language manuals in this period differed greatly from those of the later period.

In other words, members of the East India Company in the seventeenth and early eighteenth century had their own sets of understandings, beliefs, superstitions, and misconceptions and these must be examined in their contemporary contexts. This issue has recently been addressed by Miles Ogborn and Philip Stern,³⁰ who focus closely on the practices of writing and representation of the early

²⁷ Bernard S. Cohn, *Colonialism and its forms of knowledge: the British in India* (Princeton: Princeton University Press, 1996), Chapter 2, 'The Command of Language and the Language of Command', 16-51;

²⁸ Emma Spary, *Utopia's garden: French natural history from Old Regime to Revolution* (Chicago; London : University of Chicago Press, 2000); Lucille Brockway, *Science and Colonial Expansion: the Role of the British Royal Botanical Gardens* (New York: Academic Press, 1979).

²⁹ The quote is from John Seeley, *The Expansion of England* (London: Macmillan, 1883) work and has been challenged in particular by Nicholas B. Dirks in his works *The Hollow Crown: ethnohistory of an Indian kingdom* (Ann Arbor: University of Michigan Press, 1993); *Castes of Mind: colonialism and the making of modern India* (Princeton, N.J.: Princeton University Press, 2001) and *The Scandal of Empire: India and the Creation of Imperial Britain* (Cambridge (Mass.): Harvard University Press, 2006).

³⁰ Philip J. Stern, "'A Politie of Civill & Military Power': Political Thought and the Late Seventeenth-Century

Company. Stern's forthcoming work promises an important reinterpretation of the early Company as a political entity; challenging many of the traditional narratives about the development of the British Empire and questioning distinctions between the public and private and the commercial and imperial.³¹ The centre-periphery focus of earlier studies of the Company is also challenged in particular by Ogborn's emphasis on the global movement of texts³² and by Stern's point that the Company settlements in India styled themselves much like the Siddis of Janjira: as small tributary polities in relation to the Mughal Empire.³³ Stern's discussion of the Company's policy in relation to the small island of St Helena also provides a much-needed reminder that India was not the sole focus of the Company in this period.

While a focus on the self-styling of the Company is important to understanding the development of colonial rhetoric, care is needed to ensure that the institutional focus that this approach involves does not overshadow the awareness that emerged in the economic histories of the Company as embedded in existing indigenous networks. As Loomba notes, 'The impact of colonialism on culture is intimately tied up with its economic processes but the relationship between them cannot be understood unless cultural processes are theorised as closely as fully and deeply as the economic ones'.³⁴ Here, I will challenge to some extent the idea of the EIC as a stable corporate entity that emerges from institutional histories of the Company. Although the idea of the 'honourable Company' was important in representations to rulers – European and Asian – to acquire privilege and power, I argue that this image was imposed over a far more chaotic reality. As Huw Bowen has pointed out, the seventeenth century in fact saw several different groups of merchants receive

Foundations of the East India Company-State', *Journal of British Studies*, 47 (2008), 253–83 and Stern, 'Politics and Ideology in the Early East India Company-State: The Case of St. Helena, 1673–1696', *Journal of Imperial and Commonwealth History*, 35 (2007).

³¹ Stern, *The Company-State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India*, (forthcoming, 2011).

³² Miles Ogborn, 'Writing Travels: Power, Knowledge and Ritual on the English East India Company's Early Voyages', *Transactions of the Institute of British Geographers*, New Series, 27 (2002), 155–171.

³³ Stern, "'A Politie of Civill & Military Power"', fn 5.

³⁴ Ania Loomba, *Colonialism/Postcolonialism*, 2nd edn. (London ; New York, NY : Routledge, 2005), p. 24.

charters from the Kings and parliaments of an unstable England and it was not until the merging of what were known as the 'old' and 'new' Companies in 1702-9 that a more stable succession began.³⁵ I take this argument further by arguing that despite the rhetoric presented in charters and petitions, both the personnel involved in the settlements in Asia and the direction of policy was often beyond the control of the Directors in London. Instead, those who were important in the settlements acquired power through networks of European and Asian patrons. Examples of this process given in Chapter 1 include the competition between different factions of the Fort St George and Surat factories for influence in King Narai's Siam, disregarding instructions from London to break off relations. The Company in London had to deal with individuals who became powerful in Asia either by denouncing them as 'interlopers' or traitors and using their military and judicial powers to either remove them, or when this became too problematic, incorporating them into its organisation. Nevertheless, in the same way as the private trade of Company officials has been shown to have benefited the expansion of the official trade,³⁶ the social networks that members of the Company were was involved in locally was also crucial to the early Company's success in negotiating alliances.

I argue here that such an understanding of the real operation of the early Company in terms of shifting networks of power and patronage existing beneath the official channels of command is crucial to developing an understanding of the relationship between early modern scholarship and colonialism. For members of the early East India Company, activities like collecting plants, identifying precious stones, describing territories and peoples, making maps, and compiling

³⁵ H V. Bowen, "No Longer Mere Traders": Continuities and Change in the Metropolitan Development of the East India Company', in H.V Bowen, Margarete Lincoln, and Nigel Rigby eds. *The Worlds of the East India Company* (Suffolk: Boydell & Brewer, 2002). Claudia Schnurmann 'Wherever profit leads us, to every sea and shore. . .': the VOC, the WIC and Dutch methods of globalisation in the seventeenth century' in *Asian travel in the Renaissance* ed. by Daniel Carey (Oxford: Blackwell, 2004) makes a similar point about the Dutch VOC and Vereenigde Westindische Compagne (WIC).

³⁶ Om Prakesh, *European Commercial Enterprise in Pre-Colonial India* (Cambridge University Press, Cambridge, 1998), New Cambridge History of India II:5, pp. 243-44; Ian B. Watson, *Foundation for empire: English private trade in India 1659-1760* (Delhi: Vikas Pub. House, 1980).

wordlists and dictionaries could mean advancement through the ranks of the EIC, valuable private trade, and even lucrative positions in the service of Asian rulers. In Chapter 2, I explore this idea in detail by looking at how the company surgeons used their skills in botany and medicine to market remedies worldwide and to acquire important contacts within the Mughal establishment at Arcot. Chapter 3 discusses how 'collecting' words and producing linguistic materials enabled factors to rise through the ranks of the Company. I have also attempted to show throughout this work that information was created and circulated by a diverse range of people who inhabited and moved between the Company settlements. To illustrate this point, Chapter 5 presents a specific focus on the involvement of slaves in the circulation of knowledge.

This conceptualization of information as produced in multiple sites by a number of actors and circulating through networks of informers around sites of colonial settlement as well as to and from Europe, has affinity with models that have emerged from studies of the Atlantic world and global history. David Armitage and others envisaged the Atlantic World as a 'kaleidoscope movement of people, goods, and ideas'.³⁷ Scholarship on the interactions that resulted has moved from the concept of a bounded 'contact zone' to understand new hybrid cultural practises emerging from multi-ethnic, cross-class encounters in multiple locations and situations, in which power relations differed.³⁸ This paved the way for studies of non-elite contributions to the environmental and medical landscape of the Americas like Judith Carney's account of the introduction of rice by African slaves, Londa Schiebinger's discussion of the use of abortifacients as a form of resistance by native Americans and enslaved Africans, and Vincent Brown's depiction of the struggles for the spiritual control of Jamaica based around the all-pervading subject of death.³⁹ The neglect of the Iberian experience in

³⁷ David Armitage and Michael J. Braddick, 'Introduction' to Armitage and Braddick ed. *The British Atlantic World: 1500-1800* (Hampshire: Palgrave MacMillan, 2002), p. 1.

³⁸ Paul Gilroy, *The Black Atlantic: modernity and double consciousness* (London: Verso, 1993). Mary Louise Pratt, *Travel Writing and Transculturation* (Routledge: London, 1992); Londa Schiebinger, 'Prospecting for drugs: European naturalists in the West Indies' in Londa Schiebinger and Claudia Swan, *Colonial Botany: Science, Commerce and Politics in the Early Modern World* (Pennsylvania: University of Pennsylvania Press, 2005), p. 119-133.

³⁹ Londa Schiebinger, 'Exotic abortifacients: the global politics of plants in the 18th century', *Endeavour*, 24 (2000),

the Americas has been corrected by new studies of the networks formed between indigenous medical practitioners, creoles, slaves, and others, as well as the role of institutions such as the *Casa de la Contratación* in Spain, formed to collect and test new materials and techniques and dispatch lists of queries around the world.⁴⁰ Studies of missionary contributions to botanical enterprise and geographical and ethnographic descriptions illustrate the formation of knowledge networks based on factors other than nationality and direct the discussion towards global histories of collecting.⁴¹

The study of networks and the movement of people and ideas between colonised spaces has been taken up in recent studies of the Vereenigde Oostindische Compagnie (VOC) and Dutch colonial world, and the Iberian colonies. The work of Marcus Vink and Kerry Ward uses forced migration to undermine a centre-periphery model of imperial movement, instead demonstrating the dynamic and contested evolution of the VOC's sovereignty forged between the various Dutch settlements in the Indian Ocean.⁴² This model is one that I argue also applies to the English East India Company, which in its early days bore close similarities to its Dutch counterpart and rival. Chapter 5 in particular takes a similar approach to Ward and Vink, demonstrating how forced migration was used to transfer skills between the Company's settlements. The involvement of missionaries in gathering, processing, and circulating information about the East Indies has received attention, particularly in relation to the Jesuits' work in bridging the gap between East and West in cartography and astronomy. Recent studies have also demonstrated the integration of many Jesuits into the pan-

117-121; Judith A Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge MA: Harvard University Press, 2001); Vincent Brown, *The Reaper's Garden: Death and Power in the World of Atlantic Slavery* (Cambridge MA: Harvard University Press, 2008).

⁴⁰ Jorge Cañizares-Esguerra. *Nature, Empire, and Nature: Explorations of the History of Science in the Iberian World* (California: Stanford University Press, 2006); Júnia Ferreira Furtado, 'Tropical Empiricism: Making Medical Knowledge in Colonial Brazil', Daniela Bleichmar, 'Atlantic Competitions: Botany in the Eighteenth-Century Spanish Empire' and 'Antonio Barrera-Osorio, 'Empiricism in the Spanish Atlantic World', all in James Delbourgo and Nicholas Dew ed. *Science and Empire in the Atlantic World* (New York: Routledge, 2008).

⁴¹ Michael T. Bravo, 'Mission Garden, Natural History and Global Expansion, 1720-1820' in Schiebinger and Swan, *Colonial Botany*, pp. 49-65.

⁴² Markus Vink, "The World's Oldest Trade': Dutch Slavery and Slave Trade in the Indian Ocean in the Seventeenth Century", *Journal of World History*, 14 (2003), 131-177 and Kerry Ward, *Networks of Empire: Forced Migration in the Dutch East India Company* (Cambridge, 2009).

European exchange of ideas known as the 'Republic of Letters'.⁴³ Early Portuguese observations of social, medical, and religious life in India has also received detailed attention.⁴⁴ The early English East India Company's support for missionary activities is touched on in Chapter 3, but is a subject that requires further investigation, along with early translations of religious texts.

The connections between the early histories of trade and science has been tackled by Harold Cook in his recent account of natural philosophy and trade in the Dutch republic and the settlements of the VOC in the spice islands of South East Asia.⁴⁵ While other authors have struggled to reconcile the materialist interests of merchants with the supposedly disinterested inquiries of scientists, Cook argues that 'the new philosophy arose not from disembodied minds from the passions and interests of mind and body united'.⁴⁶ He links the worlds of merchants and scholars by the reliance of both on trust and 'credit'. Like Bayly, he notes that information was crucial to the process of colonisation and uses the idea of 'objectivity' to demonstrate that information could be contained in physical objects as well as texts. As Raj has noted, following the lives of individuals reveal similar links between the trading companies and 'savant institutions' across Europe.⁴⁷ Here I have taken a similar approach, in mapping the formal and informal links between the East India Company and scholarly institutions, in particular, the Royal Society of London for Improving Natural Knowledge.⁴⁸

Both the Royal Society and the East India Company received royal charters in 1660,⁴⁹ placing the Society on a formal footing and effectively constituting a new Company, which was granted a

⁴³ Mordechai Feingold ed. *Jesuit Science and the Republic of Letters* (Cambridge MA: MIT Press, 2003). Ines G. Zupanov, *Missionary tropics: the Catholic frontier in India (16th-17th centuries)* (Ann Arbor: University of Michigan Press, 2005); M. N. Pearson, 'The Thin End of the Wedge. Medical Relativities as a Paradigm of Early Modern Indian-European Relations', *Modern Asian Studies*, 29, (1995), pp. 141-170.

⁴⁴ Joan-Pau Rubiés, *Travel and Ethnography in the Renaissance. South India through European Eyes* (Cambridge: Cambridge University Press, 2005).

⁴⁵ Harold J. Cook, *Matters of Exchange* (New Haven: Yale University Press, 2007).

⁴⁶ Cook, *Matters of Exchange*; See also Fa-ti Fan, *British Naturalists in Qing China: Science, Empire, and Cultural Encounter* (Cambridge MA: Harvard University Press, 2004).

⁴⁷ Raj, *Relocating Modern Science*, p. 225.

⁴⁸ Hereafter referred to as the Royal Society.

⁴⁹ India Office Record (IOR) A/1/21 Letters patent of Charles II granting the Company permission to ship bullion, 18 December 1660 and IOR A/1/22 confirming and renewing Company privileges.

monopoly on trade east of the Cape of Good Hope and several sovereign powers, including the authority to build fortified settlements and fight wars. The Royal Society consciously modeled itself on Salomon's House, the institution of learning in Bacon's *New Atlantis* and it shared with the East India Company a commitment to Baconian principles of record-keeping using the vernacular. Like the Company, the Society kept detailed manuscripts accounts of its meetings and of letters sent and received from a worldwide network of correspondents. Another similarity between the early Royal Society and the East India Company in London was their collections of material objects sent from abroad. In London, the East India Company had a storehouse or museum of specimens sent to them in this period by their servants abroad. Though references to it are rare, it seems to have been a considerable collection according to a contemporary account of the visit of an Italian Duke, which relates: 'His highness went next to the India House...which is full of curious things, both animal and vegetable...His highness examined many other animals and curiosities which came from India, and are kept here to gratify the curiosity of the public.'⁵⁰ Petiver also refers to examining the natural history collections in the Company museum as the beginning of his involvement with the EIC surgeons.⁵¹ The Royal Society also had a 'repository' of curiosities, animal, vegetable, and mineral, sent to them from around the world, a collection which was eventually transferred to the British Museum.⁵² It is clear that objects flowed freely between the collections of the two organisations, which in some cases overlapped. For example, between 1672 and 1675, the Society shared Gresham College with some of the East India Company's collections.⁵³

⁵⁰ Lorenzo Magalotti, *Travels of Cosmo the Third, Grand Duke of Tuscany, through the England during the Reign of King Charles the Second (1669)*... (London: J Mawman, Ludgate Street, 1821). I am grateful to Antonia Moon for this reference. Presumably, the main collection was housed in Craven House, where the Company moved their headquarters in 1666 (William Foster, *The East India House* (London: Lane, 1924)).

⁵¹ Samuel Browne, and James Petiver, 'An account of part of a Collection of some Curious Plants and Drugs, lately given to the Royal Society by the East India Company', *Philosophical Transactions*, 22 (1700/1) p. 579-594, doi: 10.1098/rstl.1700.0032.

⁵² Nehemiah Grew, *Musæum Regalis Societatis, or a Catalogue & description of the Rarities belonging to the Royal Society & preserved at Gresham College* (London: W. Rawlins, 1681); Michael Hunter, 'Between Cabinet of Curiosities and Research Collection: the history of the Royal Society's "Repository"' in his *Establishing the New Science: the experience of the Royal Society* (Woodbridge: Boydell, 1989) pp. 123-155; Jenni Thomas, 'A 'Philosophical Storehouse': The life and afterlife of the Royal Society's repository' (unpublished doctoral thesis, University of London, Queen Mary College, 2009).

⁵³ Royal Society, Minutes of Council, Vol. 1., meeting of 24 June 1675. Also noted by Jenni Thomas, 'A Philosophical Storehouse', p. 19.

Studies of the early Royal Society traditionally focused on the advances in the mathematical and physical sciences made by well-known early members including Robert Boyle and Isaac Newton and on the ideology of experimentation: Michael Hunter, one of the principal historians of the Society, argues that its core mission was simply to reform knowledge through experiment.⁵⁴

However, this view neglects the involvement of many of the members in medicine and botany, as well as the many investigations into human culture that would now be described as ethnographic or anthropological, geographical, antiquarian, or historical. This perspective, largely the result of the developments of the Society rather than its early character, might be corrected by considering some early statements about its purpose. The early Society had to prove its usefulness to society in the face of opposition to its activities from a number of public figures including Thomas Hobbes.⁵⁵ In response, it commissioned a history of its activities to be produced by Thomas Spratt. In his review of this work, the Secretary Henry Oldenburg lists the aims and achievements of the Society. These included ‘Queries and Directions, they have given abroad’; followed by ‘Proposals and Recommendations, they have made’ and ‘Relations, they have received’. Despite Hunter's claim, ‘Experiments they have tried’ is given only fourth place in this list of functions, followed by observations made, instruments designed, and theories proposed.⁵⁶ As Oldenburg implies, the functions of directing travel, collecting and translating works of travel and natural history, and making recommendations on the basis of these activities were at least as important as experimentation to the early Society.

Until recently, it was also denied that the Royal Society had any involvement in the process of colonial expansion, and even recent studies of science in the service of empire have imagined a

⁵⁴ Michael Hunter, *Establishing the new science: the experience of the early Royal Society* (Suffolk: Boydell, 1989).

⁵⁵ S. Shapin and S. Schaffer, *Leviathan and the air-pump: Hobbes, Boyle, and the experimental life: including a translation of Thomas Hobbes, Dialogus physicus de natura aeris* (Princeton: Princeton University Press, 1985).

⁵⁶ H. Oldenburg. ‘An Account of Some Books; 1. The History of the Royal Society of London for the Advancement of Experimental Philosophy, by Tho. Spratt’, *Philosophical Transactions*, 2 (1667), 502.

transformation of the nature and purposes of the Company in the mid seventeenth century from a 'gentleman's club with an interest in nature' to a significant player in the colonial enterprise.⁵⁷ This shift is placed at around the same time as the East India Company is assumed to have morphed from an organisation mainly concerned with trade into the ruler of large tracts of territory. I will argue that, instead, deep and crucial connections between the two organisations existed from the earliest stage. The East India Company connected with the Royal Society both formally and informally through overlapping membership and friendships and rivalries that spanned the organisations. From 1682, members of the Royal Society held stocks in the East India Company, as well as the Royal African Company, on behalf of the Society.⁵⁸ Many prominent members of the Royal Society, like the diarists John Evelyn and Samuel Pepys, also held their own stocks in the Company. Members like John Fryer, Isaac Pyke, and Joseph Collet were elected to the Royal Society on the basis of their positions in the East India Company.

For the Royal Society as an institution, supporting the activities of the trading companies could demonstrate their commitment to 'useful' projects, in the face of criticisms of their experiments, which were depicted as futile and even dangerous by contemporary critics. It could also provide returns on their investment. Most importantly, it was through developing international networks following the routes of the trading companies that the Society received much of the materials for its experiments and it was on the basis of observations made by seamen, Company factors, and their informants, that the Society was able to embark on projects including mapping the terrestrial and celestial world and even determining the shape and magnetic field of the earth.⁵⁹ Sometimes, as with the astronomer Edmund Halley's journey on a Company ship to observe the stars of the southern sky from St Helena, core members travelled themselves, but more often they relied on international

⁵⁷ For example, R.W. Home, 'The Royal Society and the Empire: the colonial and Commonwealth Fellowship Part 1. 1731-1847', *Notes Records of the Royal Society of London*, 56 (2002), 307-332.

⁵⁸ Minutes of Council, Vol. 2, 6 December 1682.

⁵⁹ Works which relied on such observations include Moses Pitt, *The English Atlas* (Oxford: 1680-1683); Nathaniel Cutler and Edmond Halley, *Atlas maritimus & commercialis* (James & John Knapton, etc.: London, 1728) and John Flamsteed, *Atlas coelestis*, ed. by Margaret Flamsteed and James Hodgson (London: 1729).

networks of contacts, including those connected with the Company, to provide their information.⁶⁰

For the East India Company's London Directors, scholars such as those associated with the Royal Society provided an invaluable consultancy service: they advised on the types of crops thought suitable for sowing at different latitudes, the treatment of slaves, and the potential value of medicinal products, they drafted letters in foreign tongues for the Company, and they helped commission and arrange travel narratives, natural histories and accounts of foreign cultures and languages, which were then sent abroad to aid the Company's factors in their trade and negotiations. How this process of consultation functioned might be demonstrated by a brief story.

On 20 May 1680, two agents of the East India Company arrived at a meeting of the Royal Society.⁶¹ They presented the Society with a bezoar stone, erroneously said to be found in the head of a snake and supposed to have medicinal virtues.⁶² The stones were highly valued across the Indian Ocean and had begun to be brought back into Europe in the 1650's by Jesuit missionaries.⁶³ In this case, the EIC agents reported that the Company had received it as a present from the King of Bantam and 'were unsure of its virtues'. However, he also showed the society a translation of a Portuguese work containing a description of the stone,⁶⁴ which was thought to come originally from Mombasa in East Africa. The Secretary, Robert Hooke, noted that the travel writer Jean-Baptiste Tavernier also mentioned the snake stones but did not give an account of how to use them. The Society then

⁶⁰ Alan Cook, *Edmond Halley: charting the Heavens and the seas* (Oxford: Clarendon Press, 1998).

⁶¹ CELL/RS/HF_441. This account is only preserved in the Hooke folio, a recently rediscovered manuscript containing Robert Hooke's copies from the records of meetings of the Royal Society. The Hooke Folio can be viewed online at <http://webapps.qmul.ac.uk/cell/Hooke/Hooke.html> (accessed, 24 July 2010).

⁶² The word 'bezoar' comes from the Persian *pādzahr*: Originally signifying an antidote to poison, the word came to refer specifically to the hard concretions found in the bodies of animals, which were applied to snake wounds, perhaps giving rise to the false belief about them being found in the heads of snakes. Henry Yule, *Hobson-Jobson: A glossary of colloquial Anglo-Indian words and phrases, and of kindred terms, etymological, historical, geographical and discursive*. New ed. edited by William Crooke, B.A. (London: J. Murray, 1903), hereafter *Hobson-Jobson*, p. 90.

⁶³ Martha Baldwin, The Snakestone Experiments: An Early Modern Medical Debate, *Isis*, 86 (1995), 394-418.

⁶⁴ Possibly Hernan Lopez de Castaneda, *Historia del descubrimiento y conquista de la India por los portugueses* (Antwerp: Martin Nucio, 1554) although I have not found evidence for the English translation of 1582 referred to in the records.

resolved to form a committee to experiment on the stones by administering *Strychnos nux-vomica*, a poison from a South-East Asian tree, and venom to two dogs and using the stone as an antidote. The results of these experiments were apparently inconclusive – although the records vary in their accounts of whether this was due to the dogs not being poisoned or to the failure of the snake stone.

The Society's draft reply to the EIC describes the use of the stone on the Swahili coast as a treatment for colic, in childbirth, and against depression and in Europe and the East Indies as an antidote to poison.⁶⁵ The letter also gives instructions on how to prepare a medicine from the stone: 'rub it on a hard smooth stone till a cream comes of it' and notes that the Italian virtuosi Francesco Redi had not found it useful. The report of the Society's own experiments, at first inserted in the middle of the letter, has been crossed out and moved to a tentative appendage in a later draft copy, and omitted completely from the copy in the Journal Book, the neat minutes of the Society's meetings.

This incident illustrates the importance to the East India Company of engaging with the indigenous drug trade in the Indian Ocean for both commercial and medicinal reasons. It shows that the Royal Society was regarded as a port of call for queries involving unfamiliar objects. Finally it shows why the Society often had to rely on the testimony of works of travel and their network of contacts rather than their own experiments — although the records are unclear, the attempt to poison the dogs failed in some way, poisons like *nux vomica* and venom were scarce, as were instructions on their administration. Furthermore, several of the reported medical benefits of the stone would have been difficult to gauge from similar experiments (depressed dogs being rather rare). The references to Athanasius Kirchner, a travel writer, Aristotelean philosopher and Jesuit, and Francesco Redi, an experimentalist at the Medici court, illustrate how debates over the products of the Indies connected

⁶⁵ CELL/RS/HF_447. No date, page headed 'Answer to the East India company concerning the stone sent by them to the Royal Society'. Not in Hooke's hand (possibly that of Mr Aston, who is mentioned as reading the account of the stone sent to the EIC in HF 449, 1 July 1680).

scholars across Europe. The two rival philosophers had publicly clashed over the efficacy of the snake stones: while Kirchner performed a single trial to confirm the miraculous cures claimed by missionaries, Redi performed hundred of experiments to support his claims that the stones were ineffective. The verdict of the Royal Society here therefore demonstrates a more theoretical than practical commitment to experimentation.⁶⁶

As well as such consultations between scholars and members of the Company, which also happened in the Court of Directors, less formal interactions took place in coffee houses, meeting places that have been used to symbolise the renewal of the public sphere, where consumption of the exotic drink accompanied traveller's tales and the examination of curiosities from around the world.⁶⁷ Other spaces in which such discussions took place include centres for the arts such as Arundel House, churches like the new St Paul's where plans were laid to install a public library as well as a giant telescope, and private houses and gardens.⁶⁸

The botanical garden provides an interesting demonstration of the co-dependence of the local and the global in the early modern period. Drayton has demonstrates how gardens like Kew symbolised universalising tendencies, including the urge to recreate the world in microcosm.⁶⁹ However, as Grove notes, the concept of botanical gardens originated in Asia and the Middle East before being transmitted to Europe.⁷⁰ As Sivasundaram has shown, colonial gardens in Asia also engaged with and continued local gardening traditions and even, as with the case of Peradenia, reveal direct

⁶⁶ The privileging of the argument of Redi over that of Kirchner may also have had some connection to a general suspicion of Jesuit science. However, this point should not be over-laboured: the Society had many Jesuit contacts and relied on Kirchner's work in other cases, especially for information about Chinese.

⁶⁷ Jürgen Habermas, *The structural transformation of the public sphere* (Cambridge Mass: MIT Press, 1989).

⁶⁸ In 1684, Wren and Evelyn visited Dr Thomas Tenison, Archbishop of Canterbury to discuss his plans to establish a public library in London. Evelyn's opinion was that the library should be housed 'at St Pauls, the west end of that Church, (if ever finish'd)' (23 February 1684) E. S. de Beer ed. *The Diary of John Evelyn* (Oxford: Clarendon Press, 2004). The entire top level of the West end of St Paul's, including the current library, trophy rooms and intervening galleries, was in fact intended as a public library (Gordon Higgott, personal communication); for the telescope, Lisa Jardine, *On a grander scale: the outstanding Career of Christopher Wren*, (London: Harper Collins, 2003).

⁶⁹ Drayton, *Nature's Government*.

⁷⁰ Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism 1600-1860*, (Cambridge: Cambridge University Press, 1995).

continuity by occupying the same physical spaces.⁷¹ Cook's study reveals how botanical gardens in the VOC settlements and Holland functioned as nodes in the international web of connections through which natural knowledge was circulated. Although the importance of botanical gardens in the British Empire has been long recognised, their role is normally considered to begin with the establishment of the gardens at Kew and in Calcutta.⁷² Chapters 2 and 5 argue that gardening was already important to the East India Company's settlements in the seventeenth century. The Company gardens abroad were part of a reciprocal exchange of plants with botanical gardens like that of the Apothecaries garden, the Chelsea physic garden, and the Oxford University garden as well as with gardens in the Dutch and Iberian settlements. Botanical illustrations are another area in which the interaction of the local and the global have been shown to co-exist. Illustrations of plants were produced throughout this period by local artists ended up in the compendious works of European botanists, often retaining the distinctive features of local traditions of depiction and associated symbolism.⁷³ The incorporation of illustrations produced in different localities into compendious works like the *Gazophil* of James Petiver is touched on in Chapter 2.

Learning from studies of the Atlantic world, the *Estado da India*, *Compagnie des Indes*, and the VOC for the study of knowledge creation and distribution in the East India Company's settlements is not merely an exercise in comparative history,⁷⁴ but reflects real contemporary overlaps and borrowings. As shown by repeated instructions issued by the Directors to their servants to follow the examples of the VOC in everything from training slaves to translating works of scripture, the East India Company in this period was concerned to emulate their more successful rivals. Overlap with the Atlantic world is evident particularly in the example of St Helena, where ships from Brazil

⁷¹ Sujit Sivasundaram, 'Science and the Global: On Methods, Questions, and Theory', *Isis*, 101 (2010), 146-158.

⁷² Brockway, *Science and Colonial Expansion*.

⁷³ Fa-ti Fan, *British Naturalists in Qing China*; Iris Montero Sobrevilla, 'Of hummingbirds, hearts and epilepsy: natural knowledge and authority in the Hernandian corpus, 1571-1651', IHR seminar, 31 March 2010.

⁷⁴ For the paucity of comparative accounts of thought about empire among different European power Anthony Pagden, *Lords of All the World: Ideologies of Empire in Spain, Britain, and France c. 1500-c.1800* (New Haven: Yale University Press, 1995).

and New York called on slave trading missions to the West African coast and Madagascar, leaving members of the crew and slaves behind. The Directors sent the laws of Barbados to be implemented on the island and dispatched West Indian planters to experiment with sugar cane on the island.

The informal networks that linked the East India Company and the Royal Society also bled into other organisations including the universities of Oxford and Cambridge, the Hudson's Bay and Africa Companies, the Society of Apothecaries, missionary societies like the Society for the Propagation of the Gospel, and the booksellers and printers who produced and distributed both works of science and travel. The personnel of both the EIC and the Royal Society also overlapped with members of the government: prominent examples include Samuel Pepys and Sir Joseph Williamson. Other scholars fulfilled semi-official roles as providers of information to both the state and the EIC, whose diplomatic contacts in the East were often conducted in tandem. For example, Thomas Hyde, whose involvement in producing Malay works of scripture and reference is discussed in Chapter 3, was also called on to help draft the letters of address to local and regional rulers in Asia to negotiate the East India Company's settlements.⁷⁵ Hyde also served for many years as the translator of the English government's diplomatic correspondence with the Islamic world, including Morocco and the Ottoman Empire, Iran, Mughal India and Java and in 1698 was asked to train two young men to succeed him.⁷⁶ Boyle himself was appointed as the religious advisor to the East India Company.⁷⁷ The networks also extend across to the continent through the connections often known as the 'Republic of Letters'. The interdependence of these institutions of natural philosophy and trade and settlement in England consciously echoed similar connections in France between the *Compagnie des Indies* and the *Academie des Sciences* and in Holland between the WIC, VOC, and institutions like the University of Leiden as well as following the examples of

⁷⁵ An example is preserved in BL 763-8 – Mss Eur. E. 192. 2 (a), item 27 fol. 1, Thomas Hyde to Thomas Bowrey, 2 August 1702.

⁷⁶ Thomas Hyde, *Syntagma Dissertationum* (Oxford: Clarendon Press, 1767), i, pp. xxii-xxiii, c.f. Marshall, *Thomas Hyde: Stupor Mundi*.

⁷⁷ Ogborn, *Indian Ink*.

earlier Iberian institutions such as the *Casa de la Contratación*.⁷⁸

The overlaps between the European trading companies and the savant institutions as well as the traders and settlers of the Atlantic world are evident in the trajectories of many of the individuals that appear in this account: Robert Knox and Thomas Bowrey both visited the Americas as well as the East Indies. Samuel Baron moved from the service of the Dutch company to that of the EIC, as well as maintaining close links with French and Portuguese priests. Close collaboration with Dutch surgeons and botanists and Jesuit priests and collectors is evident in the networks of the Madras surgeons explored in Chapter 2 and the cross-fertilisation of Dutch and English scholarship on Malay is demonstrated in Chapter 3. However, cooperation co-existed with rivalry between nations, companies, and scholars, as demonstrated by the appropriation of cartographic information and guarding of botanical secrets discussed in Chapter 4.

The other sets of relationships that are involved in global exchanges of information are the connections forged in each locality through which members of the European trading companies acquired information about the new environments they were encountering. Several authors have warned against assuming a consensual character to these interactions or neglecting the power dynamics and wider imperial contexts involved.⁷⁹ However, Kapil Raj, in particular, has also challenged the earlier assumption that the codification of non-European knowledge was a project undertaken only by the colonisers and not the colonised, arguing instead for the existence of 'reciprocal, albeit asymmetric, processes of circulation and negotiation'.⁸⁰ Although the idea of 'native informants' has been widely discussed by postcolonial theorists,⁸¹ with the exception of in-

⁷⁸ J. E. McClellan III and F. Regourd, 'The Colonial Machine: French Science and Colonization in the Ancien Regime'. *Osiris* 15 (2000), 31-50; R. Hahn, *The Anatomy of a Scientific Institution: the Paris Academy of Sciences, 1666-1803* (Berkeley: University of California Press, 1971); Cook, 'Matters of Exchange'; William Clark, Jan Golinski, and Simon Schaffer ed., *The sciences in enlightened Europe* (Chicago: University of Chicago Press, 1999).

⁷⁹ Most recently, Stephen Greenblatt ed. *Cultural Mobility: A Manifesto* (Cambridge: Cambridge University Press, 2010).

⁸⁰ Raj, *Relocating Modern Science*.

⁸¹ Nicholas Dirks, 'Colonial Histories and Native Informants: The Biography of an Archive' in *Post Colonialism and*

depth studies of a few projects of collaborative knowledge production where information is provided about the informants, notably the *Hortus Malabaricus*,⁸² there have been few studies that address the question of the identity and motivation of these informants. In many cases discussed here, those who provided the original information, such as the Tamil and Telugu-speaking doctors who provided the names and descriptions of the plant specimens the Madras surgeons sent to Petiver, remain unidentified⁸³. As Sivasundaram has noted, achieving a true picture of the worlds of the providers of information can only be addressed by a greater integration of area studies with global history.⁸⁴ A new focus on 'go-betweens' or *passeurs culturels* has, however, thrown some light on the lives of some of those who mediated exchanges between the cultures Europeans came into contact with and the early agents of colonialism.⁸⁵ I have used the life of Samuel Baron here to illustrate the importance to the early Company of people who were able to move between different worlds, translating and explaining each to the other. However, as argued in Chapter 1, the 'go-between' label applies to all of the providers of information discussed here.

To demonstrate the global interests of the Company in this period, we might consider the map of Asia dedicated to them in 1673 by John Ogilby. Eighteenth and nineteenth century maps produced for the Company, including those of Rennell, tend to focus solely on the Indian subcontinent. In

the Predicament of History, ed. by Carol Breckenridge and Arjun Appadurai (Oxford: Oxford University Press, 1993).

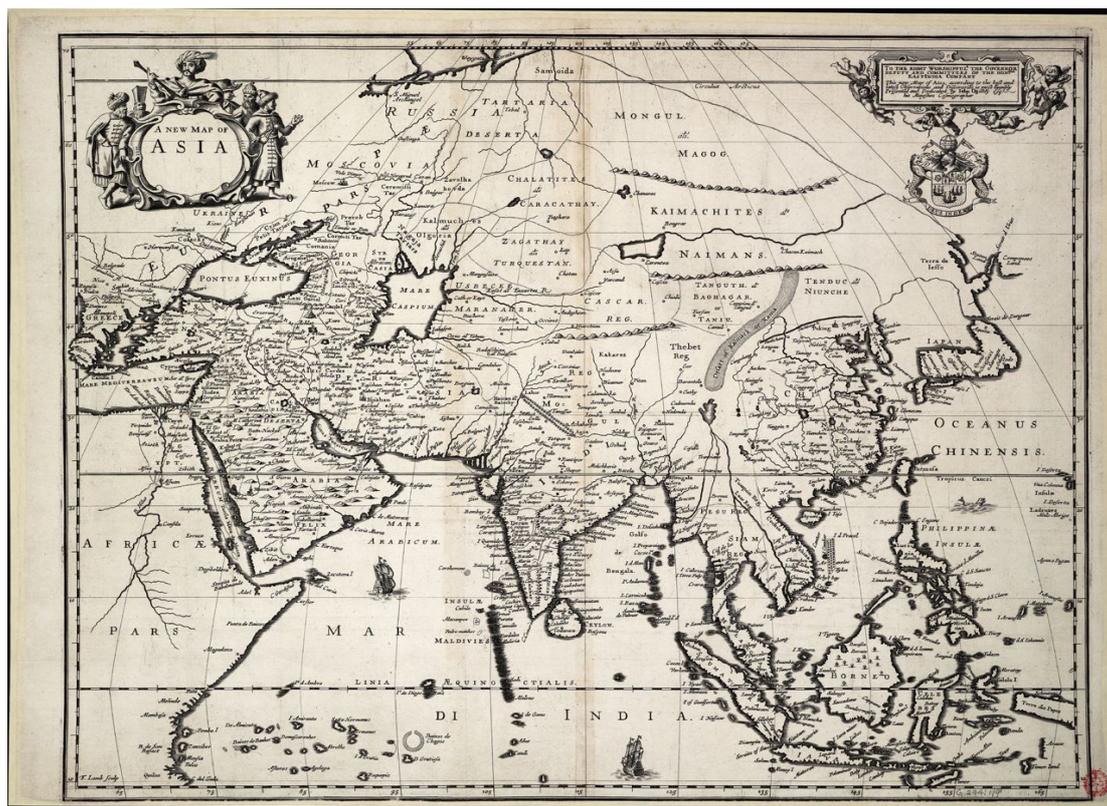
⁸² K.S. Manilal, *Van Rheede's Hortus Malabaricus (Malabar garden)* (Thiruvananthapuram: University of Kerala, 2003); K.S. Manilal ed. *Botany and history of Hortus Malabaricus* (Rotterdam: Balkema, 1980).

⁸³ Neil Safier, *Measuring the New World: enlightenment science and South America* (Chicago: University of Chicago Press, 2008), pp. 8-9 notes 'Through their desire to portray themselves as intrepid heroes fighting single-handedly to overcome the challenges stacked against them, scientific actor-protagonists frequently effaced the processes by which this knowledge was provided to them by other agents – not only Amerindians, Africans, and metizos but American-born creoles and other Europeans as well. The many sources of the knowledge that European travellers acquired *in situ* were often disguised and displaced, disenfranchising those who were responsible for its collection, including their assistants as well as their adversaries'.

⁸⁴ Sivasundaram, 'Science and the Global'.

⁸⁵ Simon Schaffer, Lissa Roberts, Kapil Raj, and James Delbourgo eds, *The Brokered World: Go-Betweens and Global Intelligence* (Sagamore Beach MA: Watson, 2009); Innes Zupanov, 'Goan Brahmans in the Land of Promise: Missionaries, Spies and Gentiles in Seventeenth- and Eighteenth-Century Sri Lanka', in Jorge Flores ed. *Portugal – Sri Lanka: 500 Years*, South China and Maritime Asia Series (Wiesbaden: Harrassowitz and the Calouste, Gulbenkian Foundation, 2006), pp. 171-210; Louse Bénat Tachot and Serge Grunzinski eds. *Passeurs culturels: mécanismes de métissage* (Paris: Presses universitaires de Marne-la-Vallée & Éditions de la Maison des Sciences de l'Homme, 2001).

contrast, India is not particularly prominent in Ogilby's map which, following the Dutch cartographers, privileges the spice islands. 'Asia' in this depiction also encompasses the East coast of Africa and the Middle East. The odd shape of Japan demonstrates the ignorance of the Company about the country that was the target of an abortive attempt to re-establish trade, discussed in Chapter 1, the year this map was published. One especially bizarre feature is the label 'Companees Land' that appears on the edge of a landmass traced at the very eastern edge of the map (above Japan, around the position of the Kamchatka peninsula). Presumably Ogilby was indulging the East India Company in the promise of an as yet unclaimed land in the East, an equivalent to Nova Hollandia (Australia). In any case, the map provides a reminder of the amount of fiction and fantasy incorporated in 'scientific' materials of this period, an issue that is touched on in Chapter 2 in reference to Petiver's incorporation of a 'monster' among his specimens and in the acceptance of the fake Formosan language in Chapter 3. Like the 'gossip and fantasy' of the EIC's archives, rather than writing the more fantastical elements out of the story of early science, we should use them to better understand the different attitudes and assumptions that lay beneath the investigations of this period.



John Ogilby, *A New Map of Asia* (1673), National Maritime Museum, London

Keeping in mind the wider global context of the East India Company's early history while also situating encounters and exchanges of information in their correct local context involves zooming in from the global to the local and back. I aim to present a picture of the global connections of the early Company, while also focusing on the specific details of the lives and contacts of collectors and colonial agents, servants, and victims. Chapter 1 is situated in the context of the EIC's and its competitors' efforts to gain a foothold in the lucrative trade between China and Japan; Chapter 2 places Madras at the centre of international networks of exchange of *materia medica*; Chapter 3 focuses on the linguistic projects that aimed to bolster the EIC's presence in the Malay world: the main site of the Company's interest for the first half of this period; Chapter 4 looks at how knowledge from Asia, here specifically Sri Lanka, was applied to bioprospecting and transplantation off the West Coast of Africa; Chapter 5 traces the movements of slaves and their skills from West Africa and Madagascar to St Helena and Bencoulen in Sumatra as well as

examining the connections of these territories to the Atlantic world.

In summary, in what follows I aim to throw new light on the networks that grew up linking scholarship and the world of the English East India Company. The period begins with both the Company and the Royal Society receiving Royal charters. The next sixty years were a formative time in which the foundations for the later territorial expansion into India and the trade with China were laid. It also saw the production of works of scholarship which provided the basis for inquiries into linguistics, botany, and ethnography for centuries afterwards. Rather than adopting a top-down or solely institutional approach to this period or assuming an inevitable trajectory towards the later history of empire and its means of gathering information, I aim to show how these works emerged from the multi-ethnic and multi-directional flows of people and information between the settlements of the early East India Company.

CHAPTER 1

***Passeurs culturels* in the making of the East India Company: Samuel Baron (fl. 1645-1695) and the Company settlements in East Asia**

Introduction

In 1686, Samuel Baron wrote from Fort St George, the Company headquarters in Madras to Robert Hooke and Robert Hoskins of the Royal Society, enclosing a draft of his *Description of Tonqueen*. The manuscript was not published immediately, but eventually appeared in a collection of voyages during the early eighteenth century.⁸⁶ Baron informed his correspondents that he would shortly be embarking on a journey to China and assured them that he would send any 'curiosities' worthy of their notice.⁸⁷ Shortly afterwards, Baron left Madras as head of a mission to establish a 'factory', or trading post, in Amoy. However, on hearing of his appointment, the London Directors wrote to the Governor and Council of Fort St George ordering them to dismiss Baron, as 'no servant of ours, but a deserter, the history whereof is too long to tell'.⁸⁸ In this chapter I uncover the history of the involvement of Samuel Baron, a half Dutch and half Vietnamese trader, go-between, and spy with the East India Company's attempts to gain a foothold in the lucrative trade between China and Japan. I use his provision of 'curiosities' and information to the Company, the Royal Society, and his Asian patrons to demonstrate the importance of 'go-betweens', brokers, or *passeurs culturels* to all the powers who competed to dominate trade and conquer territory in East Asia during the late seventeenth century. I examine Baron's ethnographic description of Tonkin and the

⁸⁶ Awnsham and J. Churchill, *A Collection of voyages and travels*, 6 vols (London: printed for the editors, 1705-1732), VI, 1732.

⁸⁷ Sloane 1039, fol. 133r. Endorsed (v) 'For S^r John Hoskins kn^t and Robart Hooke Esq^r / In / P^r M^r Owenwinn que dieu garde London', 1686, February 2, Samuëll Barron to Sir John Hoskins and Mr Robert Hooke. I am grateful to Will Poole for his transcription of this letter.

⁸⁸ BL IOR E/3/91, fol. 71 (143), London to Fort St George – 6 June 1686.

accompanying illustrations as example of works of hybrid works of scholarship created in the process of mediating between cultures.

Connected histories in the global early modern period

Scholars have begun to take a global approach to the early modern period, identifying large scale processes including population and economic growth, the development of large states, the diffusion of technologies, and the transplantation and large-scale cultivation of crops.⁸⁹ European expansion was paralleled by the growth of China under the Qing Empire: in the period 1660-1760 the area governed double from the Ming dynasty and many of the ethnic minorities that make up the modern People's Republic were incorporated into the Empire.⁹⁰ New nationalist and imperialist 'political theologies' accompanied these shifts, emerging alongside discourses like millenarianism that cut across cultures.⁹¹ Many different cultures produced travel literature, ethnographic writing, and maps as a result of voyages of 'discovery' in all directions. These works of travel and description functioned as both justifications and manuals for colonialism.

The trade of East Asia in the period centred on the exchange of high-quality silk from China for Japanese silver. The Ming Empire's prohibition of direct trade with Japan had left smaller states and foreign actors – including the European trading companies in Asia – scrabbling for roles as intermediaries.⁹² It also encouraged the diversion of the trade through entrepôts in the

⁸⁹ John Richards, 'Early Modern India and World History', *Journal of World History* 8 (1997), pp. 197-209.

⁹⁰ Jonathan D. Spence, 'The K'ang-hsi Reign', in *The Ch'ing Empire to 1800* ed. by Willard J. Peterson, Series: The Cambridge History of China, 9(1) (Cambridge: Cambridge University Press, 2002).

⁹¹ Sanjay Subrahmanyam, 'Connected Histories: Notes towards a Reconfiguration of Early Modern Eurasia', *Modern Asian Studies*, 31 (1997), 735-762; M. Alam and S. Subrahmanyam, *Indo-Persian Travels in the Age of Discovery* (Cambridge: Cambridge University Press, 2007). Laura Hostetler, 'Qing Connections to the Early Modern World: Ethnography and Cartography in Eighteenth Century China', *Modern Asian Studies*, 34 (2000), 623-662.

⁹² For the profits made by the Portuguese as go-betweens in this trade in the period 1570-1620, see John E. Willis, 'Maritime China from Wang Chih to Shih Lang' in Jonathan D. Spence and John E. Willis, *From Ming to Ch'ing: Conquest, Region, and Continuity in Seventeenth Century China* (New Haven and London: Yale University Press, 1979), p. 213.

region: in particular Taiwan (also called Formosa in this period), Siam, and modern Vietnam (then Tonkin and Annam or Cochin China), and the port cities of the Malay archipelago.⁹³ During the period of Ch'ing expansion, these areas also provided refuge for Ming loyalists and thus the maritime world became briefly important to the centre of the Chinese empire.⁹⁴ In each of these entrepôts, indigenous rulers therefore faced the task of using the interest of foreigners in trade and settlement to their advantage while preventing any one faction from assuming too much power. It was against this background that the English Company, along with their Chinese, Japanese, Dutch, French, and Portuguese rivals, attempted to establish bases in Siam, Tonkin, and Taiwan during the late seventeenth century.

Before the arrival of foreign settlers, Taiwan, also known as Formosa, was inhabited by several different Austronesian ethnic groups, living in dispersed settlements. From their arrival in 1624, VOC servants violently subjugated the aboriginal people around their base and extended their authority over much of the island by the 1640's. The Dutch were joined by Chinese pirates and traders and, later, farmers. The aboriginal people of the island produced deer skins and later settlers grew sugar, which they traded to China and Japan.⁹⁵ In January 1666, the Ming loyalist Cheng Ch'enga-kung (son of Cheng Chih-lang, known as Coxinga to the Europeans) expelled the Dutch from Taiwan. Ch'eng died soon after the conquest of Taiwan and his son Cheng Ching ruled the island as a military colony, continuing to encourage the trade to Japan and expanding into other areas, including Siam, Cambodia, Annam, Bantam, and Manila.⁹⁶ The EIC were therefore keen to fill the vacuum left by their Dutch rivals by establishing a base in Taiwan.

⁹³ Derek Massarella, 'Chinese, Tartars and "Thea" or a Tale of Two Companies: The English East India Company and Taiwan in the Late Seventeenth Century', *Journal of the Royal Asiatic Society*, Third Series, 3 (1993), pp. 393-426.

⁹⁴ Willis, 'Maritime China from Wang Chih to Shih Lang'.

⁹⁵ Tonio Andrade, 'Pirates, Pelts, and Promises: the Sino-Dutch Colony of Seventeenth Century Taiwan and the Aboriginal Village of Favorolang', *The Journal of Asian Studies* 64 (2005), pp. 295-321.

⁹⁶ Willis, 'Maritime China'.

Tonkin, the north-western part of modern Vietnam, had experienced Chinese colonisation in antiquity, but had been an independent, though tributary, polity for some seven centuries before Baron wrote his *Description* of the kingdom. However, Chinese culture remained influential in literature, education and law, especially after the transition from Buddhism to Confucianism as the state ideology in the thirteenth century. Although the Le *vúa* (or 'Emperors') were recognised as the rulers of both Tonkin and Annam, since the dynasty's restoration in 1590 the real power in each region had lain with the *chúa* (called the 'General' or 'King' in European descriptions): the Trịnh in the North and the Nguyễn in the South. The *chúa* Trịnh Tạc (r. 1645-1682) led a drive towards centralisation, a focus on Confucian ideology, increased taxation, and tightened state control over villages and foreign traders.⁹⁷ The primary goods that attracted traders keen to break into the Japan-China trade were raw silk and silver, although other commodities like tortoise-shell, areca nuts, and cinnamon were also profitable. The capital of Tonkin, Ké Cho,⁹⁸ had been dominated by Chinese traders until the 1670's, but by the time of William Dampier's visit in the later 1680's, they had been banished along with other foreign merchants to the town of Hien.⁹⁹ The Dutch had been allowed to establish a trading post in Tonkin in the 1650's in return for services to the Trịnh rulers, including attacking their enemies in Cochin-China.¹⁰⁰ Other groups of foreigners in Tonkin included small communities of (often Christian) Japanese merchants¹⁰¹ and French and Portuguese Jesuit priests.¹⁰²

⁹⁷ Insun Yu, *Law and Society in Seventeenth Century Vietnam* (Asiatic Research Centre, Korea University, 1990).

⁹⁸ Ké Cho (Chachao or Cacho in European documents) was the popular name for Thang Long, the capital of Dai Viet from the eleventh to the nineteenth century.

⁹⁹ Baron, *Description*, p. 210 describes the Chinese merchants dominance of the silk trade to Japan but Dampier notes that by the 1680's the Chinese presence in the capital had been forbidden and a much smaller community remained in Hien or Hean (Taylor, note 15, p. 253, refers to Phó Hiến). For a Chinese description of seventeenth century Vietnam, Arnold J.A. Vissière, 'Ngan-Nan Ki Yeou: relation d'un voyage au Tonkin', *Bulletin de Géographie Historique et Descriptive* 4 (1889).

¹⁰⁰ WJM Buch, 'La Compagnie des Indes néerlandaises et l'Indochina', *Bulletin de l'Ecole française d'Extrême-Orient* 36 (1936), 97-196, pp. 103-4.

¹⁰¹ Alexandre de Rhodes, *Histoire du Royaume du Tonkin* ed. by Jean-Pierre Duteil (Paris: Éditions Kimé, 1999).

¹⁰² De Rhodes, *Histoire*, Book II relates that the initial enthusiasm of Trịnh Trang, father of Trịnh Tạc for the

While the *chúa* of Tonkin kept foreign traders strictly under their control during the seventeenth century, the Buddhist rulers of Siam (modern Thailand) pursued a policy of liberalising trade, allowing foreign merchants to settle in the capital, and taking some into their service.¹⁰³ In 1605, Japanese merchants were allocated a settlement in the capital Ayutthaya (or Ayudhya) and exported sappanwood and animal skins.¹⁰⁴ An Embassy was dispatched to the Hague in 1609, and King Narai (r. 1659-1688) sent Ambassadors to Persia,¹⁰⁵ Tonkin,¹⁰⁶ and France.¹⁰⁷ By the mid-1680s, there appears to have been a considerable expatriate population in Ayutthaya, with Dutch¹⁰⁸, Chinese, and Iranian¹⁰⁹ traders joined by French and Portuguese missionaries and priests, all of whom were encouraged by the policies of religious toleration and free trade.¹¹⁰ The English Company made two attempts to begin a factory in Siam: in 1613-23 and in 1666.¹¹¹ However, they faced a constant problem with deserters who found the service of the King more congenial than the Company's. At least

Jesuit missionaries, who he hoped would facilitate trade with Portugal, subsided after a conflict over polygamy. De Rhodes himself was imprisoned for some time in 1645 before escaping via Macao.

¹⁰³ Anthony Reid 'Merchant Princes and Magic Mediators', *Indonesia and the Malay World*, 36 (2008), 253-267, p. 256 notes that the capital Ayutthaya owed its origins to the Chinese or Sino-Thai traders who made it their base in the fourteenth century.

¹⁰⁴ EW Hutchinson, *Adventurers in Siam in the Seventeenth Century* (London: The Royal Asiatic Society, 1940), p. 27.

¹⁰⁵ Anderson, *English Intercourse with Siam*, p. 249 gives the name of the Ambassador to Persia as Ali Selim. He left Ispahan in early 1685 accompanied by the Persian Ambassador, Ebraim Beague and arrived in Siam on English ships via Fort St George.

¹⁰⁶ IOR G/12/17/1 fol. 40-41, transcribed in Anthony Farrington and Dhiravat na Pombejra, *The English Factory in Siam 1612-1685* (London: The British Library, 2007), 2 vols, i, p. 418-419. 'A Syam junck arrived with two ambassadors from the King of Syam, but the comander an Englishman resident there'.

¹⁰⁷ Anderson, *English Intercourse with Siam*, pp. 224-252.

¹⁰⁸ Hutchinson, *Adventurers in Siam*, p. 33 on the first treaty signed between Siam and the Dutch in 1617 for the purchase of hides and the Portuguese and English reprisals. See also Bhawan Ruangsilp, 'Dutch Interaction with Siamese Law and the City Rules of Ayutthaya in the Seventeenth and Eighteenth Centuries', in Masashi ed. *Asian Port Cities*, 139-161.

¹⁰⁹ M. Ismail Marcinkowski, 'The Iranian-Siamese Connection: An Iranian Community in the Thai Kingdom of Ayutthaya', *Iranian Studies*, 35 (2002), 23-46.

¹¹⁰ John Anderson, *English Intercourse with Siam in the Seventeenth Century* (London: Kegan Paul; Trench, Trübner & co., 1890), p. 297. Hutchinson, *Adventurers in Siam*, p. 23 notes that the Jesuits had a church in Ayudhya by 1606. p. 44-48 notes the founding of the French mission with the support of Louis XIV in 1659. The French missionaries acted as conduits for the correspondence of King Narai and Louis XIV, which led to the Embassy of 1687. King Narai regarded the French as possibly allies against the Dutch. See also R S. Love, 'Monarchs, Merchants, and Missionaries', who also notes the co-dependent of the Mission Étrangères and the Compagnie des Indes.

¹¹¹ Farrington and Pombejra, *The English Factory in Siam 1612-1685*; IOR OC 107; OC 125; OC 1130; OC 3197.

eleven English commanders of ships and others had entered the service of King Narai, while a contemporary account put the total number of English in Ayutthaya before 1688 at 120. The friction generated by such intercultural contacts could have creative, but also explosive, consequences.¹¹² For example, astronomical instruments were taken from France to Ayutthaya and a dialogue begun between Western and Thai traditions of astronomy.¹¹³ Other contributions of foreign settlers to Thai affairs were less welcome: for example, Japanese settlers were massacred in 1632 after supporting the usurper Prasād T'ong. A similar fate awaited Europeans who interfered in the internal affairs of the kingdom.

Brokers, Go-betweens, Passeurs culturels

Such experiments in managed multiculturalism meant it was crucial for all these groups of competing traders and rulers to gather information about one another. One way was through the collection of 'novelties' or 'curiosities' from other cultures. These included scientific instruments and weapons: telescopes, watches, burning and perspective glasses, as well as firearms and gunpowder, were often sent to Asian rulers by the representatives of the European trading companies,¹¹⁴ while Chinese compasses and Japanese stilliards (weighing scales) were in demand among the intelligentsia of Europe.¹¹⁵ Maps and pictures were also exchanged,¹¹⁶ as were exotic animals – alive, dead, or depicted – and plant specimens and

¹¹² The idea of 'friction' is borrowed from Anna Lowenhaupt Tsing, *Friction, an Ethnography of Global Contact* (Princeton: Princeton University Press, 2005).

¹¹³ Ian Hodges, 'Western Science in Siam: A Tale of Two Kings,' *Osiris*, second series, 13 (1998), 80-95, p. 87.

¹¹⁴ For the collections of scientific equipment including telescopes, time-pieces, globes, and astronomical tables amassed by King Narai of Siam, see Ian Hodges, 'Western Science in Siam,' *Osiris*, 13 (1998).

¹¹⁵ On January 23rd 1684, the Royal Society's *Record Book*, Vol. 6, fols. 143-4, records Hooke experimenting with Japanese scales and weights. For the Chinese compass see Chapter 3.

¹¹⁶ The voyage of Japan of lists among its cargo maps of 'several parts' and pictures of King Charles II (Pratt, *History of Japan*, ii, p. 161); see also Timon Screech, "'Pictures (the Most Part Bawdy)": The Anglo-Japanese Painting Trade in the Early 1600s', *The Art Bulletin*, 87 (2005), pp. 50-72; Ashok Kumar, *Mughal Painting: An Interplay of Indigenous and Foreign Traditions* (Delhi: Munshiram Manoharlal, 2000). Ronald S. Love, 'Monarchs, Merchants, and Missionaries in Early Modern Asia: The Missions Étrangères in Siam, 1662-1684', *The International History Review*, 21 (1999), 1-27; Ito Shiori, 'Western and Chinese Influences on Japanese Painting in the Eighteenth Century', in Masashi Haneda ed. *Asian Port Cities, 1600-1800: Local and foreign Cultural Interactions* (Tokyo: University of Toyko, 2009); Donald S. Lach, *Asia in the Making of Europe*, 4 vols (Chicago: University of Chicago Press, 1970), II, Book 1, 'The Visual Arts'.

drugs.¹¹⁷ Occasionally, more bizarre items occur: for example, the letters of the Siam factory to Bantam during the 1670's obsess over the need to provide the King of Siam with 'toys' including 'A Chrystall branch & amorous representations in wax work',¹¹⁸ while Hans Sloane attracted ridicule for his interest in Chinese ear-pickers.¹¹⁹

To manage these exchanges, which were often part of the process of negotiating trade and settlements, people who could mediate between two or more languages and cultural systems were essential. Studies of the connections between the medieval and early-modern South Asian state and the colonial period have emphasised that in both, the maintenance of power was dependent on accumulating various types of knowledge and stressed the role of 'spies, informants and collators of gossip' in establishing these networks.¹²⁰ Those who could mobilise and deploy the information that filtered through these networks have been described as 'brokers', 'go-betweenes', or *passeurs culturels*.¹²¹ These people fulfilled a number of roles, being specialists in language, diplomacy, law, navigation, in mapping territory, in explaining the manners and customs of foreign peoples, or collecting medicinal plants. They often worked in several of these fields and are difficult to define because they cannot be assigned to any fixed social group; indeed their roles depended on their insight into other worlds, either by changing allegiances or by prolonged contact with another group.¹²² I have used

¹¹⁷ R. S. Love, 'Monarchs, Merchants, and Missionaries', p. 23. For demands made by the Brahmins at the court of the King of Golconda for animal products including a civet cat and alligator gall, IOR G/19/26, no folio number, dated 2 September 1670 and 'Brahminy Podula Lyngpah from Conjevaram to the R[igh]t Wors[hipfu]ll: William Gyfford Esqr: Govr'. Undated but c. Feb 1682, *Letters to Fort St George 1682* (Madras: Government Press, 1915), ii, p. 15.

¹¹⁸ IOR G/21/7, fols. 36-37 Siam to Bantam, 28 November 1678. See also IOR G/21/6(1) fol. 100r, transcribed in Farrington and Pomejra, i, pp. 393-4.

¹¹⁹ James Delbourgo, 'Exceeding the Age in Every Thing: Placing Sloane's Objects', *Spontaneous Generations: A Journal for the History and Philosophy of Science*, 3 (2009): 41-54.

¹²⁰ Christopher Bayly, 'Knowing the Country: Empire and Information in India', *Modern Asian Studies*, 27 (1993), pp. 3-43 and *Empire and Information* (Cambridge: CUP, 1996).

¹²¹ Louse Bénat Tachot and Serge Grunzinski eds. *Passeurs culturels: mécanismes de métissage* (Paris: Presses universitaires de Marne-la-Vallée & Éditions de la Maison des Sciences de l'Homme, 2001); Innes Zupanov, 'Goan Brahmins in the Land of Promise: Missionaries, Spies and Gentiles in Seventeenth- and Eighteenth-Century Sri Lanka', in Jorge Flores ed. *Re-exploring the links: history and constructed histories between Portugal and Sri Lanka*, South China and Maritime Asia Series (Wiesbaden: Harrassowitz, cop. 2007), pp. 171-210; Schaffer, Roberts, Raj, and Delbourgo eds, *The Brokered World*.

¹²² Raj, 'Mapping Knowledge Go-Betweenes in Calcutta, 1770-1820', in *The Brokered World*, 105-150, p. 111.

Grunzinski's term *passeurs culturels* here because it seems more expressive of personal identity, and the mixing and moulding of identities than the terms 'broker' and 'go-between', which point more to the roles occupied by such people.¹²³

Here I use the life of Samuel Baron to argue that in this period *passeurs culturels* were particularly important to all sides of the complex struggles for dominance in the unstable world of East Asia in this period. Focusing on the people who spanned cultures can highlight similarities between the techniques of gathering and using knowledge across different cultures in this period. Using the framework of one man's life to explore the wider history of imperial expansion and conflict in this period can allow us to move beyond narratives focusing on particular nations and their ideologies towards a picture of the connections between the underlying concerns and practises of different competing actors in this period of increasing global contact.¹²⁴

Samuel Baron: A summary biography

Baron's background is obscure, partly I'll suggest, a result of his own efforts to mould his ethnic and personal identity. Previous accounts almost all mistake his origins and none give an account of his life after despatching his account of Tonkin to Hooke and Hoskins. However, an overview of his life demonstrates that he played an important role in some key historical events.

Samuel was born Salomon Baron, the 'natural' son of a Dutchman, Hendrik Baron and a Tonkinese woman in around 1640. The sexual alliances of the agents of the Dutch company

¹²³ Grunzinski, 'Un honnête homme, c'est un homme mêle', pp. 1-22, provides an interesting general discussion of the potentials and limitations of concepts such as 'hybridism', 'melange' and cultural and biological mixing.

¹²⁴ David Lambert and Alan Lester eds. *Colonial Lives Across the British Empire: Imperial Careering in the Long Nineteenth Century* (Cambridge: Cambridge University Press, 2006), c.f. Kerry Ward, *Networks of Empire*, p. 9.

with women in Tonkin were advantageous in a country where most trade was controlled by women.¹²⁵ The VOC records in 1651 describe Hendrik as a 'long-term resident' of Tonkin, familiar with the language and culture. These skills allowed him to rise to head the Dutch factory in Ké Cho.¹²⁶ Baron himself is therefore likely to have been instructed in both indigenous and European trade by both his parents from an early age. He also claimed that he travelled to Japan and Taiwan as a young man. The role of mixed-race people in the history of European interaction with Asia has been much neglected.¹²⁷ However, as Baron's background shows, these people were in an ideal position to span cultures.

In 1659, Salomon left for Holland, changing his name at some stage. It is clear from his work that he acquired a thorough knowledge of contemporary and classical European culture: in the *Description*, he quotes Luther's speeches, compares the Tonkinese to the ancient Spartans, and to please his English readers, drops in a reference to the defeat of the Spanish Armada. Baron seems also to have read European travel books dealing with South and East Asia.¹²⁸

Baron first appears in the Court Minutes of the East India Company in London in March 1671, where he is described as a Frenchman: the first of many mistaken statements about his background.¹²⁹ Baron had approached an Ambassador in Paris and suggested to him a scheme for re-opening the English trade with Japan. This suggestion was extremely well-timed,

¹²⁵ William Dampier, *Voyages and Descriptions Vol. II, in Three Parts* (Printed for James Knapton, London, 1700), p. 51. Dampier also notes that most money-changers are women (p. 60). For the traditional equal status of women in Vietnamese society – although somewhat diluted by the influence of Confucianism by this period Insun Yu, *Law and Society in Seventeenth Century Vietnam* (Asiatic Research Centre, Korea University, 1990).

¹²⁶ Buch, 'La Compagnie des Indes néerlandaises et l'Indochina'.

¹²⁷ Kumari Jayawardena, *Erasure of the Euro-Asian: recovering early radicalism and feminism in South Asia* (Colombo: Social Scientists' Association, 2007). The example of Francis L'Etoile, a Eurasian born or naturalised in the Danish settlement of Tranquebar who entered the service of Sultan Jauhar al-Alam is given by Reid, 'Merchant Princes and Magic Mediators', p. 259.

¹²⁸ Baron, *Description*, pp. 205, 213, 223, 244, and 245,

¹²⁹ Court Minutes, 3 March 1670, Vol. 27, fol. 104, transcribed in Peter Pratt, *History of Japan, Compiled from the Records of The English East India Company at the Instance of the Court of Directors* (London: Curzon Press, 1972, first published Kobe, 1931), pp. 146-7.

following up as it did on an initiative led from Bantam (the EIC headquarters in Java) to reopen the English trade with Japan, which had been abandoned almost fifty years previously, despite periodic attempts to reopen it. Baron was therefore employed on an unusually high salary of £120 per annum as second-in-command on a voyage to Japan.¹³⁰

Although the English Company hoped (unwisely, given the dismal failure of the previous attempt) that Japan would provide a market for the English broadcloths that had been rejected across Asia, they were also aware that any entry into the Japanese trade would involve establishing bases in the entrepôts discussed above, in order to acquire commodities that could be profitably exchanged. It was Baron's unrivalled experience of the local languages and cultures of this region that allowed him to demand a salary and position that would have been unthinkable for most men of his age and particularly for an unknown foreigner.

Three ships, *Zant*, *Experiment*, and *Return*, were therefore despatched from London to Tonkin, Formosa, and Japan.¹³¹ Baron was intended to play a key part in the negotiations in each place. On the way, Baron spied on his former sponsors at the VOC base in Batavia, as well as providing information to London about the designs of the French *Compagnie des Indes* on the cinnamon of Ceylon, and the potentially treacherous intentions of the Company's own servants.¹³² The use of Baron to provide intelligence to the East India Company was not unusual, the archives are filled with the writings of factors reporting the sinister designs of their colleagues and competitors and Baron himself would later become the target of such

¹³⁰ Court Minutes, 10 March 1670-1, Vol. 27, fol. 105b, fol. 106, transcribed in Pratt, *History of Japan*, p. 147. Baron's 'assistant', Jan France, was also employed after producing a 'testimonial from the Protestant Church of Paris of his being of the Reformed Religion'.

¹³¹ For detailed discussion of the voyages of these ships see Derek Massarella, *A World Elsewhere: Europe's Encounter with Japan in the Sixteenth and Seventeenth Centuries* (New Haven: Yale University Press, 1990) and Roger Machin ed. *Experiment and Return. Documents concerning the Japan Voyage of the English East India Company, 1671-3* (Kyoto: Richard Cocks Society, 1978).

¹³² IOR E/3/33 fol. 42 (OC 3646) S. Baron at Bantam to London 4 June 1672. For the voyage of de la Haye and the travel narrative describing it see Chapter 4.

writing. The East India Company was dependent on this web of informers to inform them when their servants were acting in interests other than their own, although often which version of events was accepted depended on the influence the factors in question wielded through their networks of European and Asian patrons.

The factory in Vietnam was established in June 1672, with the aid of Tonkinese interpreters, merchants, carpenters, and other workers recruited by Baron at Batavia and sent with the English factor William Gyfford (or Gifford).¹³³ The agreements brokered by Baron with Cheng Ch'enga-kung also allowed the establishment of an EIC settlement in Taiwan in July 1672.¹³⁴ The *Return* had stopped at Siam on its voyage to Japan in 1674, landing three factors who settled themselves in the old quarters of the EIC in Ayutthaya, initially meeting with a good reception and making agreements for trade.¹³⁵ Despite these relatively auspicious beginnings, the settlements in both Taiwan and Tonkin failed to profit in their early years and were subject to the strict control of the authorities and hostility from other groups of traders. On arriving in Tonkin, Gyfford was told by a mandarin that the factors were now 'in the position of a married woman, that can blame no-one but herself for being brought into bondage'.¹³⁶ Gyfford certainly seemed to agree with this assessment: he appealed to the EIC Directors in London not to blame the factors 'who are in reality no better than slaves', for the settlement's lack of profit.¹³⁷ The helplessness of the English factors is an illustration of the fact that the actions of EIC servants in Asia were often directed more by the demands of local rulers than by directives from London. It also highlights the complete dependence of the

¹³³ IOR E/3/33 fol. 42 (OC 3646) S. Baron at Bantam to London, 4 June 1672 and Sloane 998, fol. 17r, Sunday 18 August.

¹³⁴ Instructions from Henry Dacres and Council at Bantam to David Stephens, Samuel Baron, Simon Delboe and other factors for their settlement at Taiwan, 9 June 1672, repr. in Hsiu-Jung Chang, Anthony Farrington, Huang Fu-San, Ts'ao Yung-ho, and Wu Mi-Tsa eds *The English Factory in Taiwan, 1679-1685* (Taipei: National Taiwan University, 1995), pp. 121-132 (passage quoted from p. 131).

¹³⁵ Farrington and Pombeyra, *The English Factory in Siam*, i, pp. 383-407. The *Return* arrived back in Surat in December 1675 with a positive report and the hope that the King of Siam could persuade the Emperor of Japan to permit the English to trade there.

¹³⁶ G/12/17, fol. 9v.

¹³⁷ Sloane 998, fol. 27.

European factories on men like Baron and the helpers they provided.

The voyage from Taiwan to Japan was disastrous for the EIC. The war which had broken out between the English and Dutch in Europe (1672-4) meant that two of three ships English ships that left Taiwan were captured by the Dutch and Baron was imprisoned for some time in Batavia. On reaching Japan, the crew of the third ship were questioned about the English King and his Catholic Portuguese wife – the Portuguese had recently been expelled from Japan following a Christian uprising. Eventually they were refused permission to trade and ordered to leave.¹³⁸

After his eventual release from Batavia, on the intervention of some VOC commissioners then in London, Baron returned to England in 1677. Frequenting the coffee houses of London, he met members of the Royal Society including Robert Hooke and Robert Boyle.¹³⁹ With Hooke's help, Baron also seems to have defended Gyfford, who by this stage had been recalled to London on charges of mismanagement and private trade.¹⁴⁰ After 'proffering his services' to Hooke as a collector of information, Baron returned to Tonkin, officially as a private merchant – he was constantly wary of appearing in his homeland in too close an association with the English factors, arguing at one stage that if he went to Tonkin at all it should be 'in the character of inspector'.¹⁴¹ Nevertheless, the records of the EIC show that he was again paid to act as a go-between and informer.¹⁴² He seems to have been involved in negotiations with the *chua* Trịnh Tạc on behalf of the English factory.

¹³⁸ Machin, *Experiment and Return*.

¹³⁹ Henry W. Robinson and Walter Adams eds, *The diary of Robert Hooke, M.A., M.D., F.R.S., 1672-1680* (London: Wykeham Publications, 1968), p. 293, Tues, 29 May 1677 – 'at Toothes with Mr. Barron of Funquin'; Sat Sept 22 1677 – 'With Mr Barron to Mr Boyle by water'.

¹⁴⁰ Robinson and Adams eds. *Diary of Robert Hooke*, entries for Mon 20 August 1677 and Thurs Oct 1 1677, which refer to meeting Gyfford at Sion College (a London-based organization for priests) and procuring 'workmen' to assist him.

¹⁴¹ E/3/33, fols. 11-12 (OC 3637), 10 May 1672, Samuel Baron to the Agent and Council. Baron claims he has presented his reasons for this while in England.

¹⁴² Summaries of letters from Bantam, G/21/7, fol. 22 '160 d[ollars] paid Mr Barron who is gone for Tunqueen'.

However, as the English factors complained, Baron also had his own agenda. He had entered the service of the *chúa*'s grandson, who 'adopted' him and gave him permission to trade. In return, Baron brought his patron 'foreign curiosities' from abroad.¹⁴³ Baron also tried his best to persuade Trịnh Tạc to open his own trade with Manilla and Siam, telling the *chúa* of the vast profit made by the foreign traders in his kingdom who traded to these places.¹⁴⁴ Baron had thus established relations of patronage in both London and Vietnam, based on the provision of information and 'curiosities' or physical objects from another culture. Baron appears to have prospered in this period, and it was probably during the time he spent in Tonkin in the 1670's that he married a local woman, who accompanied him on his later travels.¹⁴⁵

Another powerful patron, whose favour Baron seems to have briefly acquired, was King Narai of Siam. Baron traded privately from Tonkin and Bantam to Ayutthaya during the late 1670s and was in contact with the English factors there as well as other Europeans including the Portuguese Jesuits. In 1682, he persuaded King Narai to appoint him as the commander of a ship to Tonkin with a cargo of rice.¹⁴⁶ However, arriving in Tonkin, he found Trịnh Tạc dead and his patron apparently mad and had his own cargo of rice confiscated.¹⁴⁷ Furthermore, in 1683, three Chinese Ambassadors had arrived in Ké Cho from the Court of the Emperor Lê Hi Tông (r. 1676-1705).¹⁴⁸ Although his references to this period are obscure, Baron seems to

¹⁴³ Baron, *Description*, p. 217. The 'prince', whose name is not given, was the son of Trịnh Cấn.

¹⁴⁴ G/12/17(4), Abel Payne and Council in Bantam to the factors in Tonkin, 29 May 1677; G/12/17(5) fols. 491r-491v – 16 December 1678, Thomas James and Council in Tonqueen to Bantam.

¹⁴⁵ Baron is referred to as being married to a 'Tonqueener' in the Fort St George census of 1688 (discussed below). A letter addressed to him in 1684 when in Siam presents greetings to 'your Lady' (IOR/G/12/16 fol. 200 - Peter Crouch and John Thomas at the mouth of the Siam river to 'Mr Samuel Barron, merchant in Syam'). Assuming that these were the same woman, it seems likely that Baron's wife accompanied or followed him during his adventures after leaving Tonkin.

¹⁴⁶ IOR E/3/42, no. 4885 William Hodges in Tonkin to Nathaniel Cholmley at Madras, 27 December 1682, transcribed in Farrington and na Pombejra, *The English Factory in Siam*, ii, p. 709.

¹⁴⁷ Baron, *Description*, p. 217. The editors note that temporary 'insanity' was not an uncommon ruse for Vietnamese princes to employ when in difficult situations.

¹⁴⁸ Buch, 'II. La Compagnie des Indes néerlandaises et l'Indochine', *Bulletin de l'Ecole française d'Extrême-*

have been punished for his refusal to lead a military force against the Cochin-Chinese and perhaps for his association with enemies of the Chinese emperor like the Cheng in Taiwan.¹⁴⁹

Baron therefore fled back to Siam, arriving in February 1684 a state of destitution.¹⁵⁰ On arriving in Siam after a space of two years without goods or profits from his voyage, Baron came into conflict with Chinese traders and the King's officials, and took refuge with the English factory.¹⁵¹ By this stage, one of the most influential men in the kingdom was Constantine Phaulcon, a Greek who had been recruited as an interpreter by the English factors landed in 1674 but who soon defected to the service of King Narai and began to court alternative trading partners, including the French.¹⁵² Phaulcon was in many ways a similar character to Baron: fluent in both European and Asian languages he moved between cultures with ease. A description given by some English factors who encountered him in 1684 depicts him at home 'entertaining the Chineses with a Comedy'.¹⁵³ As was perhaps inevitable, given the similarities between the two men, they became rivals and in 1684 Baron wrote a scathing report of the 'monstrous' character of Phaulcon and his plan to displace the EIC in favour of 'interlopers'.¹⁵⁴ He urged the Company to send a military force to Siam to remove Phaulcon and his associates. By 1686, Phaulcon was also calling for European military intervention in Siam, urging Louis XIV to seize Mergui for France.¹⁵⁵ Despite his rivalry with Phaulcon, Baron seems to have built up strong enough networks with local officials and Portuguese

Orient, 37 (1937) 121-237, p. 181.

¹⁴⁹ Baron, *Description*, p. 254.

¹⁵⁰ Samuel Baron at Siam, 15 November 1684 to William Gifford at Fort St George, *Letters to FSG 1684-5*, pp. 42-44. Baron had set off with a Company ship, the *Smerniott*, which had been forced to turn back to Tonkin.

¹⁵¹ Journal of Peter Crouch, supercargo of the *Delight*, 25 September 1683 – 17 April 1684, entry for 3 March 1684, transcribed in Farrington and na Pomejra, *The English Factory in Siam*, ii, pp. 834-5.

¹⁵² Anderson, *English Intercourse with Siam*, p. 309-10 and R. S. Love, 'Monarchs, Missionaries and Merchants'. The French factory was established in Ayudhya in 1680. See also Ch. XI – on the French Embassy to Siam and the Mughal Court in 1687 with letters from Louis XIV. The embassy left Siam in Jan 1688 with a letter to Louis XIV, three mandarins, and three Siamese youths to be educated in France.

¹⁵³ IOR/G/12/16, fol. 172v.

¹⁵⁴ Samuel Baron at Siam, 15 November 1684 to William Gifford at Fort St George, *Letters to FSG 1684-5*, p. 43.

¹⁵⁵ E.G.E. Hall, 'From Mergui to Singapore, 1686-1819: a neglected chapter in the naval history of the Indian Ocean', *Journal of the Siam Society*, 5 (1953), 1-18.

priests to manage to secure the release of two English factors who were imprisoned after coming into conflict with Phaulcon in 1684.¹⁵⁶

Despite Baron's warnings and an explicit command in 1684 from London to break off all relations with Siam,¹⁵⁷ the private interests of members of the Company meant that EIC ships continued to be sent from both Surat and Madras to trade in Siam.¹⁵⁸ In 1685, Siamese Ambassador was also received with much ceremony along with his Persian counterpart in Fort St George.¹⁵⁹ Eventually, a feud broke out between Elihu Yale, who succeeded William Gyfford as President of Fort St George, and Phaulcon over some jewels. This added to the embarrassment of the conflict begun in October 1686 by another errant Company servant, Samuel White, against their ally the King of Golconda using Siamese war ships with English captains,¹⁶⁰ finally motivated the Madras Council to follow the instructions of the Directors to make war on Siam.¹⁶¹ They were supported by King James II, with the aim of forestalling Louis XVI's ambitions for a settlement in Mergui to open up trade with East Asia.¹⁶² In Siam, the situation was also proving explosive, and like the Japanese before them, the European traders were punished for their interference in Siam's affairs by a massacre of about 200 of them in Mergui in 1687.¹⁶³ This was followed in 1688 by the execution of Phaulcon¹⁶⁴ and the expulsion of all traders from Ayudhya under Phra-Phet-Raxa, an army general who had been victorious in campaigns in Cochin China and to whom the mandarins entrusted the affairs of

¹⁵⁶ IOR/G/12/16 fol. 200 - Peter Crouch and John Thomas to 'Mr Samuel Barron, merchant in Syam', 2 April 1684.

¹⁵⁷ IOR/G/12/16 fols. 163-92, London to Fort St George, 2 April 1684.

¹⁵⁸ Anderson, *English Intercourse with Siam*, p. 220-1.

¹⁵⁹ Consultation of 2 August 1685, transcribed in Love, *Vestiges*, p. 488.

¹⁶⁰ See Anderson, op. cit. and Stuart Rankin, 'White, Samuel (c. 1650–1689)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk:80/view/article/53891>, accessed 19 Feb 2008].

¹⁶¹ Letter of Yale, referenced as 'Oriental Repertory, vol. ii, p. 189', c.f. Anderson, *English Intercourse with Siam*, p. 275.

¹⁶² Anderson, *English Intercourse with Siam*, p. 333.

¹⁶³ See anon, *A Full and True Relation of the Great and Wonderful Revolution that Happened Lately in the Kingdom of Siam in the East-Indies* (London: Printed for Randal Taylor, 1690); Anderson, *English Intercourse with Siam*, Chapter X.

¹⁶⁴ Hutchinson, p. 170.

Kingdom after King Narai fell ill in May 1688. Meanwhile in England, James II was overthrown in the Glorious Revolution of 1688.

In 1685, Baron had accepted an invitation from his old friend and patron, William Gyfford, to return to Fort St George. Gyfford needed Baron's help to negotiate a new set of power relations that had emerged in the region as a result of the continuing expansion of the Manchu forces southwards into the coastal areas and outposts until recently held by the Ming loyalists. Like the Tonkin factory, the English in Taiwan had failed in their aim to break into the indigenous trade in any profitable way.¹⁶⁵ Nevertheless, the English were granted permission to trade in Amoy (Xiamen), also controlled by the Cheng. A factory was opened in Amoy in 1677 with Taiwan placed under its control the following year.¹⁶⁶ In 1680, however, Amoy fell to the Ch'ing and the English factors fled after the Cheng leaders to Taiwan. Taiwan was taken over by the Ch'ing under Shih Lang (known to the English as Segor or Seco) in 1683.¹⁶⁷ The English factory there was forced to pay large sums of money as a tribute to the new regime.¹⁶⁸ However, under the new Ch'ing regime, they were once again permitted to trade with Amoy, where some factors were dispatched, meeting with those men who with Baron's help had fled there from Siam after being imprisoned by Phaulcon.¹⁶⁹ Given his language and diplomatic skills, Baron was therefore the ideal candidate to head a voyage to Amoy and consolidate the trade there.¹⁷⁰

At Amoy, Dutch, Siamese, and Portuguese traders were taking advantage of the Ch'ing

¹⁶⁵ On the problems of trade in Taiwan, see IOR G/12/4B fols. 150-151, Simon Delboe and Council at Bantam, 12 February 1673, transcribed in *English Factory in Taiwan*, pp. 170-173. This letter mentions attacks by the Cheng rulers of Taiwan against Japanese ships and the difficulties of trading with Tartar China.

¹⁶⁶ Massarella, 'China, Tartars, and "Thea"', p. 408.

¹⁶⁷ IOR E/3/16, fols. 134-5, Massarella, 'China, Tartars, and "Thea"', p. 416. See also IOR G/12/16, fols. 133v-139, Thomas Angeir and Thomas Woolhouse at Taiwan to the Agent and Council in Siam, 20 December 1683, transcribed in *English Factory in Taiwan*, pp. 550-567.

¹⁶⁸ Massarella, 'China, Tartars, and "Thea"', p. 419.

¹⁶⁹ IOR G/12/16, fols 175r-192v, Journal of Peter Crouch, supercargo of the *Delight*, 24 April 1684-20 March 1685, transcribed in *English Factory in Taiwan*, p. 580.

¹⁷⁰ IOR G/19/4, fol. 145, Consultation, 8 April 1686.

decision to liberalise trade at the port. Although two English ships that arrived there in 1685 had been allowed to trade, they had not been able to procure exemption from the customs duties that were imposed on all merchants.¹⁷¹ By the time Baron and the other factors arrived, in May 1686, these ships had left.¹⁷² Baron entered into negotiations with Shih Lang, but was also unable to achieve any binding agreement. Furthermore, he fell out violently with his subordinates. Both sides wrote to the Council at Fort St George, the underlings complaining that Baron sold their goods without consultation and 'went Whiffing up and down with some rascally Chinamen who led him by the nose under pretense to procure a settlement'.¹⁷³ The factors conclude, rather revealingly, that 'Chinamen are a crafty and knavish sort of people in general, but tis as easy to cheat them in many things (if one was set on't) as they to cheat us, the only difference is a good linguister'.¹⁷⁴ Meanwhile, Baron claimed that while a person of 'eminent quality' had promised the Company a provisional settlement but that the other factors, who he described as 'malicious and refractory' had refused it.¹⁷⁵ Finally, the other factors left Amoy. Some time later, Baron boarded a Chinese ship, apparently to act as navigator, translator and mediator on a voyage to Fort St George. However, Captain Burton, another English trader in Amoy, wrote to the Council in February 1687 to report Baron's 'fatal accident'.¹⁷⁶ He wrote that the Chinese vessel had capsized and sank with all the crew, including Baron, aboard. He adds that without a 'wonderfull act of providence', Baron must be dead, and then goes on to defend him against allegations apparently made by Captain Alford, the commander of the *Shrewsbury*, that Baron had deserted to the Dutch, adding that 'were Mr

¹⁷¹ Massarella, 'China, Tartars, and "Thea"', p. 422.

¹⁷² IOR G/19/4, fol. 89, 1 January 1687, Consultation, *Letters to FSG 1686-7*, pp. 6-7, Baron, Mose and Dubois to William Gyfford 31 May 1686.

¹⁷³ Henry Mose and Charles Du Bois onboard the *Shrewsbury* to Fort St George, 30 December 1686, *Letters to Fort St George 1686-7*, p. 21. 'Linguister' means interpreter,

¹⁷⁴ Henry Mose and Charles Du Bois onboard the *Shrewsbury* to Fort St George, 30 December 1686, *Letters to Fort St George 1686-7*, p. 21. 'Linguister' means interpreter,

¹⁷⁵ IOR G/19/4, Samuel Baron in Amoy to Fort St George, 23 November 1686; *Letters to Fort St George 1686-7*, p. 24. The next letter, addressed to 'all Persons of what quallity or Conditions' and dated 1 November 1686, is in a similar vein and names the General (Shih Lang) as the person who had promised a settlement.

¹⁷⁶ Henry Burton to Fort St George, 22 February 1687, Cuddalore, *Letters to Fort St George 1686-7*, p. 77-78.

Baron now alive to hear this story, it would Even Scare him to his grave'.¹⁷⁷

Baron had been neither drown nor scared to death, for he appeared on Malacca some time later.¹⁷⁸ His explanation for this 'wonderful act of providence' is not recorded and the whole episode is subject to multiple interpretations: did Baron defect to the Dutch once more, as his accusers claimed?¹⁷⁹ Was he scared enough by the accusations to lie low until he could assure himself of at least some welcome in Madras? Did the 'expensive and extravagant wanderer', as the Directors referred to him,¹⁸⁰ simply decide to engage in some private trade with the profits of the China voyage? Or did Baron really have yet another miraculous escape via one of the fishing boats Burton mentioned nearby the wreck?

By February 1688, Baron had returned to Fort St George accompanied by three Chinese representatives from Shih Lang, to negotiate with the Council for a 'mutual trade'. Baron had apparently encountered these men in Malacca where they had ended up after escaping from some English pirates who had taken their ship. On their arrival 'they were handsomely received in the fort...to oblige their good report of the place, & civilities to our people that voyage thether, & to encourage the trade.'¹⁸¹ Baron himself received a less warm welcome on his return to Fort St George, given the directive from London to sack him, in addition to the testimonies of his fellow merchants in Amoy and the disappearance of the ship, profits, and documents from the voyage.¹⁸² The replacement of his friend William Gyfford with Phaulcon's ally, Elihu Yale, as President at the same time is also likely to have affected his prospects.¹⁸³

However, Baron remained too useful to the Council to be dispensed with altogether and was

¹⁷⁷ Henry Burton to Fort St George, 22 February 1687, Cuddalore, *Letters to FSG 1686-7*, p. 77-78.

¹⁷⁸ G/19/5 fol. 1v, 20 February 1688.

¹⁷⁹ Henry Burton to Fort St George, 22 February 1687, Cuddalore, *Letters to FSG 1686-7*, p. 77-78.

¹⁸⁰ IOR E/3/91 fol. 104, London to Fort St George, 22 October 1686.

¹⁸¹ *FSG Diary and Consultations*, p. 25, 09/02/1688.

¹⁸² *FSG Diary and Consultations*, p. 27, 11/02/1688 and IOR G/19/5, fol. 30v, Consultation, 16 April 1688. The 'General of Amoy' probably refers to Shih Lang.

¹⁸³ IOR E/3/91 fol. 104, London to Fort St George, 22 October 1686.

called on to advise concerning the treatment of the Chinese representatives.¹⁸⁴

After this incident, Baron apparently settled for some time in Madras: he and his wife appear in a February 1688 census¹⁸⁵ and in the survey of houses in 'white town' in August 1688 as the tenant of Bernado Medom.¹⁸⁶ Baron then disappears once more from the Fort St George records until 1693, when he was arrested for 'tampering with some of the soldiers in the garrison to draw them with him to Siam'. For this purpose, he had left his house in white town and taken up residence in the house of a mestizo army drummer in a nearby fishing village.¹⁸⁷ There, as he admitted, he had met secretly with the Siamese Ambassador (perhaps the same one who had arrived in 1685) and spoken to some of the inhabitants and soldiers about leaving to form a new colony under his leadership in Ayutthaya. This incident was Baron's last (recorded) attempt to establish his own trading settlement: something that, perhaps with the memory of his father as example, appears to have been his ultimate goal throughout his adventures.

In 1695, Baron gave the East India Company one final piece of advice, which has survived in the copybook of an eighteenth century governor of Bombay, Henry Vansittart (Appendix 1).¹⁸⁸ This interesting document provides a birds-eye view of the Company's trade in that year. By the time Baron dispensed this last piece of advice, however, he had disappeared from the lists of European residents and sea-faring men of Madras and his burial is not recorded among the lists that remain at St Mary's church. Indeed, in his last years, he seems to have abandoned the 'English' identity he had earlier taken such care to create. Did Baron remain in the Copang or

¹⁸⁴ *FSG Diary and Consultations*, p. 22, 06/02/1688.

¹⁸⁵ FSG, *Diary and Consultations*, Census, pp. 214-5 (2 Feb 1687/8, from Pub Cons Vol. XIII, pp. 261-265).

¹⁸⁶ IOR G/19/5, 2 August 1688 fols. 120-121.

¹⁸⁷ Baron is said to have gone to a 'Portuguese parrier house in the Copang'. For which terms see *Hobson-Jobson*, p. 678 and Yule, *Vestiges*, I, p. 445.

¹⁸⁸ British Library (hereafter BL) MS Add 34123 – 'Copybook of Henry Vansittart, Governor of Bombay, 1756', fols. 40-42: 'Samuel Baron's account of the trade of India, written from Fort St George in 1695'.

San Thomé after the incident in 1693? Did he ever undertake his intended voyage to Siam? Or did he return to Tonkin eventually? In his *Description*, in a passage concerning the presents of food made to the dead, Baron writes, 'I have, in jesting, told some of them I would not like to die a Tonqueeneese, were it only because the custom of the country, whilst living, allowed me three meals a day, but when dead they would feed me but once a year'.¹⁸⁹ Nevertheless, it is possible that at the end of his life Samuel Baron may have returned to the place of his birth, 'to die a Tonqueeneese'.

'Deserters', 'interlopers', and the 'honourable' Company

Samuel Baron was an unusual man, but his story also reveals a larger pattern. Because of their roles in navigating a political situation that was unstable on either side, *passeurs culturels* in this period often had undulating career paths featuring – as did Baron's – episodes of imprisonment and escape, poverty and riches, being promoted to high office and summarily dismissed. For example, Cheng Chih-lung, a Ming official who was appointed to mediate with the Dutch in the 1620's and became involved in their attacks on Spanish-controlled Manilla, was placed in charge of Amoy and at one stage controlled large tracts of land and people before being executed in 1661.¹⁹⁰ Similarly, Constantine Phaulcon, began life as a poor boy, waiting around docks to be picked up by ships,¹⁹¹ rose to become the chief minister of Siam, and was finally executed in disgrace. These swift reversals in the fate of such men were because their dual alliances made them dangerous to both parties with whom they are involved because of their capacity to change sides or play both against the middle. It is for this reason that brokers were often regarded as untrustworthy, and explains why Baron was denounced as a 'deserter' by both the English and the Dutch.

¹⁸⁹ Baron, *Description*, p. 267.

¹⁹⁰ Willis, 'Maritime China from Wang Chih to Shih Lang'. Arnoldus Montanus, *Atlas Japannensis*, trans. John Ogilby (London: Printed by Tho. Johnson for the author, 1670) p. 58 claims that Chih Lang had also been involved with the Portuguese of Macao.

¹⁹¹ This is a story related by the 'English Catholic' author of the manuscript at the Mission Étrangere (MS 854-942), translated in Hutchinson, *Adventurers*, p. 247.

Because they were bound up in the same networks of patronage and brokerage, albeit for some at one remove, such swift elevations to power and falls from grace also affected members of the East India Company like Baron's patron Gyfford. As Yule notes, 'hardly any man appointed to high place in India at this period, continued for more than the briefest space to retain the confidence of the court'.¹⁹² Like Gyfford, almost all Governors were at some stage accused by the Company, often on the information of their rivals, of private trade, dealing with interlopers, deserting to local rulers or European rivals, usually coupled with accusations of a moral nature, such as drunkenness or debauchery. For example, the accusations made in 1693 against Elihu Yale by his Council list a number of crimes including 'leading young factors into debauchery', 'oppressing the natives', 'confounding' the Company accounts for his own benefit, and increasing his influence with the London Directors through lavish presents acquired as a result of his private trade.¹⁹³

Such accusations should be situated within the contemporary context of the Company's factories in Asia. As Gyfford's exchange with the mandarin on arriving in Tonkin shows, the representatives of European trading companies were bound to do the bidding of local rulers, at least until they were able to build up sufficient funds, fortifications, and independent military force to turn events their own way. The services Europeans were required to perform included entering regional conflicts, as with the demand of the *chúa* that the Dutch attack his enemies in Cochin China and White's war on Golconda at the command of King Narai. While such engagement was necessary for the Directors in London to profit from trade in the region, their servants becoming embroiled in local conflicts could prove dangerous to their trade in other regions, as when White's war began to threaten the alliance of Fort St George with Golconda.

¹⁹²Yule, *Diary of William Hedges*, ii, p. xii.

¹⁹³ Bodleian Library (hereafter Bod.) MS Rawl. A. 302, fol. 157, 'Charges from the Council of Fort St George against their President Elihu Yale October 20th 1690'.

Therefore, in this period, the issue of dual alliances affected not only a distinct class of people who can be classed as brokers or go-betweens, but every member of the Company with any power to effect agreements for trade and settlement. This complicates the issue of 'desertion' and I argue must make us rethink our concept of the Company in this period. In other words, rather than a simple picture of lines of command emanating from London, we must envisage the Directors in London gathering information from a web of informers like Baron about the involvement of their servants in local politics and intervening strategically to their own advantage. Such interventions could include removing servants whose actions became politically embarrassing elsewhere in the region. This could be achieved by summons to London like those Gyfford received, but in more extreme cases, like that of Samuel White, it involved the use of force. I would suggest that this, as well as the fear of rival trading groups,¹⁹⁴ was an important reason for the flood of petitions that the EIC presented to parliament during this period to increase their powers over all Englishmen in their area of operation.¹⁹⁵ In 1688, the Company prevailed on King James to issue a proclamation ordering all Englishmen to leave the service of local rulers in the East Indies and live within the Company settlements under EIC authority.¹⁹⁶ However, the definition of 'desertion' was inevitably hazy in a landscape in which all the European factors were involved with local politics. This explains the more colourful accusations that the factors levelled at one another: grounds for expulsion from India included being deemed 'unfit...for a civil and Christian society'.¹⁹⁷

¹⁹⁴ John Keay, *The Honourable Company* (London: Harper Collins, 1991), p. 144 notes that rival trading groups presented no significant threat to the Company in this period and describes the frequent complaints about pirates and interlopers as 'little short of paranoid'.

¹⁹⁵ The Company's petitions are collected in the volume BL IOR/A/1.

¹⁹⁶ Bod. MS Rawl. A. 170, fol. 160 – 'By the King A Proclamation for the Recalling all His Majesties Subjects from the Service of Foreign Princes in East Indies – James R, Given at our Court at Windsor the Seventeenth day of July 1686, In the Second Year of Our Reign. London: Printed by Charles Bill, Henry Hills, and Thomas Newcomb.

¹⁹⁷ Letter of 6 April 1658 transcribed in William Foster, *The English Factories in India, 1655-1660*, (Oxford: The Clarendon Press, 1921), p. 148.

Conversely, when those outside the Company became too powerful to be removed, they were co-opted into the organisation, through the powers the Crown granted the EIC to expel independent traders, or 'interlopers', from India if they refused to trade within Company settlements.¹⁹⁸ The best example of the Company incorporating a powerful private trader is Thomas Pitt. Arriving in 1673 as an independent trader in India he was ordered to be removed two years later. However, he remained and grew wealthy trading horses and sugar, protected by allies in the Company. When he returned to England in 1681, the Company launched proceedings in chancery to keep him in the country. This failed to prevent his return to India where he was permitted by the nawab of Bengal to establish a factory on the Hugli river.¹⁹⁹ Finally arrested in 1683, Pitt was fined, but by 1689 he had been accepted into the East India Company and held stocks in it. The reconciliation was not complete however: Pitt used his increasing influence in the House of Commons to spearhead the attacks on the East India Company's monopoly in 1690. A few years later, he again shifted back towards involvement in the Company; accepting the post of president of the Coromandel Coast and governor of Fort St George at Madras in 1698. Eventually, he headed the campaign against the interlopers of the 'new' East India Company. Pitt's effectiveness as a Company Governor was in a large part due to the same local connections that had made him a dangerous rival.

Thus, the Company Directors in London used the legal powers conferred on them by the English crown, including violence, to incorporate and retain within their service Europeans who became powerful in Asia. At least until the Company built up sufficient wealth and military power of its own in the region by constructing fortifications, transporting slaves, and attracting settlers, their trade depended on employing people who were involved in client

¹⁹⁸ Charles, R, warrant 21 Feb 1663, transcribed in *The English Factories in India, 1655-60*, p. 99.

¹⁹⁹ For Pitt's career, Yule *Diary of William Hedges*, iii 'Documentary Contributions Towards a Biography of William Pitt'.

relationships with local rulers. This need to monitor and intervene in the relationships of patronage established by their servants and rivals in Asia was what made the intelligence provided by men like Baron so crucial to the early Company in London.

Self-fashioning

Set against this landscape, Baron's extraordinary life provides a demonstration of the vital importance of *passeurs culturels* in this period. Baron had personal contacts with all the crucial figures in the complex configurations of power that were being played out during this period: he negotiated with both Cheng Ch'enga-kung and Shih Lang and acted as a merchant, adviser, and diplomat to the rulers of both Tonkin and Siam as well as spy for the EIC. As well as being promoted to one of the most important position available to a factor in the Company's service abroad, as putative head of the factory in Amoy, he maintained contacts with the Dutch companies and Portuguese and French missionaries. In addition to the skill in languages and negotiations required to straddle these different allegiances, this required a constant manipulation of his own identity. The idea of 'self-fashioning' is drawn from Greenblatt, who describes it as the manipulation of human individual identity, an 'artful process', which 'may suggest hypocrisy or deception'.²⁰⁰ In many ways, this description recalls the common depictions of interpreters or go-betweens as sometimes duplicitous individuals crafting their identities for their political or social ends.

When Baron first presented himself to the EIC in 1671, he described himself as having been born in Tonkin, 'His Grandfather, by the Fathers Side a Scotchman, His Father a Dutchman, And by his Mother of the race of the Portugalls'.²⁰¹ Here Baron stresses the background of his

²⁰⁰ Stephen Greenblatt, *Renaissance Self-Fashioning From More to Shakespeare* (Chicago: University of Chicago Press, 1980).

²⁰¹ London to Bantam 'Sent on the Experiment Return & Zant Frigatt, London 21 September 1671'. Transcribed in Machin, *Experiment and Return*, p. 51. The editors of *The English Factory in Taiwan* misinterpret this passage to mean that Baron's mother was half Scottish and half Portuguese and his father was Dutch (p. 721).

grandfather to create a link to Britain and downplays his Asian identity. The use of 'black Portuguese' or simply 'Portuguese' to describe people of mixed Asian and Portuguese heritage was common in the English records of the period and Baron's mother could have been of mixed Vietnamese and Portuguese descent. On the other hand, the claim could have been simply another element in Baron's creation of a European identity. For Baron, an English Protestant identity was necessary to enable him to rise through the ranks of the EIC. Although the letter appointing Baron second in command on the mission to Japan notes that he should not succeed as Governor on the death of David Stephens, 'being not of our nation', after spending three years in the service of the Company, Baron became a 'naturalised Englishman', entitled to hold any post within the Company.²⁰²

Baron selected other facets of his ethnic identity to highlight when it suited him: in his meetings with Robert Hooke he presented himself as 'of Tonqueen' while in later letters to the Company he complained of prejudice shown towards him 'because I am Dutch'. Baron's other identities are difficult to discern behind the image he cultivates in his travel narrative and correspondence with the English Company. Nevertheless, it is clear that Baron played many different roles in relation to his other patrons – for example his 'adoption' by the grandson of the *chúa* demonstrates his engagement with Vietnamese customs at the highest level. Baron always appears in the English records with Vietnamese companions, and, as he says, his networks among 'persons of all qualities and degrees'²⁰³ were crucial to his ability to procure interpreters and representatives for the English settlements. In the same way, Baron made himself useful to Asian rulers like King Narai and Trịnh Tạc by providing them with information about foreign goods and customs and with communities of foreigners ready to carry trade goods and perform military services.

²⁰² Maybon, 'Un factorie anglais', p. 169, note 1.

²⁰³ Baron, 'Advertisement'.

'Auto-ethnography' and 'Manuals for Colonialism': Describing Tonkin

Greenblatt also talks of self-fashioning in opposition to 'the other'. In analyses of travel writing, this idea 'otherness' has taken on racial connotations. As Singh puts it: 'despite their very professions of veracity, [travel] narratives point to the power of a *colonizing imagination* which "discovers" new lands via demarcations of identity and difference often based upon ideological and mythical distinctions between civilization and barbarism and tradition and modernity.'²⁰⁴ Baron's text is an interesting example of 'auto-ethnography':²⁰⁵ it contains several negative assessments of the level of civilization of the people of Tonkin, made by a man who I have argued retained a Vietnamese identity that was at least as strong as his identification with European modes of thought and representation. I'll argue in this section firstly that Baron's text needs to be approached with his 'self-fashioning' in mind: it was an offering to the EIC demonstrating his loyalty and utility and much like the other 'curiosities' he provided, it was intended to secure patronage for the author and his friends. Secondly, I'll show through a brief comparison with a Chinese account of Tonkin produced in the same period that the account may be viewed as a 'manual for colonialism' of a type that was being produced and distributed among all of the powers competing for territory in East Asia during the late seventeenth century.

In his letter to Hooke and Hoskins, Baron asks that his work should be published and that the 'money the said description will yield' should be delivered to Charles Chamberlain to be passed on to William Gyfford. He also singles out three other members of the Company who he asks should be mentioned in a dedication as 'my benefactors'.²⁰⁶ Travel accounts like

²⁰⁴ Jyotsna G. Singh, *Colonial Narratives/Cultural Dialogues: 'Discoveries' of India in the Language of Colonialism* (London: Routledge, 1996). See also Andrew Hadfield, *Literature, Travel, and Colonial Writing in the English Renaissance, 1545-1625* (Oxford: Clarendon Press, 1998); Rubieś, *Travel and Ethnology in the Renaissance*.

²⁰⁵ Pratt, *Imperial Eyes*, p. 7.

²⁰⁶ BL Sloane 1039, fol. 133r.

Robert Knox's account of Ceylon, which will be discussed in Chapter 4, could raise both significant funds and patronage for their authors. They could also be of practical use to the East India Company, and this aim is demonstrated by Baron's statement in his letter to Hooke and Hoskins that the account is intended to equip a new commissioner to conduct business in Tonkin on his first arrival in the country. The account contains features that are clearly designed to entice the East India Company to invest in Tonkin. For example, Baron claims that European broadcloth was in demand in Tonkin.²⁰⁷ As he well knew, this statement had not been born out by the experience of the factory, who complained that broadcloth could not be given away, much less sold,²⁰⁸ but it was designed to appeal to the Company, who were still engaged in their search for a market for the unpopular fabric.

The production of ethnographic descriptions of foreign peoples for the purpose of colonialism was not confined to Europe in this period, but was also practised by the Chinese as part of the process of assimilating different ethnic groups into the Qing Empire.²⁰⁹ Like their European counterparts, these Chinese accounts had practical purposes, as manuals for the governors of new territories as well as demonstrations of the achievement of knowing and understanding the 'nature' of a people. A comparison between Baron's account and the 1688 description of Tonkin by a Chinese trader, P'an Tong-Kouei, reveals several similarities both in the tone of the description and in the types of information included.²¹⁰ Both Baron and P'an Tong-Kouei begin with accounts of the history of Vietnam, beginning with the period of Chinese conquest, and both offer anthropological accounts of the difference of the peoples of the region from the Chinese, using a story about their 'converging toes'.²¹¹ P'an Tong-Kouei makes similar

²⁰⁷ Baron, *Description*, p. 214.

²⁰⁸ Baron, *Description*, Chapter VI, p. 214. G/17/17(7), fol. 552, Consultation of 15 October 1681 among other passages.

²⁰⁹ Hostetler, 'Qing Connections to the Early Modern World'.

²¹⁰ I used the French translation of Vissière 'Ngan -Nan Ki Yeou'.

²¹¹ Baron, *Description*, Ch XI, p. 236; Vissière 'Ngan -Nan Ki Yeou', p. 72. Doror and Taylor *Views of Seventeenth Century Vietnam*, p. 16 note that this description also appears in Gio. Filippo de Marini, *Relation nouvelle et curieuse des royumes de Tunquin et de Lao* (Paris: Gervais Clouzier, 1666), p. 2. P'an Tong-

observations to Baron about the popularity of works of Confucian literature in Tonkin and systems of government, education, and honours. Like Dampier, P'an Tong-Kouei notes the custom of women conducting the majority of trade and notes with disapproval women's participation in public life and ability to choose husbands freely. His description of the natural history of the country pays particular attention to the unusual shapes of the limestone cliffs that rise from the water along the long river journey to the capital, a feature which had also been picked up on by Robert Hooke in an account he received from one of the Bantam factors²¹² and the isle of Hainan, which produces pearls and was inquired after by Robert Boyle.²¹³

Both Baron and P'an Tong-Kouei denigrate the culture and values of the people of Tonkin. For example, Baron writes 'the Tonqueenese are not altogether so fradulent, and of that deceitful disposition as the Chinese; it may be, by reason they are inferior to them in craft or cunning'.²¹⁴ At times, Baron takes pains to be less complimentary about the Tonkinese customs than Tavernier had been in his narrative. For example, he writes in the chapter on learning: 'They are wholly ignorant of natural philosophy, and not more skill'd in mathematics and astronomy; their poesy I do not understand, and their musick I do not find delightful or harmonious; and I cannot help but wonder by what faculty Monsieur Tavernier has discovered them to be the most excellent of all the oriental people in that art.'²¹⁵ In particular, both authors down-play the significance of the army and the manliness of the people in general: thus reassuring potential colonialists that they would not face significant opposition. P'an Tong-

Kouei describes the converging toes as a sign of closeness to 'other Indians' and racial difference from (presumably Han) Chinese.

²¹² Robert Knox, *An Historical Relation of Ceylon, Revised, Enlarged & Brought to the verge of Publication as a The Second Edition*, 2 vols, ed. by J.H.O Paulusz (Dehiwala, 1989), ii, p. 235 (British Museum MS M10836, fol. 495-6).

²¹³ Marginal notes in *Boyle Papers* Vol. 27, p. 79. Boyle asked 'a Gentleman who lived a while in the Island of Formosa and had been a while on the Coast of China and Japan...what Truth there was in the relation made about Petrifying Crabs in the Isle Hainan' This probably refers to the meeting between Baron and Boyle, when Hooke mentions that a debate about petrification to place.

²¹⁴ Baron, *Description*, p. 211.

²¹⁵ Baron, *Description*, p. 229.

Kouei states incorrectly that there was no permanent militia and arguing that despite its large population and territory, Tonkin was poorly defended. Similarly, Baron mocks the eunuch Mandarins and describes the people as 'cowards'.²¹⁶

Just as Baron fashioned his own 'English' identity, he presented to his English patrons an image of Tonkin that consciously used the tropes of the European travel narrative to entice the Company to further invest in a settlement, from which he might have benefited, by offering evidence for the ultimately inferior and docile nature of the people to be ruled. This picture should not, of course, be equated with his real view of the society. Baron may have altruistic reasons for urging the English and other foreigners to invest in Tonkin, where he had experienced a period of increasing poverty since the introduction of tighter state control.²¹⁷ For example, the cargoes of rice that he brought from Siam in 1682 were probably intended as relief for the famine that was ravaging the country at the time as well as for his personal profit.²¹⁸ A sympathetic attitude surfaces in his later account of the famines of Bengal, where he writes that there can be 'no advantage more uncomfortable than that which arrises from the poverty and misery of the poor tho it may be as well Charity as Interest to deal with them sometimes'.²¹⁹ Although Baron's background was unusual for the author of an 'English' travel account, I argue in the chapters that follow that many of those who filled similar go-between roles presented only certain aspects of the other worlds they were familiar with to their European correspondents, often exhibiting expected attitudes rather than a simple reflection of their real prejudices.

²¹⁶ Baron, *Description*, p. 214.

²¹⁷ Yu, *Law and Society in Seventeenth Century Vietnam*.

²¹⁸ G/12/17(8) fol. 17-18 3 September 1682, transcribed in Farrington and Pombejra, *The English Factory in Siam*, p. 672 notes Baron's arrival over the bar at Tonkin with a cargo of rice. For the famine, Baron, *Description*, p.

²¹⁹ BL MS Add 34123.

'Not according to art': the illustrations to the Description of Tonqueen

The illustrations that accompany the text of the *Description* were reproduced from drafts that Baron sent to Hooke and Hoskins, which have recently been recovered.²²⁰ Baron notes that they were copies of originals made by 'a Tonqueener of Eminent Quality' and were 'true and exact, tho' not according to art'.²²¹ The twelve illustrations are an interesting combination of Asian and European styles, containing the detailed illustrations of costumes, buildings and vessels that were common to Western and Chinese ethnographic depictions of the period.²²² The depiction of 'The City of Cha-Cho, the Metropolis of Tonqueen'²²³ indicates the situation of the city using a compass of the type used in Western maps of the period, but provides an illustration rather than a map of the city. A similar style is apparent in a late seventeenth century map of Jambi in Sumatra, produced in the region in the second half of the seventeenth century.²²⁴

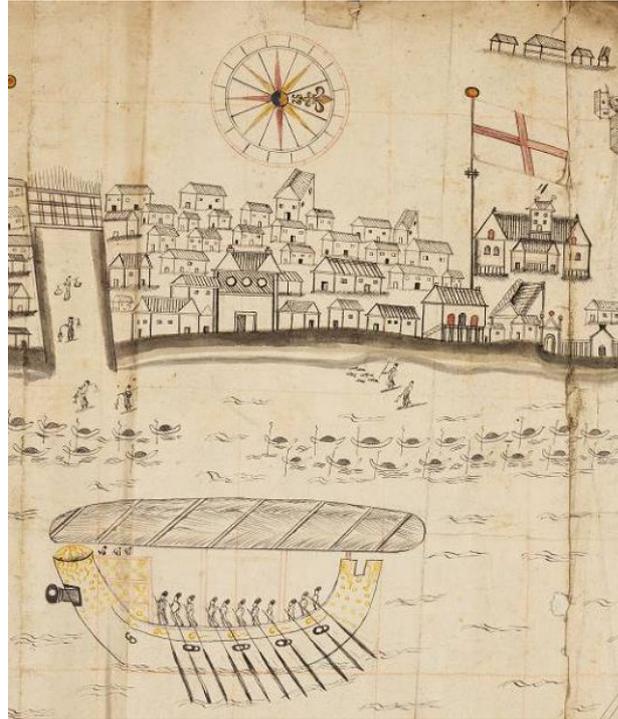
²²⁰ The original illustrations were recently discovered in the library of the Royal Society, having been returned to the Royal Society from the Society of Antiquaries (along with other, later material) in 1998. Presumably they strayed into the Antiquaries' collections some time during the long association of the two organisations at Somerset House or Burlington House. They sat in a plan-chest drawer, the envelope marked 'Chinese Watercolours', until identified by Keith More in 2007 (I am grateful to Keith Moore for this information and for allowing me to use the illustrations).

²²¹ Baron, *Advertisement*, p. 194 and letter to Hooke and Hoskins, p. 190.

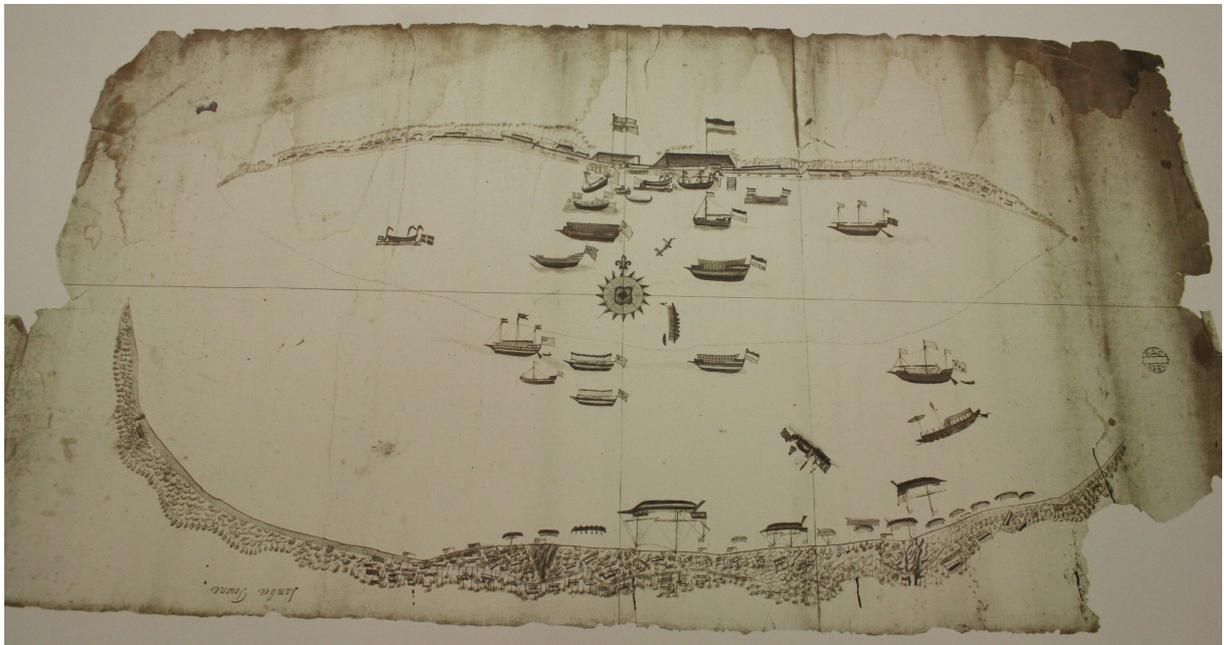
²²² Hostetler, 'Qing Connections'.

²²³ The illustrations were made in 1683, at which point the English were finally offered a settlement in the city.

²²⁴ The collection of Dutch and English maps were previously kept in the library of Corpus Christi College, Oxford but have now been transferred to the Maritime Museum, Rotterdam. See Sjoerd de Meet and Frits Looimeijer, *De schat van Corpus Christi: VOC-kaarten boven water* (Zutphen: De Walburg Pers, 2007), 'Jambee town' is item 20.



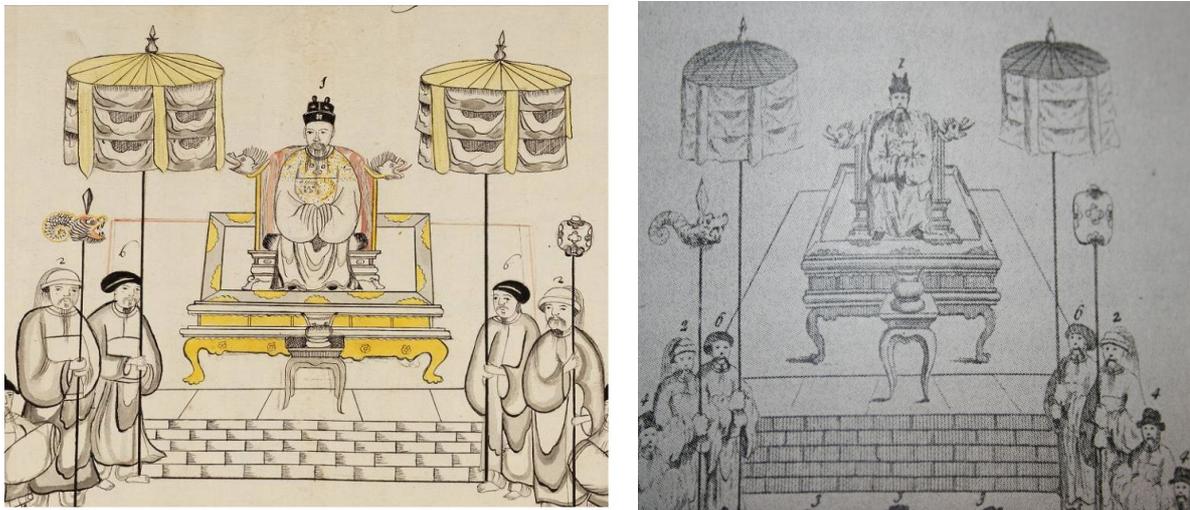
Detail from draft illustration for Baron, Description, Plate 2: The City of Cha Cho, the metropolis of Tonqueen, the Royal Society



'The Town of Jambee', anonymous map probably produced in the region sometime in the late seventeenth century showing Jambi in Sumatra, Maritime Museum, Rotterdam

The perspective is an interesting feature of several of the illustrations. In particular, the dais in

the illustration of the 'Bova or King of Tonqueen' and that on which the Judge is seated in the illustration of 'The Manner of their dancing upon Ropes and other sorts of Play', and also the buildings shown in several of the illustrations, demonstrate the use of axonometric or parallel perspective as employed in Chinese and Japanese painting, so that there is no vanishing point, the view is always a 'birds-eye' one, and the size of the figures and architectural elements in the foreground and background remain constant. In some cases, the perspective of the drawings was altered by the European copyist whilst in others it was retained. The lack of a fixed optical plane means that in many cases the side and front of buildings can be seen simultaneously and, in the 'City of Cha-Cho' illustration, the building that houses the 'Theckydaw' can be viewed as though the onlooker is hovering in the air roughly opposite the front of it.²²⁵



Baron, Description, Plate 8: 'The Boua or King of Tonqueen when He Gives Audience': left, original and right, copy in published work with perspective altered

²²⁵ This technique was in use in China as early as the first century BCE in both military maps and landscape paintings. See Wilfred H. Wells, *Perspective in Early Chinese Painting* (London: Edward Goldston Ltd., 1935); Hsin-Mei Agnes Hsu, 'Structured Perceptions of Real and Imagined Landscape in Early China', in Kurt A. Raaflaub and Richard J. A. Talbert eds., *Geography and Ethnography: Perspectives of the World in Pre-Modern Societies* (Oxford: Blackwell, 2010). For early borrowings of Asian techniques in Western painting, see Lach, 'The Visual Arts', pp. 73-4. There is little literature dedicated to the history of painting in Northern Vietnam, for which problem see Nora Annesley Taylor, *Painters in Hanoi, an Ethnography of Vietnamese Art* (Honolulu: University of Hawai'i Press, 2004), Introduction.

The draft version of the map that accompanies the printed *Description* has not yet been recovered. Baron says that it was 'drawn and computed' from two others in Tonkin. As this comment implies, maps were produced and circulated throughout the region. At Batavia, the Dutch had a cartographical office by the 1620's established and by 1630 had also established a hydrographical office. In fact, Baron's map bears a strong resemblance, though is not identical, to Blaeu's map of the same region produced in around 1663.²²⁶ Although the EIC were less organised in their production of maps, it is clear they were produced and circulated within Asia, as Baron's reference to 'our sea draughts' shows.²²⁷ Sea charts made by Thomas Bowrey are preserved in the British Library,²²⁸ and he wrote to the Company to suggest that it was made compulsory for all seamen.²²⁹ His explanation throws light on how maps like Baron's were created: 'It was my practise when in India, when I meet with any sea chart which I liked I either bought it or Copied it, & in all such places where I navigated & found my Chart erroneous, there I precisely amended it, by which means I have now by me a large collection'.²³⁰ The practise among all the European companies of copying and incorporating information from maps produced by their rivals was common, and will be discussed further in Chapter 4.

²²⁶ de Meer and Looimeijer, *De schat van Corpus Christi: VOC-kaarten boven water*, the 1663 map is item no. 7 in this facsimile edition.

²²⁷ Baron, *Description*, p. 199.

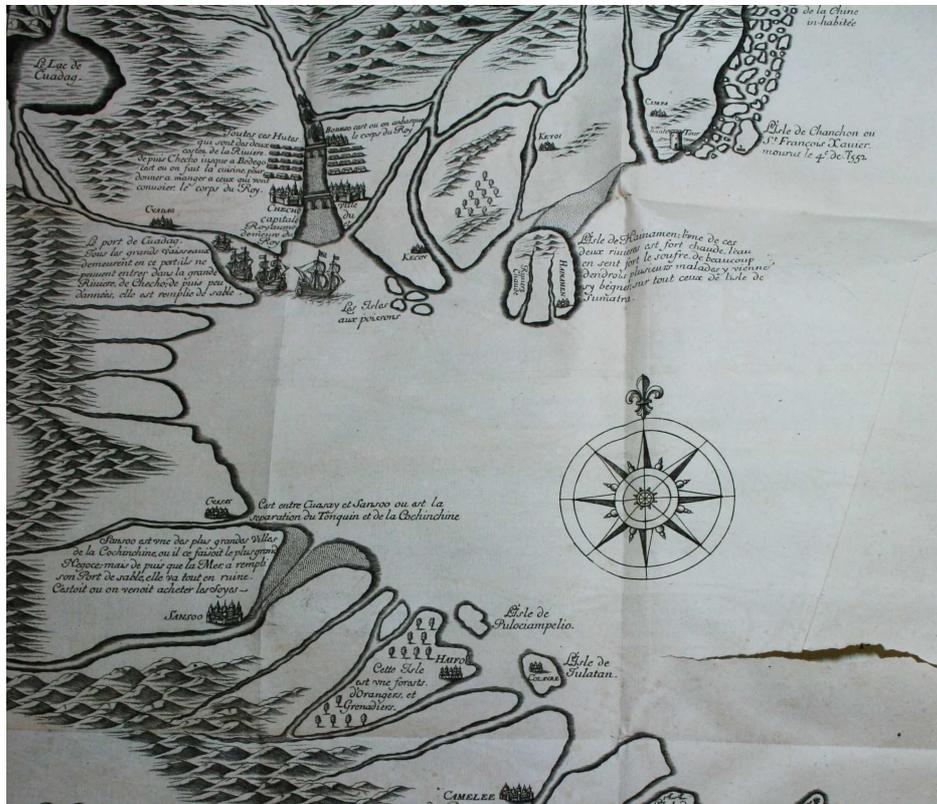
²²⁸ BL Add MS 5222.

²²⁹ BL MS Eur. E. 192, item 31, fol. 2, undated (c. 1701-1702), Thomas Bowrey to the directors of the English East India Company.

²³⁰ BL MS Eur. E. 192, item 31, fol. 2, undated (c. 1701-1702), Thomas Bowrey to the directors of the English East India Company.



Joan Blaeu, *Kaert van de Bocht van Tonkin*, 1663, Maritime Museum, Rotterdam



Detail from Daniel Tavernier, *Carte: Fait sur les lieux en plusieurs voiajes a fait au Tonquin*, in J. B. Tavernier, *Six Voyages* (1676), Bodleian Library

As noted above, pictures and maps were among the curiosities that were exchanged in all directions in this period. For example, Tavernier claims that his brother 'stor'd himself with a considerable number of small curiosities, to present the King [the *chúa* of Tonkin] and his Nobility', including pictures of courtesans.²³¹ The representations made in Tonkin were not unique in being made in Asia interpolating Western styles. As Baron notes, Tavernier boasted that his map and illustrations had been 'drawn upon the place'.²³² There also seems to have developed some sort of consensus across the region about the types of subjects that should be produced for the benefit of curious foreign observers. For example, the merchant George White, brother of Samuel, who accompanied a Siamese Ambassador who crossed from France to England in 1684, showed to scholars in London 'A map of China, a map of the world, a map of the city of Siam with the kings palace, river &c. a large representation of the triumphs upon that water with the figures of all ther boates & barges, differing from each other in beauty height figure & richness, a large representation of the funerall movements of their Kings, which are very wonderfull and curious figures of several machines relating to the fire works'.²³³ In other words, these illustrations are a very similar set of depictions to those sent by Baron from Tonkin.²³⁴

Illustrations made by local artists were often incorporated into Western works of travel, as was the case with the illustrations for the *Description of Tonqueen*. For example, the plates in

²³¹ Tavernier, *A Collection of Several Relations and Treatises*, p. 2-3.

²³² Baron, *Description*, pp. 198-199.

²³³ Bodleian MS Smith 57, fol. 27, London 11 September 84; fol. 29, 16 September 1684. See also fol. 103 for a description of the Siamese Ambassador writing down the alphabet, which he passed on to the orientalist Thomas Hyde. There is very little information about this Embassy. Anderson, *English Intercourse with Siam*, p. 243, mentions it on p. 243, citing Alexander Hamilton, *New Account of the East Indies*, 2 vols. (Edinburgh, 1727), ii, p. 181 that one of these Ambassadors crossed the channel and signed a treaty with Charles II. Also as Anderson notes, the treaty has never been found. However, there is a reference to a present made from the King of Siam to Charles II in *Out Letters (General)* VII, p. 424. 'Entry Book: September 1684, 23-30', *Calendar of Treasury Books, Volume 7: 1681-1685* (1916), pp. 1335-1345.

²³⁴ It is not impossible, though speculation, that Baron, who was in Siam around the time of its departure, was involved with this rather mysterious mission to England.

Kaempfer's account of Japan were based on drawings by Japanese artists.²³⁵ However, such images were also altered by the process of copying and borrowing evident in the illustrations and maps that accompany Baron's account.

Conclusions

I have used the life of Samuel Baron here to provide an insight into the worlds of the men who the East India Company and scholars relied on for information during the early modern period. All the figures I will introduce later as providers of information – botanical, medical, linguistic, cartographic, and ethnographic, as well as political and economic – demonstrate similar trajectories to Baron's in and out of the service of the Company and Asian rulers.

Although Baron's position as head of a factory was short-lived, several other members of the Company who played a similar mediating role became wealthy and prominent prospered because of their local contacts and influence.

The lives of such men show that while the practice of natural philosophy in Europe might perhaps be described as 'gentlemanly',²³⁶ this was certainly not the case for those who collected and distributed the information these gentlemen relied on. Their lives demonstrate that collecting was not a leisured or peripheral activity, but a dangerous competition for supremacy in the competing networks of patronage that linked Europe and Asia in the struggle to control the trade of South and East Asia. Whether they died wealthy men like Robert Knox or slipped into obscurity like Samuel Baron depended on the strength of the ties that they managed to build up through the distribution of information, be it in the shape of travel accounts, physical objects or 'curiosities', or verbal reports. The information that was supplied to natural philosophers was directly relevant to the trade in this period; even pieces of

²³⁵ The drawings are in BL Add MS 5232. The manuscript of Kaempfer's journal was acquired by Hans Sloane and published as Engelbertus Kaempfer, *The history of Japan*, trans. by J.G. Scheuchzer (London: 1727).

²³⁶ Shapin, *A Social History of Truth*.

information that may seem frivolous, such as the fondness of the Tonkinese for birds' nests, were employed by the EIC in its search for profitable goods to be exchanged.²³⁷

I have argued that this period was one in which the occupation of the go-between assumed a particular importance. This period of openness saw the exchange of Ambassadors and curiosities in all directions; the creation of new multi-cultural trading emporia; and expansionism led by those in the maritime world of Asia, rather than directed from the distant centres of the Chinese court or Directors of the European companies in Amsterdam, London or Paris. It did not last. Japan had already banned all foreign travel by Japanese by 1635²³⁸ and by 1717, the Ch'ing Emperor had also prohibited all Chinese from trading with the Southern oceans, while the Chu I-kuei rebellion on Taiwan in 1720 reinforced the Ch'ing tendency to see the maritime world as a centre of subversion.²³⁹ Nevertheless, Asian powers' need to use foreigners in their conflicts during this period had placed the East India Company in an advantageous position in terms of the trade between India and China.²⁴⁰ Go-betweens like Baron were essential to this process.

After the territorial expansion into India following the victories of the mid eighteenth century, the EIC was better able to regulate the work of its European agents and was more assured of their continued loyalty. As Raj notes, the eighteenth century saw the professions of go-betweens assume some regularity, with training in languages as well as classics, sciences, law and other subjects provided for both European administrators and the indigenous literati.²⁴¹

²³⁷ Tavernier, *A Collection of Voyages*, p. 9; Baron, *Description*, p. 207; Massarella, 'China, Tartars, and "Thea"', p. 404.

²³⁸ Massarella, 'China, Tartars, and "Thea"', p. 396. The assumption that Japan was closed to all outside influence from this period onward has been challenged by works including Donald Denoon, Gavan McCormack and others, *Multicultural Japan: palaeolithic to postmodern* (New York: Cambridge University Press, 1996).

²³⁹ Willis, 'Maritime China from Wang Chih to Shih Lang', p. 233.

²⁴⁰ Massarella, p. 426-7.

²⁴¹ Raj, 'Mapping Knowledge', p. 122. See also Susan Neild-Basu, 'The Dubashes of Madras', *Modern Asian Studies* 18 (1984), 1-31.

While still crucial to the expansion and consolidation of colonial rule, however, the standardisation of their professions meant that these men were ultimately replaceable. However, in the earlier period, those who could build up international networks of patronage through their skills in brokerage could rise to the highest positions in the Company. For example, as a young man Baron was able to make demands on the Company for a high salary and position as second in command in the Japan factory on the basis of his status as one of the few people capable of negotiating settlements in Tonkin and Taiwan. However, such men could also become the most dangerous and therefore had to be either integrated into the Company or fought by being denounced as 'traitors', 'deserters' and 'interlopers' to justify their removal. This was the purpose of the type of writing that Baron both produced and that was directed against him.

In the final analysis, Baron failed to construct robust enough networks to consolidate his wealth and power through the Company. Perhaps ultimately his construction of a European identity was not quite complete enough. Despite the official support for racially mixed marriages in the early governments of the trading companies in Asia, attitudes that stressed 'purity' of blood were already common among both Europeans and Asians of the period. In language that echoes that used for the go-between and the 'interloper', people of mixed race were often described as threatening, 'disorderly' or 'turbulent' because of their dual allegiances.²⁴² While Baron was able to 'pass' as a European, his children certainly would not have been able to, and perhaps this is one reason for his eventual disappearance from 'white town'. In contrast, European contemporaries of Baron's, like Elihu Yale and Thomas Pitt, who were involved in the same process of brokerage through local and international networks of patronage went on to become among the best known of the Company's members.

²⁴² Jayawardena, *Erasure of the Euro-Asian*, pp. 3-5; Soren Mentz, 'Cultural Interaction between the British diaspora in Madras and the host community', in Masashi, *Asian Port Cities*, pp. 162-174.

Raj argues that go-betweens not only enabled and sustained the process of expansion, but also negotiated the definitions of the cultural boundaries they straddled 'to construct and manage the cultural differences which lay at the heart of the sciences of the 19th century'.²⁴³ Perhaps, although it belongs to an earlier period, this also is how we should view Baron's description of Tonkin and the representations of the 'other' worlds other *passseurs culturels* presented to their European correspondents. The authors of such works molded their representations to conform to the expectations of their audiences, but also to their own advantage; revealing some facts and concealing others.²⁴⁴ However, the works were also themselves hybrid products and part of both the process of mediation and the definition of difference. This can perhaps be best demonstrated by the illustrations to Baron's work: drawn in Tonkin and copied in London, they incorporate techniques from both Asian and European traditions.

²⁴³ Raj, 'Mapping Knowledge', p. 106. Gruzinsky, 'Un honnête homme', p. 8 expresses a similar idea by quoting the work of Mignolo on interactions between Native Americans and European colonisers: 'Dans les especes *in between* crees par la colonisation apparaissent et se développent de nouveaux mode de pensée dont la vitalité réside dans leur aptitude à transformer et à critiquer ce que les deux héritages...!'

²⁴⁴ See also Natalie Davis, *Trickster Travels: the search for Leo Africanus*, (London: Faber & Faber, 2007).

CHAPTER 2

Medical and Botanical Networks of Madras c. 1688-1713

Introduction

Established in 1639, the English East India Company's settlement at Madras (also known as Madraspatam or Chinapatam, now Chennai) quickly become the focal point of the Company's operations on the Coromandel Coast. By 1695, Samuel Baron described it as 'the most considerable to the English nation of all their settlements in India whether...in reference to the trade to and from Europe, or the Commerce from one part of India to the other'.²⁴⁵ The early attempts to establish trades to China and Japan, to resettle in the Indonesian archipelago, and to gain a foothold in Bengal, were all directed from Fort St George. This was the town where Governor Elihu Yale made his fortune dealing diamonds, where the Venetian chancer Nicolò Manucci, physician to the Emperor Aurangzeb, spent his last days,²⁴⁶ and through which traders and adventurers passed, stopping to trade cloth, drugs, and stories. Here, I examine the botanical and medical networks that grew up around the town as described in the correspondence of two East India Company surgeons, Samuel Browne and Edward Bulkley, with the English apothecary and botanist James Petiver.

Recently, interest in the botanical, biological and environmental aspects of the 'scientific revolution' has supplanted an earlier emphasis on physics and mathematics. The idea of 'networks', fashionable in economic history, has been transplanted to the collectors, botanists, and doctors who amassed, drew, described, categorised, and circulated plant and animal specimens.²⁴⁷ The interaction between Indian and Portuguese medicinal systems has received attention, as has the creation of medical

²⁴⁵ BL MS Add 34123 – 'Copybook of Henry Vansittart, Governor of Bombay, 1756', fols. 40-42: 'Samuel Baron's account of the trade of India, written from Fort St George in 1695'.

²⁴⁶ Sanjay Subrahmanyam, 'Further thoughts on an enigma: The tortuous life of Nicolò Manucci 1638-c.1720', *The Indian Economic and Social History Review*, 45, (2008): 35-76.

²⁴⁷ Spary, *Utopia's garden*; Raj, *Relocating Modern Science*.

discourses in colonial India.²⁴⁸ Arnold has called for historians to see European medical ventures overseas as ‘more than just a series of independent national narratives; to view them instead in a comparative, transnational perspective’ and to examine the continuity between Portuguese, Dutch and English physicians in the East Indies between 1500 and 1750.²⁴⁹ Nevertheless, Arnold has argued elsewhere that at least until the end of the seventeenth century, India was still ‘medical speaking, a largely unknown land to Europeans’.²⁵⁰

There is, perhaps, a conceptual difference here that Arnold does not spell out between the academic study of *āyurveda*, *siddha*, or *yūnāni tibb*²⁵¹ and the assimilation of particular drugs, concepts, or methods of treatment from Indian medicinal systems into European medicine.²⁵² During the seventeenth century and early eighteenth centuries, the English settlements followed their Portuguese and Dutch counterparts in borrowing from the methods of treatment they observed at the courts of rulers – where they were frequently called on to perform medical services – and worked closely with local experts both in treating patients in the hospitals and army camps and in collecting plants and recording their local names and medicinal properties. Looking at early interactions between the English East India Company surgeons and their informants, including South Asian botanists and medical practitioners, the doctors at the courts of royals and noblemen, VOC surgeons and botanists like the compiler of the *Hortus Malabaricus* van Rheede and Paul Hermann,²⁵³ and

²⁴⁸ Guy Attewell, *Drugs in dialogue: Arabic learning and the linking of Europe and Asia in the Colóquios (1563) of Garcia de Orta*. Paper circulated for discussion at Anglo-Dutch-German workshop: ‘Travelling knowledge’, The Wellcome Trust Centre for the History of Medicine at UCL, June, 2007. Pearson, ‘The Thin End of the Wedge’; Arnold, *Colonising the Body*; Harrison, *Climates and Constitutions*.

²⁴⁹ Arnold, *Warm climates and western medicine*, p. 11.

²⁵⁰ Arnold, *Colonizing the Body*, p. 11. Arnold and others have noted the brief descriptions of Indian medicine by John Marshall, who was the first to note the tridosā system, and John Fryer. See S. A. Khan, *John Marshall in India: notes and observations in Bengal, 1668-1672* (London: Oxford University Press, H. Milford, 1927), pp. 319-351.

²⁵¹ As Pearson, ‘The Thin End of the Wedge’, p. 150 points out, *yunani* or *unani* is derived from the word ‘Greek’, referring to Greek influence on Muslim medicine. However, Hindu medicine was also an important influence on *yunani* as practised in early modern India. See Seema Alavi, *Islam and healing: loss and recovery of an Indo-Muslim medical tradition, 1600-1900* (Basingstoke: Palgrave Macmillan, 2008).

²⁵² This process of assimilation of medicines and techniques continued into the nineteenth century, as demonstrated by Benjamin Heyne, *Tracts Historical and Statistical on India* (London: Robert Baldwin, 1814).

²⁵³ Paul Hermann *Paradisus Batavus* (Leiden: 1689). Hermann spent several years in Ceylon. His collections, described in Carl von Linné, *Flora Zeylonica* (Amsterdam: J. Wetstenium, 1748), are preserved in the Natural History Museum. A searchable database of the specimens is available at <http://www.nhm.ac.uk/jdsml/research-curation/research/projects/hermann-herbarium/> (accessed 29 June 2010).

Jesuit priests like George Camelli, can help bridge the gap Arnold identifies between the early European encounters with South Asian medicine and later colonial medicine.

Grove has argued that the study of the networks through which botanical knowledge was distributed demonstrates the shared roots of India, Middle Eastern and European medicine and how European science was 'transformed by indigenous technical knowledge' in this period.²⁵⁴ While other authors have made important qualifications to Grove's argument,²⁵⁵ botanical texts composed in South Asia and printed in European languages can provide information about Asian medical practises and botany.²⁵⁶ Furthermore, examining the knowledge networks through which they were circulated can demonstrate the process through which the diffusion – and appropriation and reconfiguration – of biological knowledge took place. In our case, the collections made by Browne and Bulkley provide a window into the practise of medicine in seventeenth century Tamil Nadu. Meanwhile, looking at the networks they were embedded in, locally and internationally, shows how the knowledge was disseminated and decontextuarised. I will show how these the East India Company surgeons, in close cooperation with local experts, collected and labelled the items that eventually ended up among the wares of London apothecaries and in the Sloane herbarium: the collection that formed the basis of the Natural History Museum. Comparing the collections the surgeons sent, especially Browne's seven volumes, collected over a short period during 1696, with the *Hortus Malabaricus* reveals some interesting parallels and contrasts between the practise of *siddha* in early seventeenth century Kerala and Tamil Nadu. The specimens that reached England through the collections sent by Browne, Bulkley and others including Camelli and Cunningham, to James Petiver and his contemporaries were the same as those sold in apothecaries' shops along with instructions for their use ultimately derived from South Asian sources.²⁵⁷

²⁵⁴ Grove, *Green Imperialism*, p. 79. Harrison, *Climates and Constitutions*, esp p. 8-9, argues that any clear division between 'Eastern' and 'Western' medicine is illusory.

²⁵⁵ Attewell, 'Drugs in Dialogue' is critical of Grove's classification of Garcia d'Orta's work along with that of van Rheede as an 'indigenous' texts.

²⁵⁶ Manilal, *Van Rheede's Hortus Malabaricus*.

²⁵⁷ Imports of non-European drugs into England soared during the seventeenth century: estimates have put the total at

The materials that I will present here are drawn to a large degree from the letters of East India Company surgeons to James Petiver preserved in the Sloane manuscripts in the British Library. It might therefore have seemed natural to have placed Petiver as the collector at the centre of the network. The choice of Madras rather than London as a node around which plants, medicines, and information circulated is in part an attempt to stress that the activities associated with the 'scientific revolution': the assiduous collection and detailed study of natural objects, the amassing of libraries of printed texts, manuscripts and of 'repositories' of curiosities and books of dried plants, exchange of information, and the formulation of theories about the natural world were not confined to European capitals but took place in colonial settlements and outposts.²⁵⁸ Raj has stressed that the collectors relied on by metropolitan scientists were not 'space probes', in other words they had their own priorities and agendas and should be regarded in the light of their immediate economic and social contexts.²⁵⁹ While the process by which instructions for collecting and observing were composed and despatched by organisations like the Royal Society has attracted detailed attention in recent years,²⁶⁰ the social situations and knowledge networks of those who responded to these inquiries has received less attention. Although European patrons and correspondents were important to the surgeons, they were embedded in other networks and often dismiss Petiver's demands for more pressing business, whether attending royal patients, marketing drugs locally, tending the plants from China, Sri Lanka, and the Coast of Guinea that they planted in the Company's gardens, or fulfilling their duties in the service of the Mughal Empire. The collections they sent reflect these

70% by 1669, up from 14% in 1588 and 48% in 1621. T.J.S. Patterson, 'The relationship of Indian and European practitioners of medicine from the sixteenth century', in *Studies on Indian Medical History* ed. G. Jan Meulenbald and Domanik Wujastyk, *Indian Medical Tradition*, V, (Delhi: Motilal Banarsidass, 2001). Chakrabarti, 'Neither Meate nor Drinke but what the Doctor alloweth'.

²⁵⁸ Savithri Preetha Nair. 'Native collecting and natural knowledge (1798-1832): Raja Serfoji II of Tanjore as a "centre of calculation"', *Journal of the Royal Asiatic Society*, series 3, 3 (2005): 279-302.

²⁵⁹ Kapil Raj, 'Surgeons, Fakirs, Merchants and Craftspeople: Making L'Empereur's Jardin in Early Modern South Asia', in Swan and Schiebinger, *Colonial Botany*.

²⁶⁰ John Gascoigne, 'The Royal Society, natural history and the peoples of the "New World(s)", 1660-1800', *British Journal for the History of Science*, 42 (2009), 539-562; Carey, *Asian Travel in the Renaissance*; Harold J. Cook and David S. Lux, 'Closed Circles or Open Networks? Communicating at a Distance during the Scientific Revolution', *History of Science*, 36 (1998), 179-211. Thomas, 'A "Philosophical Storehouse"'.

roles as well as their relationships with the collectors in London. Therefore, as well as examining their embeddness in the knowledge networks that transmitted information to and through Europe, I will look into some of these local spaces inhabited by the two surgeons to observe the processes by which they amassed the information they transmitted to Petiver.

The surgeons and their collections

Samuel Browne was appointed to the position of surgeon of Madras in 1688, after serving as a ship's surgeon.²⁶¹ Petiver became acquainted with Browne through the clergyman and collector Richard Sambach in 1689, and the two corresponded until Browne's death in 1698.²⁶² Among many other specimens, the collections Browne sent to England during this period included seven volumes of dried and labelled plants with their Tamil names in the original script and accounts of their medicinal virtues.²⁶³ These volumes are especially interesting because they can be matched with a series of articles published in *Philosophical Transactions* which contain comments from Petiver and cross-references to other contemporary works of botany, particularly the *Hortus Malabaricus*.²⁶⁴ Brown also sent many other individual specimens, most including accounts of their local names and uses. Edward Bulkley, previously surgeon of Pettipoli, joined Browne at Fort St George in 1692 and remained in the position until 1709 when he resigned and became 'land customer' and member of council and Justice of the Peace until his death in 1713.²⁶⁵ He corresponded with Petiver from at

²⁶¹ D. G. Crawford, *History of the Indian Medical Service, 1600-1913*, 2 vols. (London: W. Thacker & Co., 1914), I, p. 91. Browne was previously the surgeon of a ship called the Dragon.

²⁶² The first letter from Petiver to Brown is dated 61 March 1689, BL MS Sloane 3332, fols. 6-7. Petiver sends a book on English botany and requests a correspondence. Browne's burial on 22 December 1698 is recorded in the book of Marriages, Burials and Christenings kept in the museum at the Fort in Chennai.

²⁶³ The specimens are kept in the Sloane Herbarium in the Natural History Museum and described in J. E. Dandy, *The Sloane Herbarium: An annotated list of the Horti Sicci composing it* (London: British Museum, 1958). Manuscript notes in the front of the first Browne volume in the Sloane herbarium note that the seven books were borrowed by James Petiver and Hans Sloane during 1699 from the Royal Society's repository, to which they had been transferred after a request to the East India Company. A note by Fra[n]cis Hawskebee reads 'The 1 2 3 & 4 books are in the Society's house, the rest are missing.' Presumably the rest were returned to the repository at a later stage.

²⁶⁴ The seven articles are all published in *Philosophical Transactions*, 22 (1700/1), 579-594, 699-721, 843-858, 933-946, 1007-1022, and 23 (1702/3), 1055-1056, 1251-1265. Petiver refers to each of the specimens as 'SB' followed by the number of the specimens in the seven volumes of the Sloane Herbarium. I have adopted Petiver's system in the references below. As Dandy, p. 101 notes, an eighth book is also described in *Philosophical Transactions*, 23, 1450-1460, but this was sent after Browne's death and also contains specimens from Bulkley. For other volumes containing specimens collected by Brown Dandy, p. 102.

²⁶⁵ Crawford, *History of the IMS*, p. 245.

least 1699 until 1713 and sent several volumes of plant specimens as well as drawings of wildlife, especially birds.²⁶⁶

Many of the specimens sent by the surgeons now remain in the Sloane Herbarium. However, it is clear that the volume of plant material sent from Fort St George to England in this period was considerably larger. For example, Bulkley refers in one letter to having sent twenty volumes of specimens to Petiver.²⁶⁷ As noted in the introduction, both the Royal Society and the East India Company kept 'repositories' or museums of specimens sent from abroad, and objects were transferred between the two. Browne's volumes provide a good example of this process: he dedicated the volumes to the East India Company but adds 'please if they be thought worthy of any notice to permitt Mr Petiver the Apothecary in Alderman street with whom I have corresponded about plants to have a sight thereof.'²⁶⁸ The volumes were accordingly transferred to the Royal Society, from where they were borrowed and examined by James Petiver and Hans Sloane and then eventually integrated into the Sloane collection.²⁶⁹

Both surgeons also corresponded with several other botanists, gardeners, and doctors in England, including John Ray, Leonard Plucknet, Hans Sloane, the Duchess of Beaufort, and the Secretary of the East India Company, Charles du Bois. Bulkley refers to sending collections to several apothecaries including his brother in law, who ran a shop in Bread Street, and Mr Porter, a druggist in Cornhill Street.²⁷⁰ The circle of botanists who received collections from the East Indies formed a close, though not always friendly,²⁷¹ group in London who spanned the East India Company, the Royal Society, and the Society of Apothecaries and the surgeons often instructed their

²⁶⁶ Bulkley's letters to Petiver are mainly in BL Sloane MSS 3321 and 3322. Volumes in the Sloane herbarium (hereafter HS following Dandy) including his specimens are given by Dandy, p. 109.

²⁶⁷ MS Sloane 3321, fol. 133 – Bulkley to Petiver, 10 February 1703/4.

²⁶⁸ Sloane Herbarium, 'Plants Fort St George and India, 1697, I-III', FSG, 20 September 1697.

²⁶⁹ This was probably in 1781 with the rest of the collection (personal communication, Jenni Thomas).

²⁷⁰ MS Sloane 3321, fol. 18, Edward Bulkley to James Petiver, FSG 12 October 1699.

²⁷¹ Petiver uses much of his commentary on Browne's collections to level criticism at his rival Leonard Plucknet.

correspondents to circulate or parcel out the specimens they sent between them. A good example of how collections were distributed is recorded in the minutes of the Royal Society. On 26 October 1698, the Vice-President John Hoskins told a meeting of the Royal Society that ‘some natural things were in the hands of the East India Company lately sent them from Fort St George’.²⁷² A committee was deputed to go to the East India Company and request that these be submitted to the Society for their consideration. The Court of Directors agreed, giving over to the Society a barber’s shop full of seeds.²⁷³ These seeds were examined, catalogued,²⁷⁴ and the following spring, those seeds which were thought to be fit for sowing were distributed to Mr Wedale, Mr (Samuel) Doody (Curator of the Chelsea Physic Garden), The Bishop of London, the Duchess of Beaufort,²⁷⁵ Mr (Charles) Dubois,²⁷⁶ and Dr (Jacob) Bobart (of the Oxford Botanical Gardens), ‘to be by them raised, and an account of the success and specimens of such use sent to the Society’.²⁷⁷ The following winter, Hans Sloane showed the Society the fruits from some of the seeds they had sent to the Duchess of Beaufort, noting that ‘there were some fruits such as were never seen in England as China oranges, Guava’s brought so ripe they had their flavour.’²⁷⁸ There was also cotton ripened which produced seed in that Garden. Apothecaries also participated in the testing of new drugs from abroad and with growing specimens, particularly in the Apothecaries' Garden in Chelsea.²⁷⁹ Many more plants,

²⁷² Royal Society, *Journal Book* [hereafter JB], Vol. 10, meeting of 26 October 1698.

²⁷³ JB, Vol. 10. It seems that the initial request was triggered by Browne's volumes. Also several of these do contain small envelopes with seeds, the reference to the barber's ship implies that there were more seeds than those sent by Browne.

²⁷⁴ JB, Vol. 10, November 23 1698 ‘Mr Pepys, Mr Pettiver, Dr Havers & Dr Sloane were appointed a Committee to looke after putting in order the East India Collection now received from the E. India Company & the same persons were ordered to return the thanks of the Society [to the EIC]’.

²⁷⁵ Mary Somerset, the Duchess of Beaufort was an avid gardener, and assisted for a time by William Sherard, she amassed a collection of thousands of rare species from around the world at her estate in Badminton. P. E. Kell, ‘Somerset, Mary, duchess of Beaufort (*bap.* 1630, *d.* 1715)’, *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk:80/view/article/40544>, accessed 26 November 2007].

²⁷⁶ Dubois was the treasurer of the East India Company and a sponsor of Petiver, Ray, and Catesby. His garden at Mitcham, Surrey was filled with exotic plants and his 13,000 specimens of dried plants in 74 volumes were given to the Oxford Botanical Garden. See B. D. Jackson, ‘Dubois, Charles (*bap.* 1658, *d.* 1740)’, rev. P. E. Kell, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2006 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk:80/view/article/8113>, accessed 14 Dec 2007].

²⁷⁷ JB, Vol 10. March 1 1698/9.

²⁷⁸ JB, Vol. 10, December 20 1699.

²⁷⁹ James Petiver, ‘Some Farther Account of Divers Rare Plants, Lately Observed in Several Curious Gardens about London, and Particularly in the Company of Apothecaries Physick-Garden at Chelsey’, *Philosophical Transactions* 27 (1710 - 1712), 416-426. For example, Petiver's comments on SB45 (Tamil: 'Moolepuncodee') notes that Plukenet has grown this in Chelsea.

medicines, and specimens sent from Asia were bought by into private collectors and for sale in apothecaries shops and other places of exchange in early modern London.

Although Bulkley and Browne passed on many of their collections to Petiver, du Bois, Plukenet, and others, they were by no means simply acting as conduits of information to London. Contacts in Europe fulfilled a range of functions for the Company surgeons: a powerful member of the East India Company's board like Charles du Bois might be leaned on for patronage in return for indulging his interests in gardening: in one instance Bulkley sent du Bois five volumes of dried plants, four with their Tamil names, requesting in return du Bois' intervention to procure a further contribution towards his living expenses and the use of a palanquin.²⁸⁰ Apothecaries like Petiver and Plukenet were expected to popularise the medicines they were sent and to sell them, remitting the profits back to the East Indies: for example, Bulkley wrote to Petiver about a root that he named *Radix Traumaticus Indicus* 'your selfe & some other friends may doe kindnesse to others and allso to me in prescribing it'²⁸¹ and later 'I desire yourself and some other friends to make it publick to the world'.²⁸² Finally, botanists and medical men like Ray and Sloane could inform the surgeons about the potential medicinal value of their local plants as well as providing them with drugs, specimens, and books from Europe and the Americas. I will show in the next sections how the surgeons assimilated the specimens they received from abroad into their collections, planted them in their gardens, and made comparisons with plants they had acquired locally.

The hospital

In 1693, Samuel Browne wrote to the President, Nathaniel Higginson: 'I have Murthered Mr Wheeler by giving him Arsnick, Please to execute Justice on me the malifactor [sic] as I deserve'.

Edward Bulkley, then second physician at the Fort, conducted a post-mortem, reporting that

²⁸⁰ For example, letter of 28 October 1698 O.C. 7880, transcribed in Yule, *Diary of William Hedges*, ii, cccxx.

²⁸¹ MS Sloane 3321, fol. 18, Bulkley to Petiver, FSG 12 Oct 1699.

²⁸² MS Sloane 3321, fol. 66 Bulkley to Petiver, FSG, 6 February 1700.

Wheeler's stomach, guts and lungs were inflamed, 'But the suddainness of his death and the severe symptoms he laboured under before he died were greater arguments of Poyson received than anything I could trace out of dissection'.²⁸³ Browne was then called to relate the incident and told the Court that Wheeler had come to him 'sorely oppressed with a great heaviness of stomach, sower belchings, and want of appetite', for which Brown prescribed tartar emetic (antimony and potassium tartrate) to induce vomiting.²⁸⁴ Wheeler did not improve and asked Brown for some ground pearl, which the doctor gave him with some bitter drink. Wheeler took the drink and 'as much of the pearl as would lye on a rupee', began vomiting violently, and came to consult Browne on the verge of death. Browne then took the bitter drink himself and would have taken the pearl had not Wheeler refused to tell him its whereabouts. Browne then concluded that a servant had beaten the pearl in the same mortar as had been used the previous day to grind arsenic 'for Peter Torris['] cancer'. The servants overhearing the conversation began to whisper of poison and Browne wrote his confession. However, when Doctor Bulkey's apprentice and the Hospital 'Coolleys' (workers) testified that the mortar in question had not been in his house the day he had given the pearl to Wheeler and the French Padre Frai Michell said that a woman who was normally healthy had died the same day after a bout of vomiting, Browne began to doubt his own guilt. He then tried administering about three times as much pearl as had been taken by Wheeler to a dog, which remained perfectly healthy. As a result, Brown was cleared of the charges against him and continued as a surgeon.

This story contains several interesting features. The use of arsenic in the treatment of cancer, which Browne refers to, was first described by Ibn Sina (Avicenna), whose work was well known in both Europe and Asia.²⁸⁵ However, the perceived danger associated with its use meant that it was seldom used in Europe in this period. This was part of a general concern regarding the use of poisonous

²⁸³ *Records of Fort St George, Diary and Consultation Book of 1693* (Madras: Government Press, 1918), p. 129. (The extra material is inserted at the end of the volume.)

²⁸⁴ *Records of FSG, Diary and Consultations 1693*, 65-6.

²⁸⁵ Ibn Sina, *al-Qanun fi 'l-tibb*, translated by Laleh Bakhtiar, *The Cannon on Medicine* (Chicago: Kazi publications, 1999). John M. Riddle, 'Ancient and Medieval Chemotherapy for Cancer', *Isis*, 76 (1985), 319-330.

substances: the Royal College of Physicians were so wary of poisons that in 1640 they petitioned the King for the right to seize them from apothecaries.²⁸⁶ In contrast, the use of poisons was more generally accepted in Indian medicine: the best-known Charaka and Susruta *samhitas* both devote lengthy sections to poisonous substances.²⁸⁷ The use of ground pearl was mentioned by Garcia d'Orta as a medicinal treatment in the East Indies and had apparently spread within the European surgeons within the region, although Bulkley's later attempts to persuade Petiver of its merits implies it had not become widely used in Europe.²⁸⁸ The animal and self-testing that Brown carried out and the post-mortem by Bulkley reflect contemporary European practise.²⁸⁹ In other words, the practises reflected in this account demonstrate the use in the hospital of a combination of techniques from European, Asian, and hybrid traditions used by the range of medical practitioners who appear in the story.

A visitor to Madras in 1711 described the hospital as follows: 'The Hospital joins the New-House by the Water-Gate to the Northward, is a long building and has a piazza with a paved Court before it: at one end of the Court is the Plaister-Room, and at the other end an Apothecaries Shop, where the Medicines are prepared after the Prescriptions of the ingenious Dr. B[ulkley]y'.²⁹⁰ The hospital was originally founded in 1664 from subscriptions from the inhabitants to house sick seamen and soldiers.²⁹¹ In 1688, the year of Browne's appointment, it was relocated to a large building close to

²⁸⁶ Rose J. Papac, 'Origins of Cancer Therapy', *Yale Journal of Biology and Medicine*, 74, (2001), pp. 391-398. MS Sloane 3914, fol. 273-4.

²⁸⁷ These early Indian writings on poison would have influenced Arabic works. See Martin Levey, 'Medieval Arabic Toxicology: the *Book on Poisons* of Ibn Wahshīya and its Relation to Early Indian and Greek Texts.' *Transactions of the American Philosophical Society*, New Series, Vol. 56, No. 7 (1966), pp. 1-130 and Alavi, *Islam and Healing*.

²⁸⁸ Sloane MS 3321, fol. 19, Bulkley to Petiver, Fort St George (hereafter FSG), 13 October 1699.

²⁸⁹ The Royal Society's minutes and the *Philosophical Transactions* frequently record testing substances on dogs. Dissection was performed in medical schools like the famous one at Leiden University. Although dissection is mentioned in Susruta (see Kenneth G. Zysk, 'The Evolution of Anatomical Knowledge in Ancient India, with Special Reference to Cross-Cultural Influences', *Journal of the American Oriental Society* 106 (1986), 687-705), it had fallen out of favour long before the seventeenth century, as several travel narratives attest.

²⁹⁰ Lockyer, c.f. Love, *Vestiges of Old Madras*, i, pp. 83-4

²⁹¹ It is not specified anywhere whether the patients were all Europeans at this stage, however, if the EIC followed the model of the Dutch and Portuguese it seems likely. The first mention of a hospital specifically for 'the indigent poor' was in 1799 (c.f. Crawford, *History of the IMS*, p. 414).

the riverside.²⁹² As Chakrabarti has noted, the practise of medicine at Madras was closely connected to the expansion of the military forces from the town. Indeed, Samuel Browne refers to 'this garrison' in the dedication of his botanical works that he sent to the East India Company.²⁹³ Like their Dutch counterparts, the VOC, the East India Company relied on the use of local drugs to circumvent the problems of expense and spoiling associated with sending drugs from Europe to its settlements abroad.²⁹⁴ The apothecaries' shop in the hospital may therefore have constituted an English equivalent to the 'medical shop' in the castle at Batavia, in provisioning the sailors and soldiers who passed through Madras.²⁹⁵ For Browne and Bulkley it was a place of experimentation where they used the knowledge they gained from their surroundings to prepare and market simple and compound drugs.²⁹⁶ As I will show in the later sections, the surgeons marketed their drugs of the Mughal camps as well as to the East India Company and their contacts overseas.

Gardens

In a letter announcing his retirement from botany, Browne tells Petiver he plans to hand over his space in the Company's garden to Edward Bulkley.²⁹⁷ Although the first colonial botanical garden is generally considered to be that established in Calcutta,²⁹⁸ gardening had been an important part of Company settlements for much longer and were considered important to the introduction of foreign species and the close observation of local specimens.²⁹⁹ In this, the EIC were following the example

²⁹² BL IOR, G/19/5, 22 March 1688, fols. 20v-21v.

²⁹³ Brown to the EIC, Letter pasted into Vol. 1 of collected books of plants, NHM, dated from FSG, 20 Sept 1697; Chakrabarti, 'Neither Meate nor Drinke'.

²⁹⁴ Chakrabarti, 'Neither Meate nor Drinke', p. 7.

²⁹⁵ Cook, *Matters of Exchange*, p. 306.

²⁹⁶ Browne refers to experimenting with creating new drugs based on his observations of existing uses. For example, he notes that SB 101, 'Care-vail maraum' ('maraum' meaning tree) a type of Acacia, is locally used for its bark, but that he has also experimented with distilling an oil from the fruit to use in treating fluxes.

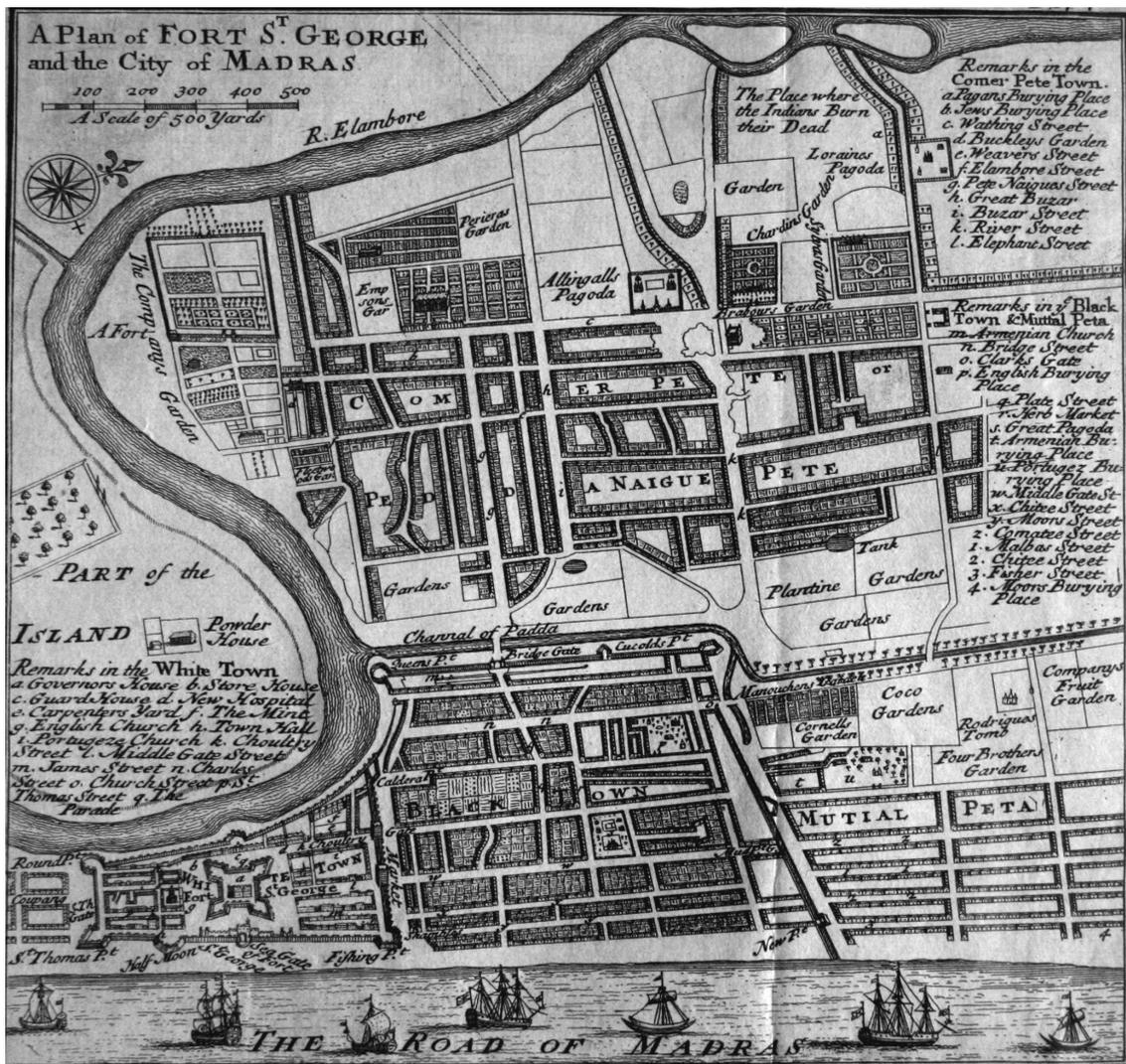
²⁹⁷ MS Sloane 4062, fol. 290, Browne to Petiver, FSG, 30 September 1698.

²⁹⁸ The Calcutta garden was begun in 1786-8 as part of an attempt to stave off famine by introducing foreign crops. See Richard Axelby and Savithri Preetha Nair, *Science And The Changing Environment In India 1780-1920: A Guide To Sources In The India Office Records*, (London: The British Library, 2007).

²⁹⁹ According to a letter dated 4 January 1677, the Company even had a garden on the small island of Johanna, which had been granted to a Captain Brown by the Sultan (Transcribed in Richard Carnac Temple ed., *The diaries of Streysham Master, 1675-1680, and other contemporary papers relating thereto*, 3 vols. (London: J. Murray, 1911), i, p. 237).

of the Dutch Company, whose gardens at the Cape were renowned by the late seventeenth century.³⁰⁰ Hermann Moll's plan of early-eighteenth century Madras includes no less than ten gardens.

³⁰⁰ Cook, *Matters of Exchange*, p. 321.



Herman Moll, *A Plan of Fort St. George and the City of Madras*, 1726

As several authors have pointed out, the idea of the experimental garden designed to introduce new crops and to provide materia medica for local hospitals had existed for a long time in both Hindu³⁰¹ and Muslim traditions³⁰² and had filtered across to Europe to manifest itself in the 'physic gardens' and 'acclimatisation gardens' that emerged in Italy, Portugal, later Holland, and finally England.³⁰³ The Company's gardens were only part of a longer tradition of transplantation and experimental gardening. The most famous instances of transplantation include chilli, thought to have been

³⁰¹ Patrick Bove, 'The Indian Gardening Tradition and the Sajjan Niwas Bagh, Udaipur', *Garden History*, 27 (2), (1999), pp. 189-205, who notes that gardening was not only a practise of princes, but was also practised by noblemen and merchants (at least in Rajasthan).

³⁰² John Brookes, *Gardens of Paradise: the history and design of the great Islamic gardens* (London: Weidenfeld and Nicolson, 1987).

³⁰³ Grove, *Green Imperialism*, pp. 73-94.

brought from the Americas by the Portuguese, and coffee, apparently brought from the Middle East during the sixteenth century by a pilgrim returning from Mecca.³⁰⁴ The letters of the surgeons also note these continued processes of informal transplantation. For example, Browne writes of a type of fragrant grass that it had been brought by a Portuguese merchant from Batavia to Pulicat and from there to gardens in Madras.³⁰⁵

The gardens in and around Madras were fertilised by all these traditions and served for both pleasure and business. Lockyer described the Company gardens as follows: 'The Governor, during the hot Winds, retires to the Company's new Garden for refreshment, which he has made a very delightful place of a barren one. It has costly gates, loveing Bowling-Green, spacious Walks, Teal pond, and Curiosities preserv'd in several divisions are worthy to be admired. Lemons and grapes grow there, but five Shillings worth of Water and Attendance will scarce mature one of them'.³⁰⁶

People involved with the gardens ranged from the Governor to the slaves who tended them.³⁰⁷ Some were able to make gardening a profitable pursuit. For example, some of the correspondence between Browne and Petiver, mentions the Company's gardener, referred to only as Randall or Randal, who is making a considerable profit from his specimens.³⁰⁸ Randall, who apparently sent at least six volumes of collections to England, might himself have been a slave: his name does not appear any of the lists of Company employees and European inhabitants made during the 1690's or in the 1688 census of the dwellings of white town.³⁰⁹ Furthermore, the profession of gardening was one often performed by slaves in the Company settlements and this would explain the use of only

³⁰⁴ [Staff writer], 'Coffee in Chikmagalur', *The Hindu*, Metro and Coimbatore section, 6 November 2008.

³⁰⁵ Petiver and Browne, Vol. 7, p. 1253, specimen no. 251. Chakrabarti also notes that Browne provided important information on Portuguese transplantations.

³⁰⁶ c.f. Yule, *Vestiges*, ii, p. 84.

³⁰⁷ 'Chardin's garden' in Moll's map might have belonged to Daniel Chardin, younger brother of Sir John, a diamond trader in Madras.

³⁰⁸ Sloane MS 3333 fol. 201, Browne to Petiver, FSG, 17 October 1696: 'The Company's gardener I know and have seen many of his collections, which he sold at very great rates'. HS, Vol. 32 fol. 131 is marked 'Sent from Fort St George by my sister Mary du Bois...au Randalia, Vol. 6, nodif. fol.', implying that Randal also made extensive collections. SB256 is referred to as *andalia Madraspatana Graminis folio globuliser* (a grass with spherical leaves). HS 188 contains a specimen from Randal on fol. 178 collected in 1700 (Dandy, p. 52 and 189).

³⁰⁹ FSG, *Diary and Consultation Book of 1700*, (Madras: Government Press, 1922), pp. 96-98, 30 December 1700; FSG, *Diary and Consultation Book of 1688* (Madras: Government Press, 1913), pp. 120-121, 2 August 1688.

one name in all the references to him.

The surgeons used the gardens to grow and observe the materia medica they collected and received from abroad. Browne describes the 'Country Plants I have collected into a Square of the Company's gardens'.³¹⁰ Growing the plants that he used in his medical practise, as well as saving on trips to the bazaar, allowed Browne to match the drugs he purchased with the living plant and to observe the plants in their different stages of development. He wrote to Petiver in 1698 that he had finally succeeded in procuring 'rhubarb and the true China root (what we had before was spurious) both brought ^me^ lately from China after I had before been many times been disappointed'.³¹¹ He adds that he has received cinnamon trees from Ceylon and that 'wild agallo Benjamin & Camphire'³¹² were expected to arrive soon from Manilla, where his correspondent was the Jesuit priest George Camelli (or Kamel)³¹³.

Bulkley appears to have taken on the section of the Company's garden left him by Brown with enthusiasm. Bulkley also received presents of plants and seeds from the network of Company surgeons, Jesuits priests, and merchants, which he planted. Bulkley obtained plant samples from as far off as West Africa. With one letter he sends:

'a figure of a small sort of Gourd gathered on the Coast of Guinea & presented to me by name of the everlasting apple it was really beautiful but after a year grew dry and lost its verdure, so I cut it open & the seed seeming to be full ripe I sowed it in my garden where it came up & bore one white flower...'³¹⁴

³¹⁰ MS Sloane 4062, fol. 290, Browne to Petiver, FSG, 30 September 1698. 'China root' refers to *Smilax L. China*.

³¹¹ Browne had previously sent Petiver a specimen (SB 164), of which he noted 'This we call China-root, but is very differ from what you describe with prickles. This cured one Mr Ingram of a consumption, who had lingered many years at the New Fort. 'Tis two foot high. The root just like China root: when I have more experience of it you shall hear farther.' China root was a mainstay of the trade from China in this period according to Baron (Appendix 1).

³¹² 'Wild agallo' is agallochum (SB709 and see below); Benjamin is incense (*Hobson-Jobson*, p. 86) and 'Camphire (Camphor) is an oil produced from a tree indigenous to Java, Sumatra, and Japan (*Hobson-Jobson*, p. 151).

³¹³ MS Sloane 4062, fol. 290, Browne at FSG to Petiver, 30 September 1698. For Kamel's collections in the Sloane Herbarium see Dandy, pp. 145-148.

³¹⁴ MS Sloane 3321, fol. 185 Bulkley to Petiver, FSG, 24 January 1706. As he noted in an earlier letter (fol. 172, 15 March 1705), the gourds were gathered by sailors on the ship Abingdon.

These plants apparently flourished in the gardens: the following year he sent two of the gourds to Petiver.³¹⁵ Bulkley also observed the progress of plants that had been brought to the settlement by others: he tells Petiver: 'I have nowe sent you 2 or 3 with one figure of Zeilon plants the leafe green, variegated with white, the flower called by the Dutch the slang Cruit, i.e. snake plants, I am a stranger to its virtues, it now growes in divers gardens here, brought from Zeilon about six years since'.³¹⁶ Bulkley also despatched seeds to be planted in other East India Company settlements: he sent rhubarb roots to Bencoulen to see whether they would fare better there than in his garden.³¹⁷

The Company surgeons also attempted to introduce European and American plants into their gardens: Bulkley made several requests for Petiver to send him seeds for plants yielding food or medicine.³¹⁸ Some introduced crops had a clear commercial value for the Company. By the late seventeenth century, several factories had become involved in the cultivation and vending of tobacco,³¹⁹ a plant which in 1693, Petiver still listed as completely unknown in London. The Company were also renting licenses to grow and sell it, along with other mild stimulants or intoxicants including betel and cannabis.³²⁰ An interest in what might be called 'narcobotany' appears in the specimens sent by Browne to Petiver, which include both these specimens.³²¹ The opium poppy, which later became so important in the trade to China, was also discussed by Petiver

³¹⁵ MS Sloane 3321, fol. 213, Bulkley to Petiver, FSG, 12 February 1707.

³¹⁶ MS Sloane 3321, fol. 110-111, Bulkley, FSG, 12 February 1702/3 [Recd 20 Nov 1703]. The 'snake plant' probably refers to *Sansevieria zeylonica*, a fibrous plant, the roots of which are used in antiseptic ointments and as purgatives, tonics, expectorant, and against fever, Peter Hanelt, R Büttner, and Rudolf Mansfeld, *Mansfeld's Encyclopedia of Agricultural and Horticultural Crops* (Berlin: Springer, 2001) p. 2201. 'Zeilon' refers to Ceylon (Sri Lanka).

³¹⁷ MS Sloane 3321, fols. 84-5, Bulkley to Petiver, FSG, 9 November 1701.

³¹⁸ MS Sloane 3321, fol. 19 – Bulkley to Petiver, FSG, 13 October 1699: 'I desire that you will send me as many medicinall seeds as you thinke may be like to growe here, I should like to raise some Europe plants here'.

³¹⁹ Tobacco cultivation was established in the Deccan by 1605 WHO India, 'Economic History of Tobacco Production: From Colonial Origins to Contemporary Trends', URL: <http://www.whoindia.org/SCN/Tobacco/Report/03-Chapter-02.2.pdf> (accessed, 19/06/2010). Petiver notes in a commonplace book, MS Sloane 4020 fol. 216, 'Tobacco certainly is a proper native of America, though now it is gott in to the Easte Indies also where (in the province of Guzarat [Gujarat] especially) they sow it in abundance'. As J. Crawford, 'On the History and Migration of Cultivated Narcotic Plants in Reference to Ethnology', *Transactions of the Ethnological Society of London*, Vol. 7 (1869), pp. 78-91, notes, both the Emperor Jahangir and King James issued edicts or tracts attempting to curb the consumption of tobacco in their realms.

³²⁰ Cannabis is described in the eighth book of plants sent to Petiver from Fort St George (*Philosophical Transactions*, 23 (1702/3), p. 1454).

³²¹ SB 8.14-15.

and Browne.³²²

Another way in which the Company profited was by participating in indigenous drug trades. Collections of advice contain lists of the commodities, including drugs that were procurable in one part of the Indian Ocean and in demand in another. Investigations into the origins of plants and the possibilities for transplanting them were therefore useful to the Company's strategy.³²³ It was therefore useful for them to encourage collections to be distributed among the circles of gardeners spanning Europe and Asia. For the surgeons themselves, the distribution of seeds carried the same advantages as remitting their dried specimens: their friends in Europe could provide them with additional comparisons and identifications of the plants they themselves were growing and raise the profile of species they were marketing to private collectors. In return for the seeds they sent, they expected to receive European or American seeds or some other form of patronage.³²⁴

Books and manuscripts

Like the process of comparison carried among the plants from around the world carried out in botanical gardens, the use of printed books and collections of dried plant materials was crucial not only to the identification of individual plants but also to the emerging understanding of the distribution of plants across the world. Again, looking at the activities of the surgeons of Madras demonstrates that this was not a process confined to Europe: the surgeons had access to the leading contemporary works of natural philosophy and they used them in the cataloguing and identification of the specimens they collected.

³²² MS Sloane 3333, fol. 195, Petiver, 'A return to Mr Samuel Browne's remarks on the 4th book of Bontius his animadversions on Garcia da Orta' (undated).

³²³ See for example BL Add MS Add 34123, 'Copybook of Henry Vansittart, Governor of Bombay, 1756', a compilation of pieces of advice from the 17-18thC. fol. 34 'Advice from Mr Pitt' includes advice on drugs that will sell in Persia including China root and pearl and drugs that may be purchased in Aceh, including marijuana. fol. 36 is a similar list of goods proper for the Coromandel Coast, including China root, bezoar stones, lignum aloes, and opium. The advice of Samuel Baron in the same volume fols. 40-42, also discusses the regional trades in China roots, opium, and arsenic.

³²⁴ E.g. O.C. 7880, Bulkley to Du Bois, 28 October 1698, transcribed in Yule, *Diary of William Hedges*, ii, cccxx.

Next to one letter, Petiver has scribbled a list of books previously owned by Samuel Browne and now in the possession of Edward Bulkley.³²⁵ These include some works that were at the heart of the scientific revolution in Europe. Among them were Prosper Alpinus' 1591 *De medicina Aegyptiorum*, one of the earliest European studies of non-Western medicine, which dealt with Turkish practises observed in Egypt.³²⁶ Browne also passed on some more recent works, including Jean-Bapiste Tavernier's descriptions of Tonqueen (Vietnam) and Japan, John Ray's, *History of Plants*, Robert Hooke's *Micrographia*, Joshua Childrey's *Britannia Baconica*,³²⁷ Parkinson's work,³²⁸ Spratt's *History of the Royal Society*, and Jo. Jacob Berlu's *Treasury of Drugs Unlock'd*.³²⁹ From the comparisons that Browne drew in the notes on the collections he sent to Petiver, it is clear that he also owned copies of Garcia da Orta's *Colloquies* and Christoval Acosta's *Tractado*.³³⁰ Browne also requested collections from Petiver covering other areas of natural philosophy including surgery, anatomy, brewing techniques, and Joseph Moxon's works on architecture and mechanics.³³¹

Edward Bulkley also requested further books from Petiver to enlarge the library he had inherited from Browne. In a later letter, Bulkley requests that Petiver send him books on 'garden art' and a

³²⁵ MS Sloane 3321, fol. 133, Bulkley to Petiver, 10 February 1704.

³²⁶ Prosper Alpinus, *De medicina Aegyptiorum*, (Venice: Francesco dei Franceschi, 1591). The work is credited with introducing moxibustion into Europe as well as containing the first mention of coffee in a Western language. The English botanists used it as a source of comparison with plants they received from around the world, as shown in Petiver's comments on SB 90.

³²⁷ Joshua Childrey, *Britannia Baconica: or, The natural rarities of England, Scotland, & Wales* (London: printed for the author, 1660).

³²⁸ John Parkinson, *Theatrum botanicum* (London: Thomas Coates, 1640). Parkinson was a prominent member of the Society of Apothecaries, a keen gardener and was appointed *botanicus regius primarius* Charles I. Browne's notes on the plants he sent Petiver contain some cross-references with Parkinson. An example is SB26, (Tamil: 'Mallewambo', Telugu: 'Trucaweampue'), a febrifuge which Parkinson (p. 1651) refers to as 'Nimbo' (MS Sloane 4020 contains some very bad poetry by Petiver on the Nimbo tree). Juanita Burnby, 'Parkinson, John (1566/7–1650)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk/view/article/21372>, accessed 15 Nov 2009].

³²⁹ Jo. Jacob Berlu, *The treasury of drugs unlock'd, or, A full and true description of all sorts of drugs and chymical preparations sold by druggists*, (London: John Harris and Tho. Howkins, 1690).

³³⁰ Specimens nos. 113: 'G: Tagada/ M Shevada (*Hewitta malabarica CONVOLVULACEAE* (Manilal, 2003 11:51, p. 189) and 121: 'G: Vaudechettoo/ M: Nuchulee' cross-reference Garcia da Orta and Christoval Acosta, *Tractado de las drogas y medicinas de las Indias Orientales* (Burgos: Martin de Victoria, 1578).

³³¹ MS Sloane 4062, fol. 290, Browne to Petiver, FSG, 30 September 1698. The books mentioned in this letter include William Salmon, *Ars chirurgica* (London: Printed for J. Dawes, 1698), J. Lightbody, *Every man his own ganger*, (London: Printed by O.C., c. 1700), a work on brewing, and several of the works of Joseph Moxon (1627–1691), printer and globe maker on architecture and mechanics.

copy of John Ray's work *Historia generallis plantarum*, adding 'I would allso have all the Transactions of the Royall Society from their beginning until the presant time also Mr Boyle's works epitomisd'.³³² He contemptuously rejected out-of-date information: in 1707 sending back an almanac of 1703 with the comment that it might be of use in 'some other latitude'.³³³ Petiver also sent samples of dried plants to Bulkley: a catalogue of around one hundred and fifty specimens of these is recorded in 1698.³³⁴ Petiver also sent books to his other correspondents, including the Jesuit Father Camelli, whose list of requests included Martin Lister's *Historia Conchyliorum* (1685-92),³³⁵ the work of Petiver's later rival Leonard Plukenet, and a pharmacopoeia of Batavia.³³⁶

Perhaps the most crucial to the surgeons' work were the twelve volumes of the *Hortus Malabaricus*, which Petiver sent to Browne who eventually sold them on to Bulkley.³³⁷ The *Hortus Malabaricus* is constantly referred to in the identification of plants in the volumes Browne and Bulkley sent to James Petiver. Petiver embarked on a project of producing English summaries of the descriptions of plants and their medicinal properties in the *Hortus Malabaricus* and sending them to Browne and Bulkley for additions. Petiver planned a summary translation of the work, intended specifically for use in the East Indies, writing to Bulkley: 'that it may be better known especially in your parts...I hope to make it so easie that the whole 12 volumes may be reduced to the price of 2 & nothing materiall omitted but the whole put into better order & method &c'.³³⁸ The translation was intended

³³² MS Sloane 3321, fol. 110-111, Bulkley, FSG, 12 February 1702/3 [Recd. 20 November 1703]. John Ray's *Historia generallis plantarum* was published in three volumes in 1686, 1688, 1704 and covers some 16100 species. See Scott Mandelbrote, 'Ray, John (1627-1705)', *Oxford Dictionary of National Biography*, Oxford University Press, Sept 2004; online edn, Oct 2005 [http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk/view/article/23203, accessed 18 Aug 2009]. Some correspondence between Ray and Petiver concerning the work of Camelli and Browne, Sherard, Rumphius is preserved in MS Sloane 4067, fols. 120-121. The same volume contains Petiver's correspondence with Sherard, Plukenet, and many others.

³³³ MS Sloane 3321, fol. 222, Bulkley dated 20 December 1707.

³³⁴ MS Sloane 3333 fol. 198v-199. The specimens include several types of convovulus, lotus, cannabis, valerian, and 'Medica Arabia'.

³³⁵ Martin Lister (1638-1712), Fellow of St. John's College, Cambridge, was physician to Queen Anne.

³³⁶ MS Sloane 3333, fol. 194b. Possibly Hermann, *Paradisus Batavus*.

³³⁷ MS Sloane 3321, fol. 28 – Bulkley to Petiver, Feb 23rd 1699/1700. Bulkley rebukes Petiver for making Browne pay for these volumes, which were 'very requisite for his commendable work'.

³³⁸ BL Sloane MS, 3340 (Commonplace book of James Petiver), fol. 10, letter to Edward Bulkley [no date]. The translation of the work into English is begun in MS Sloane 3333 fol. 41.

to focus on plants that also occurred around Madras, and Petiver made it clear that the surgeons' input would be required to achieve the 'better order and method'. To this end, he extracted all the names of trees from the first volume of the *Hortus* and requested that Bulkley send him a sprig of each with a specimen of the ripe fruit, which should be dried and sorted in a chest 'with the Malabar [Tamil] or any other name it has tied to it'.³³⁹ Petiver's commonplace book reveals that he attempted similar summaries of the work of other Dutch natural philosophers including Rumphius and Hermann.³⁴⁰ The monumental work of translating the *Hortus Malabaricus* eventually had to wait until the twentieth-century edition of K.S. Manilal. However, the comparisons between different parts of the world enabled by the libraries the EIC surgeons built up did allow them to begin to sketch a larger map of the distribution of flora and fauna.

Patients and Politics

In a letter to the Directors in London in 1666, the President and Council at Surat wrote to England requesting the services of an experienced surgeon capable of the cure of Indian 'Governors and noblemen'. This, they wrote, was essential 'for the honour of the nation', adding that these dignitaries 'having such civilities done them, in gratitude become very serviceable in...furthering your business'.³⁴¹ European doctors attending Asian noblemen was nothing new: Garcia da Orta boasts of the riches he was offered by one such patient;³⁴² the *fīrman* granted by the Emperor Farrukhsiyar to the Embassy led by John Surman in 1715 after a cure effected by the doctor William Hamilton;³⁴³ and John Fryer describes being sent to treat a Mughal dignity.³⁴⁴ European physicians in the employment of Asian rulers were also used as diplomatic conduits by the trading

³³⁹ BL Sloane MS, 3340, fol. 10, letter to Edward Bulkley [no date].

³⁴⁰ MS Sloane 3340, fols. 103-106 – 'Epitome of Rumphius' herbal of of East India Plants'; fol. 113, 'Hermani catalogus Musei Africanus'; fol. 115-135 'Catalogus plantae musai zeylonici Pauli Hermanni' (probably referring to the collection preserved in the Sloane herbarium).

³⁴¹ IOR E/3/29, 3144, fol. 152-62 – Sir George Oxenden and Council to EIC in London, 1 January 1666.

³⁴² Garcia da Orta, *Colloquies on the simples and drugs of India*, trans by Clements Robert Markham (London: Sotheran, 1913). See also Grove, *Green Imperialism*, p. 81 who says that da Orta soon shifted his allegiance from the Portuguese government to Burhan Nizam Shah, interacting with other physicians at 'Balagate'.

³⁴³ For this grant Sen, *Empire of Free Trade*,

³⁴⁴ c.f. [Anon] 'John Fryer-A Traveller Of XVII Century And His Impressions Of Medicine In India', p. 249.

companies. For example, the Madras factory used their contacts with Monsieur Eshelmon, the surgeon to the King of Golconda, to help them procure a *firman* or grant giving permission to coin rupees. They also kept up a correspondence with Manucci during his period as physician to Aurangzeb and planned to use him as an ambassador to Shah Alam.³⁴⁵ This practise of using medical officers in political and administrative roles was inherited by the Europeans from the Mughal Empire: as Crawford notes, Jahangir had promoted the successful doctor Muqarrab Khan to an governmental post.³⁴⁶ As Bayly has shown, doctors attending Indian rulers, like Paul Jodrell physician to the Nawab of Arcot, continued to be important to both the diplomacy of the EIC and as providers of information to the scientific community in England.³⁴⁷

The EIC settlement in Madras during the late seventeenth and early eighteenth centuries was in a difficult position. Since 1657, they had been subjects of the rulers of Golconda, the Qutb Shah dynasty who had regained independence from the Mughal Empire after a war of succession. Despite nominally accepting Mughal overlordship in 1677, the same year Abul Hasan of Golconda negotiated a military alliance with the Maratha leader Śivaji, based on the annexation of land in Bijapur and Karnataka.³⁴⁸ The East India Company had themselves thrown in their lot with these enemies of the Mughal Empire, launching an abortive war during the 1680's. However, the war proved so disastrous that the English parliament granted a charter to a rival company in 1698,³⁴⁹ which fought and petitioned the Emperor against the old Company until a final merger of the two took place in 1702-9. The Madras factory was therefore under great pressure to form a new alliance with Zu'lfiqar Khan and Daud Khan, leaders of a powerful faction of the Mughal nobility, who had

³⁴⁵ A Lakshmanaswami Mudaliar, 'A History of Medical Relief in Madras', in *The Madras Tercentenary Commemoration Volume*, (Madras, 1939 repr. Delhi: Asian Educational Services, 1994), p. 52.

³⁴⁶ Crawford, *History of the IMS*, pp. 127-8. Seema Alavi, *Islam and Healing: Loss and Recovery of an Indo-Muslim Tradition, 1600-1900* (Basingstoke: Palgrave Macmillan), p. 3 notes that 'in the Mughal empire, medicine was a form of healing central to the building of an imperial political culture'.

³⁴⁷ Bayly, *Empire an Information*, Ch. 7 'Colonial controversies: astronomers and physicians'.

³⁴⁸ John F. Richards, *The Mughal Empire*. New Cambridge History of India, I, 5, Ch. 10.

³⁴⁹ India Office Record (hereafter IOR) A/1/51-52 William III's letter's patent and A/1/54, signatures of 1442 subscribers to the New Company.

been sent by Aurangzeb to defeat the Marathas and had consolidated Arcot as a centre by the early 1690's.³⁵⁰ The network of surgeons played an important part in the diplomatic negotiations with the new Nawabs of the Carnatic.

In 1693, Samuel Browne was sent to treat a wound of the Mughal general Qasim Khan.³⁵¹ Khan must have been satisfied with his treatment, for he appointed him as the *Hawāla* of six towns adjoining Madras.³⁵² The East India Company was apparently unhappy with Brown's position: they ordered him to return the towns and to choose between the role and remaining in their employment.³⁵³ This wariness may have been due to the defection the same year of Richard Blackwall, the surgeon at Fort St David from 1693 was said to have 'by his profession, access to the Mughal's camp' and while there had apparently been bribed to betray Fort St David and take on the position of governor of Porto Novo.³⁵⁴ Whether Brown did eventually assume a Mughal office is unclear. However, during his visit, he made contact with the physician to the Nawabs of the Carnatic, an Armenian named Johannes Potuliet or Poterliet, who may also have attended Bahadur Shah or his younger brother, Azam Shah. Like the exchanges in Europe in this period, diplomacy with the Mughal Empire was heavily dependant on the exchange of costly gifts or 'curiosities'. In 1693, Potuliet wrote to the Council at Fort St George asking for more glasses for a lantern that Browne had given his master, and implying that these would be essential to the process of procuring a *firman* from the Emperor to confirm the Company's status in Chinapatam and Cuddalore.³⁵⁵

³⁵⁰ The history of Arcot is discussed by Sanjay Subrahmanyam, 'Reflections on State-Making and History-Making in South India, 1500-1800, *Journal of the Economic and Social History of the Orient*, 41 (3), (1998), pp. 382-416.

³⁵¹ Crawford, *History of the IMS*, Vol 1. p. 91. This is probably too late to be the Qasim Khan who was Governor of Bengal under Jahangir. However, S.R. Bakshi and R. K. Gupta, *Rajasthan through the Ages* (New Delhi: Sarup & Sons, 2008), p. 79 mention a famous Mughal general of the same name who was defeated by the Maratha armies in 1695.

³⁵² Pub. Cons. Vol. XX, pp. 43-44, 01 August 1693. Qasim Khan is given here as 'Cassim Cawn'. For the term 'havildar', a corruption of the Persian term *Hawāladār*, or *Hawāldār* probably indicating an office rather below that of a *zamindar*, see *Hobson-Jobson*, p. 412-3.

³⁵³ Letter from Sir John Goldsborough Chuttanutti dated 14 October 1693, *Letters to FSG*, Vol. V, pp. 164-8.

³⁵⁴ John Bruce, *Annals of the Honourable East India Company*, (London: Black, Parry and Kingsbury, 1810), Vol. III, p. 154, reproduced in Crawford, *History of the IMS*, Vol. 1, pp. 94-5, who notes that Blackwall was later sent as a surgeon to Bencoulen. Love and Crawford note an episode previous to this in which Browne drunkenly challenged Blackwall to a duel.

³⁵⁵ *Letters from FSG* (Tamil Nadu State Archives, hereafter TNSA. Volume and page numbers here indicate the original

Browne's position and his apparent ruthlessness in exploiting it appears to have caused some problems for the Company: in 1697, the Council at Fort St George punished the doctor for robbing, attacking, and, to add insult to injury, pulling the beard of a Mughal customs official.³⁵⁶

Nevertheless, shortly thereafter the doctor was mediating in a dispute with the same official, who had cut off the roads between Fort St George and nearby San Thomé after a dispute concerning land rents.³⁵⁷ The Council also had to intervene in a dispute between Browne and a patient who is named Aggala Khan, who apparently paid him a large sum to acquire medicines for him. Browne seems to have defaulted, and eventually the President, Nathaniel Higginson, was forced to make a personal appeal to Zul'fiqar Khan, to reduce the doctor's debts.³⁵⁸

Despite such occasional hiccups, Browne seems to have managed to have used his patrons in the Mughal establishment and the Company hierarchy to build up a lucrative business supplying drugs to the camps of the Mughal generals as well as to the inhabitants of Madras and the Portuguese of San Thomé.³⁵⁹ Browne's contacts in the Mughal army were also useful for the Company: he could inform them about goings-on and, as he did in 1695, recover errant servants who had crossed to the Mughal camp.³⁶⁰ During their visits to the Nawabs of the Carnatic, the two surgeons became aware of *unani* medicine: Browne mentions the use of certain plants 'in the Moors camp' in his letters to

volumes. Most entries are also transcribed in the series printed by Madras Government Press), Vol. IV, pp. 102-108, A letter of 1 December 1693 identifies Johannes Potuliet as 'Physician to Prince Azem Tarra' (This probably refers to Azim Shah but it could potentially also be Bahadur Shah I, who was known as Muazzam in his youth). A. Lakshmanaswami Mudalier, 'A History of Medical Relief in Madras', *Madras Tercentenary Commemoration Volume*, (First published Madras, 1939, reissued New Delhi, 1994, Asian Educational Services). pp. 51-61, p. 52 notes that the Council wrote to Potuliet in 1682 for assistance in their attempts to procure a grant for free trade on the Coromandel Coast from the Emperor.

³⁵⁶ FSG, *Public Consultations* (TNSA), Vol. XXIII, pp. 153-6, 27 April 1696. The term used is 'Junckaneer' for which see *Hobson-Jobson*, p. 473 the location 'Ipere' is unclear.

³⁵⁷ FSG, *Public Consultations* (TNSA), Vol. XXVI, pp. 43-44, 11 October 1697. The incident is also noted in Crawford, *History of the IMS*, Vol. 1, p. 91-2.

³⁵⁸ *Letters from FSG* (TNSA), Vol: VIII, pp. 99-100, fol. 882, 23 April 1698 and pp. 111-114, 13 May 1698. Higginson sends a letter in Persian appealing on the doctor's behalf and 2000 fanams: and 4 Gold mohurs to pay the debt.

³⁵⁹ MS Sloane 3333, fol. 208 'An answer to Mr Petivers Remarks on Parkinson's Herball relating to such Plants as Grow Near Fort St George on the Coast of Cormandel', undated but c. 1696 mentions giving medicine for the Portuguese clergy and laity.

³⁶⁰ FSG Pub. Cons. (TNSA) Vol. XX, pp. 43-44 (p. 114 in printed vol), 1 August 1693, in which Browne returns with a defected French soldier and procures a pardon for him.

Petiver³⁶¹ and notes of another: 'the moors give it to their horses to fatten them, which I have seen; but the Malabars think it to be poison, because the goats eat it not'.³⁶² The knowledge of the local names and uses of drugs that is evident in his correspondence with Petiver must have been partly gleaned from the observation of medicine in the courts and camps of the Mughal hierarchy as well as from local doctors at Fort St George and would have been essential to establish the client base he seems to have had in the camps of the Mughal generals. Browne also profited by selling drugs from the bazaar to the Company,³⁶³ and in 1698, Browne wrote to Petiver that he was retiring from the pursuit of botany to focus on his 'physick practise' and the office of assay master that he had recently assumed.³⁶⁴ Browne also used his network of contacts to extend the reach of the 'physic practise' far beyond Madras, a point that I will return to below.

Despite the accommodation reached in 1693, relations with the rulers of Arcot remained tense: Selim Khan attacked Cuddalore during 1698 and Zul'fiqar Khan's deputy Daud Khan repeatedly threatened Madras, blockading it for an extended period in 1702. Again, Company officials turned to network of surgeons with access to the Mughal hierarchy: on this occasion, they appealed to the self-made Italian medic Manucci, then living in Madras, to negotiate with Daud Khan.³⁶⁵ The need for political awareness as well as medical skill might partly explain the Company's decision in 1697 to replace Browne with Bulkley, who they wrote was 'largely fit to serve us by his large experience of India...and as fit for prescribing physic as for manuall operation [surgery]'.³⁶⁶ In 1707, the year of the death of Emperor Aurangzeb and the ensuing political unrest, Bulkley visited Arcot to attend the

³⁶¹ SB 250 *Imperata cylindrica* POACEAE (Manilal, 2003: 12: 57, p. 189), Browne writes 'this is Schaenanth, which the Natives have not in great esteem, sometimes in the Moors Camps, the Horses, Camels, and Oxen, which carry burthens eat nothing else', but he also notes its use in fever and argues that it should be better regarded.

³⁶² SB 175.

³⁶³ Payments for drugs purchased by Brown in the bazaar for use in the Company hospital are recorded in 1695-8 (FSG *Public Consultations* (TNSA), Vols. XXII, pp. 265-72, 02/08/1695; XXII, pp. 265-72, 31 August 1696; and XXXIII, pp. 267-8, 16 February 1698).

³⁶⁴ MS Sloane 4062, fol. 290, Browne to Petiver, FSG, 30 September 1698.

³⁶⁵ See Rao Bahadur K. V. Rangaswami Iyengar, 'Manucci in Madras' in *The Madras Centenary Commemoration Volume* (Delhi: Asian Educational Services, 1994, first published Madras, 1939) p. 150. Letter, undated but c. 1699 from John Pitt (of new Company) to Manuchi – IOR Original Correspondence 6685 and 6790.

³⁶⁶ Despatch from England dated 16 April 1697 and quoted in Love, *Vestiges of Old Madras*, II, p. 88.

Nawab, using the time he spent there to gather several volumes of the local plants, some of which he sent on to Petiver.³⁶⁷ Mughal medical conventions appear to have had some influence on Bulkley; for example, when he wrote to request changes to the hospital, he recommended the appointment of a dubash (interpreter and general manager) and a conicoply (accountant or registrar) as well as four 'coolies' (workmen).³⁶⁸ He also recommended an allowance of one hundred pounds for the purchase of drugs: half to be sent from Europe and the remainder acquired locally.

Late seventeenth century Madras was in a precarious position. Poised between Mughal expansionism, the rebel Marathas, and the Kingdom of Golconda, it was regularly threatened with extinction. The network of contacts that could be built up between physicians, who had the advantage of close personal access to those at the centre of power, was an important way to exchange information and gifts. It was therefore crucial for the surgeons to acquire a good reputation: this would have entailed becoming acquainted with the protocols of Mughal court life and medicine and forging networks among their Europe and Asian counterparts. Surgeons were therefore selected on the basis of political acuity as well as medical skill and, like Browne, they were often ruthless in the pursuit of power. Knowledge of plants, medicine, and the protocol of employing them was thus as crucial to establishing the East India Company's position in India in terms of the relationship with the Mughal hierarchy.

Collaborators and colleagues in Madras

Studies of colonial projects such as cartography, linguistic projects, and botany itself have

³⁶⁷ MS Sloane 3321 fol. 213, Bulkley FSG, 12 February 1707 implies it was his first.

³⁶⁸ Yule, *Vestiges*, I, p. 564. A dubash (from *do bhāṣī* lit. 'two languages') also has the meaning of secretary or representative (*Hobson-Jobson*, p. 328). See Susan Neild-Basu, 'The Dubashes of Madras', *Modern Asian Studies*, 18 (1984), 1-31. The 'conicoply' may refer to an accountant or registrar. References to 'the warehouse conicoply' appear in the FSG records. Public hospitals were established by the Emperor Jahangir and were apparently common even in smaller towns during the reign of Aurangzeb. See Iqtidar Alam Khan, 'The Middle Classes in the Mughal Empire', *Social Scientist*, 5 (1979), pp. 28-49.

increasingly emphasised the co-constitution of knowledge through the reliance of European scholars on 'native informants'.³⁶⁹ More recent studies have moved this discussion away from imagining a process of directed questioning and instead characterise the history of ideas as embodied in lived experience and collective action, with exchanges emerging from the practicalities of life in early multi-cultural settlements.³⁷⁰ As I will show in this section, exchanges of knowledge between Indian and European practitioners in Madras took place among the daily business of the hospital, duties in the military camps of the British and the Mughals, and the need to find effective ways to cure sick people. The Indian physicians who worked with Browne and Bulkley borrowed from European methods when it suited them, just as the medicinal practices the two doctors report in their letters bear the imprint of South Asian medicinal thought.³⁷¹ For this reason, it might be most appropriate to drop the idea of 'informants' altogether and view those people who provided the doctors with information as they themselves did: as colleagues, collaborators, sometimes servants, other times friends, or rivals in business.

Browne's first six volumes of dried plants were collected in locations within a thirty-mile radius of Madras and the seventh within 70 miles: probably while on tours of duty with either the army of the East India Company or the Mughal army.³⁷² It is clear from the volumes that Browne sent Petiver that they were produced in close collaboration with a Tamil physician. For most of the plants in the volumes, the Tamil ('Malabar') name has been written on a strip of palm leaf and pasted into the book. The volumes not only have the transliterated Tamil names and medicinal properties entered

³⁶⁹ Nicholas Dirks, 'Colonial Histories and Native Informants: The Biography of an Archive' in *Post Colonialism and the Predicament of History*, Christopher Bayly, *Empire and Information* (Cambridge: CUP, 1996); Simon Schaffer, Lissa Roberts, Kapil Raj, and James Delbourgo eds, *The Brokered World: Go-Betweens and Global Intelligence* (Sagamore Beach MA: Watson, 2009).

³⁷⁰ Raj, *Relocating Modern Science* and Sujit Sivasundaram, 'Tales of the land: British Geography and Kandyan resistance in Sri Lanka, c. 1803-1850', *Modern Asian studies*, 41 (2007), 925-961, p. 927.

³⁷¹ Browne occasionally refers to local practitioners borrowing from Portuguese customs, for example in their treatment of smallpox. Petiver and Browne, Vol. 6, specimen 234 (p. 1054), Tumba maraum or Carpa maraum Malab: 'I can't as yet learn that the Natives use this in Physick, except here and there one, who use it as an ingredient in the Cuddanee (which is Decotions for the Pox) which possibly they may have done in imitation of the Portuguese who do the same'.

³⁷² It was not possible to identify the locations given in the first six books. The location 'Trippetee' given in the seventh may refer to Tirupati.

for each plant, they are also organised according to the Tamil names given in the index. When 'species' or families of plants are discussed it is with reference to their local classifications.³⁷³ This implies that the Tamil physician was travelling with Browne and was closely involved with the process of selecting and collecting as well as naming the specimens. Browne also had some interaction with a Telugu-speaking doctor: he has left a space for the Telugu ('Gentue') name in all of the books and some of these names have been filled in in their transliterated forms.

In 1698, when Browne decided to give up his botanical work, he wrote to Petiver 'I have also sent to [Edward Bulkley] one of the Malabar [Tamil] Doctors who is well skilled in the nature of Indian Plants from whome he or his people may transcribe their virtues'.³⁷⁴ In cooperation with the Tamil physician to whom Browne introduced him, Bulkley also embarked on the process of transliterating the Tamil names of plants and gathering accounts of their medicinal properties. Bulkley wrote to Petiver in 1700, 'I have ^now^ sent you a large collection with: their mallabar names the next opportunity you shall have the Gentue alias Gentile [Telugu] names with the best account I can procure of their virtues'.³⁷⁵ In 1701, he reported a promising relationship: 'I have lately contracted a friendship with the principall of the Gentue Doctors who promises to be very communicative and give a large account of known plants of these parts'.³⁷⁶ Bulkley sent the results of these collaborations to Petiver in 1703, when he wrote, 'by the next you shall have the largest & best collection you ever yet received: with the Gentue, as well as Mallabar names, which: is the most important of their names & physicall [medicinal] virtues'.³⁷⁷

³⁷³ For example, SB 228 on the different types of myrobalans and 229 on sandal. Browne also identifies various species of *nux vomica* according to local classifications. On one occasion, he disputes the classification of three types of tree as a species – apparently correctly according to the HM and modern classifications.

³⁷⁴ MS Sloane 4062, fol. 290, Browne to Petiver, FSG, 30 September 1698. It is clear that Bulkley had previously assisted Browne in making some of collections the latter sent to Petiver, see for example, Petiver and Browne, 'Sam Browne his Second Book of Plants', p. 708.

³⁷⁵ BL MS Sloane 3321, fol. 28, Bulkley to Petiver, 23 February 1699/1700.

³⁷⁶ BL MS Sloane 3321, fol. 67, Bulkley to Petiver, FSG, 30 January 1700/1 [Recd. 30 Jan 1701/2].

³⁷⁷ BL MS Sloane 3321, fol. 110-111, Bulkley to Petiver, FSG, 12 February 1702/3 [Recd. 20 November 1703].

Both surgeons make constantly distinguish between 'Malabar' (here Tamil) and names and uses for plants and materia medica and their 'Gentue' (in this case Telugu) equivalents. Telugu had become the language of high culture in Southern India during the medieval period, and by the seventeenth century its status rivalled that of Sanskrit.³⁷⁸ The dominance of the Telugu language ran alongside the establishment of the rule of Telugu-speaking Nāyakas over much of Tamil Nadu from the early sixteenth century, which lasted until the fall of Madurai in the 1730's.³⁷⁹ Telugu Brahmins were also important in the service of Muslim rulers. A distinctive strand of Siddha medicine among Telugu speakers had grown up around Āndhardēśa with a strong tradition of translation and commentary on the classic Sanskrit works of *ayurveda*. The school received patronage from the Qutb Shahi rulers of Golconda and developed a dialogue with *unani* medicine.³⁸⁰ The distinction that the surgeons make between 'Gentue' and 'Malabar' medicine is therefore likely to represent a difference between the medicine practised by Telugu Brahmin castes, rooted in translations from Sanskrit *ayurvedic* works and dialogue with *unani* and a more localised Tamil strand of *siddha*. The same distinction was made by Roxborough in his discussion of the medicinal plants of the Coromandel Coast in the late eighteenth century.³⁸¹ The dominance of Telugu-speakers in both administrative and mercantile roles persisted in Madras under European rule.³⁸² It is clear that Telugu-speakers enjoyed a higher status: proposals for the town council put forward in 1688 include two 'Gentues' as well as Portuguese, Armenian and English members.³⁸³ A set of Telugu dialogues published in Madras in

³⁷⁸ Velcheru Narayana Rao, 'Coconut and Honey: Sanskrit and Telugu in Medieval Andhra', *Social Scientist*, 23, No. 10/12 (1995), 24-40.

³⁷⁹ Velcheru Narayana Rao, David Shulman and Sanjay Subrahmanyam, *Symbols of substance: court and state in Nāyaka period Tamilnadu* (Delhi; Oxford: Oxford University Press, 1992).

³⁸⁰ Polavarapu Hymavathi, *History of Āyurvēda in Āndhardēśa AD 14thc-17thc*. (Bhargava Publishers, Warangal, 1993). Rao notes that the school of medicine is referred to as Parahita in inscriptions from Andhra (Rama Rao, 'Medical allusions in the Inscriptions of AP', *Bulletin of the Indian Institute for the History of Medicine*, 5 (1975), 198-206 and 6 (1976), 28-36. See also Rhehber Farooqui, 'Medicine in the Deccan', *Bulletin of the Indian Institute for the History of Medicine*, 17 (1986), pp. 31-52. Rao, Shulman and Subrahmanyam, *Symbols of substance* p. 113 also note the wealth of medical texts produced around Tanjavur.

³⁸¹ William Roxborough, *Plants of the coast of Coromandel* (London: Printed by W. Bulmer and Co. for George Nicol, 1795-1819) distinguishes between the practises of 'Telinga' and 'Malabar' physicians. See for example p. 8 on the uses of *Oldenlandia Umbellata*.

³⁸² Hymavathi, *History of Āyurvēda*, p. 25 mentions the Telugu compositions of Srinatha, including details of the drug trade to other countries.

³⁸³ Love, *Vestiges*, Vol. II, pp. 558-9.

1750 emphasises the continued differences between Tamil and Telugu-speaking castes. The Brahmin tells his European friend: 'All the School-Boys that write upon black-wooden-Tables with a Stone-Pin are *Gentou-Boys*: but those which sit on the Ground and write with their fingers in the Sand are *Malabarian-Boys*'.³⁸⁴

Browne mentions the drugs available in the bazaar³⁸⁵ in several of his letters to Petiver, and appears knowledgeable about their origins. The origins that are mentioned give us a taste of the global and regional trade networks through which the drugs available around Madras in this period were supplied. For example, Browne writes that tutia – an argillaceous ore of zinc, the powder of which is an ophthalmic – similar to that available in England can be procured locally, but that its source is Persia.³⁸⁶ Bulkley was similarly able to inform Petiver that the fragrant black sandal or agallochum available in the Madras bazaar was acquired from Cape Comorin.³⁸⁷

Both Browne and Bulkley clearly spent time observing the work of their Indian counterparts in practise, adopting the practises they saw into their own routines and reporting them to their correspondents in Europe. An example of how Browne observed the use of the drugs that were available in the bazaar appears in a letter to Petiver that discusses the two types of *assa foetida* that were sold there. He reports, 'these are by the natives much used in Phisick...against Cough asthma

³⁸⁴ Love, *Vestiges*, Vol. II, p. 333.

³⁸⁵ For the importance of the bazaar in European thought about India see Pratik Chakrabarti, 'Medical Marketplaces Beyond the West', in *Medicine and the market in England and its colonies, c. 1450-c. 1850* ed. by Mark S R Jenner; Patrick Wallis (Basingstoke: Palgrave Macmillan, 2007), pp. 199-200 notes that the bazaar was not only a static marketplace within a town, but could refer also to a group of traders who followed the EIC's armies. Chakrabarti also discusses the continued importance of bazaar or 'country' medicine in the EIC's medical practise during the eighteenth century.

³⁸⁶ MS Sloane 3333 fol. 201, Samuel Browne, FSG 17 October 1696. The definition of tutia is from William Lewis, *An Experimental History of the Materia Medica* (London: J. Johnson, 1791). Further discussions of the identity of tutia occur in MS Sloane 3332, fol. 67 – 'An abstract of Bontius his Animadversions upon Garcia da Orta with some additional remarks by Mr Alexander Brown', 12 June 1695.

³⁸⁷ SB709. Cape Comorin or Kanyakumari is on the southern-most point of the India peninsula. The entry is under 'Davadaree' (Malab) and reads: 'the Natives call this wood Black Sandal; they also sometimes call it Wild Aggally (i.e. agallochum), as my very ingenious friend Mr Edward Bulkley informs me'. Black sandal and agallochum are both fragrant woods used as incense since ancient times. Both sandal wood and agallochum appear in the Mahabarata. See H.H. Wilson, 'Notes on the Sabhá Parva of the Mahábhárata, Illustrative of Some Ancient Usages and Articles of Traffic of the Hindus', *Journal of the Royal Asiatic Society of Great Britain and Ireland*, 7(1), (1843), pp. 137-144.

Palsys &c. I have in Dead Palseys etc. seen them mix *assa foetida* & the juice of Raw Ginger Calam & Aromaticus &c. together and Anoynt the body all over with good success.³⁸⁸ Another interesting example relates to plant products that can be used to clean water including the seeds of the Moringa tree.³⁸⁹ Some of these beans were demonstrated at a meeting of the Royal Society in 1696 by Dr Havers,³⁹⁰ a fellow of the Society and another of Bulkley's correspondents, where it was decided that they worked by sticking to the dirt and dragging it down to the bottom of the container. After the meeting, Petiver wrote to Bulkley about the properties of the seeds, and the surgeon replied, giving the names of the plant in 'Malabar' and 'Gentue', and noting their preparation and use in medicine, including against dysentery, as well as their antiseptic properties.³⁹¹

Although the EIC's hospitals' intake would probably have been restricted to European patients, it appears to have been common for Europeans to turn to Asian doctors and *vice versa* on occasion in the early Company settlements: Fryer noted that in Surat, 'the Brahmin comes every day and feels every man's pulse in the factory, and is often made use of for a powder for argues, which is as infallible as the Peruvian Bark.'³⁹² As in others of the East India Company's settlements, medicine was practised by a range of people with different types of medical knowledge, and the exchanges that took place in the informal medical marketplaces of Madras often spilled over boundaries of nationality or race. For example, the minutes of the early Mayor's court in Madras record a case

³⁸⁸ MS Sloane 3333, fol. 201, Samuel Browne to James Petiver, FSG, 17 October 1696. *Assa foetida* is much used in Ayurveda in the treatment of simple digestive problems such as wind, bloating, indigestion and constipation, and also for respiratory problems such as bronchitis, bronchial asthma and whooping cough. It is also used as a circulatory stimulant, lowering blood pressure and thinning the blood. (Information from 'Ferula *assa-foetida*', Plants for a Future: Edible, medicinal and useful plants for a healthier world, URL: <http://www.pfaf.org/database/plants.php?Ferula+assa-foetida>, accessed 14 October 2009). *Assa Foetida* had been known in the West for some time by the seventeenth century: it appears in Garcia da Orta's seventh colloquy who in turn refers to Avicenna's descriptions.

³⁸⁹ *Moringa pterygosperma* MORINGACEAE. Parkinson *Theatrum Botanicum*, p. 1650. The *Hortus Malabaricus*, Vol. 10, Tab. 11 describes the use of the Moringa in the preparation of vegetables and to treat various types of inflammation. Marshall mentions the use of the seeds of *nirmali* (*Strychnos potatorum*) to clean water (Khan, p. 337. Khan notes this use appears in *Suśruta*).

³⁹⁰ Clopton Havers (1657-1702).

³⁹¹ MS Sloane 3321, fol. 28 – Bulkley to Petiver, Feb 23rd 1699/1700

³⁹² c.f. 'John Fryer-A Traveller Of XVII Century', *Bulletin of the Department of the History of Medicine* (later *Bulletin of the Indian Institute for the History of Medicine*), 2, (1964) [no author given, D.V. Subba Reddy ed.]. 'Peruvian bark' refers to cinchona, the source of quinine.

Manucci brought against a patient Cojee Bauba – probably an Armenian – for non-payment of fees³⁹³, while Browne gossips about a Muslim inhabitant of Madras who is said to have a store of a now-rare type of medicinal Myrobalans.³⁹⁴

Bulkley also relied on local people with medical knowledge to make the collections of plants and fossils he sent to Petiver and others. In a peevish letter in which he complains that Petiver has not sent him plants and books he had requested, he tells his correspondent: 'it is a greater charge & trouble to make collections than you suppose, there are very few that understand it and they will have extraordinary pay to goe 40 or 50 miles and be a moneth absent from their families and businesse'.³⁹⁵ In the same letter, Bulkley reports that he had employed a man to travel from Madras to Bengal, making plant collections on the way, but that his collecting activities were being impeded by the conflict between the Mughal regime and the Marathas, adding in a later letter that the men had been held back by the fear of meeting tigers in the woods. Nevertheless, some collections made by this man do survive in the Sloane herbarium.³⁹⁶ Bulkley also reports sending his servants to make collections in Achin (Aceh in Sumatra) and Pegu (Burma/Myanmar).³⁹⁷ Some of the drawings and paintings Bulkley made of birds were copied from the works of local artists.³⁹⁸

³⁹³ Mayoral Court Records (TNSA), Vol. 2, fol. 197, 3 December 1718.

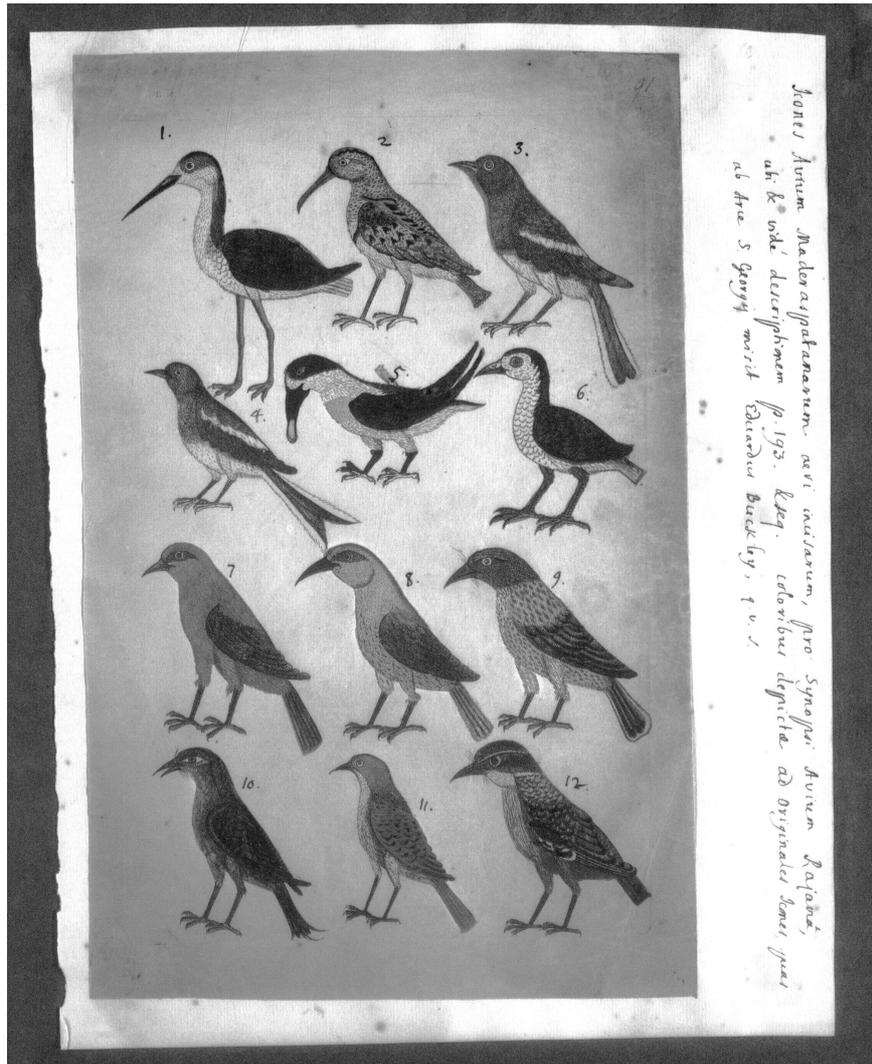
³⁹⁴ SB 228.

³⁹⁵ MS Sloane 3321, fols. 84-5, Bulkley, FSG, 9 November 1701 [Recd 4 Jun: 27th 1702, marked 'no XI'].

³⁹⁶ Sloane Herbarium, Vol. 32, fols. 135-150 contain plants gathered in Bengal. Bulkley reports sending them in MS Sloane 3321, fol. 169 – An unsigned letter to Petiver from 'your humble servant' at Fort St George Feb 7 1704/5 (Recd Nov 13 1705).

³⁹⁷ MS Sloane 3321 fol. 171 – 1 March 1704/5 [Recd March 13 1705/6]. It is in this letter that the reference to tigers occurs. Collections from Pegu sent to Petiver by Bulkley are in HS 32, fols. 119-153. None of the specimens are named.

³⁹⁸ MS Sloane 3321, fol. 211 – From Bulkley to Petiver with no date [Recd. 9 Dec 1706 from Ireland]. The original paintings are in Add MS 5266, fols. 91-2. The inscription reads 'Icones Aurium Maderaspatannarum aevi incisarum, pro Synopsi Avium Rajana, uti & vide descriptionem p. 193, & seq. coloribus depictae ad oringales Icones, quas ab Arce S. Georgii misit Edwardus Bulkley'. They were copied by again the engraver of four pages towards the back of the BL's copy of Petiver's Opera (443.i.1.(8)K. Birds.).



‘Icones Avium Maderaspatanarum’, sent from Bulkley to Petiver, BL Add MS 5266

These interactions between the European surgeons and their informants would have taken place with varying degrees of consent – ranging from consensual exchange to the forced acquisition of information.³⁹⁹ This can be demonstrated by the two different relationships hinted at above. While Bulkley implies an equal friendship with the high-caste Telugu-speaking 'Gentue' doctor, the 'Malabar' physician is 'sent' to him by Browne. Similarly, while Bulkley complains of the large fees the specialist who made his collections for him charged, other collectors would have derived less advantage from their activities. For example, one set of instructions on how to acquire and instruct

³⁹⁹ Harrison, *Climates and Constitutions*, although stressing throughout the 'dialogic' nature of exchanges between indigenous and Europe concepts and methods of medicine, warns against idealising such contacts, pointing out that a major impetus for learning Indian languages was to circumvent dependence on Indian informants.

collectors issued by Petiver explicitly identifies the slaves of European settlers and Muslim traders as those who would be sent out into the sometimes hostile local environment to make collections.⁴⁰⁰

Bulkley's comment when writing to Petiver to request help acquiring an apprentice also sheds some light on the distribution of labour in the collecting process: 'apprentices live much easier here than in England, having blacks & slaves to doe all meniall & servile business for them'.⁴⁰¹

It is evident that close observation of the work of Indian physicians in Madras and collaborative identification and naming of specimens was crucial to the understanding that Browne and Bulkley gained of the uses of the materia medica they amassed. Like the *Hortus Malabaricus*, therefore, the volumes that remain in the Natural History Museum should be regarded as collaborative works.⁴⁰²

Although the cosmopolitan environment of early modern Madras provided an environment in which ideas flowed freely between traditions, it is clear that the surgeons were left with some impression of the broad schools of South Indian medicine of the period, given the distinctions they make between 'Malabar', 'Gentue' and the medicine of 'the Moors camp'. After exploring the surgeons' relationships with practitioners of medicine in the other European settlements, I will examine how one of these in particular, the Tamil version of Siddha medicine, was reflected in the volumes Browne sent to Petiver.

Networks beyond Madras

As well as the relationships they sustained with local practitioners of medicine in and around

⁴⁰⁰ Sloane MS 3332, fols. 108-9 James Petiver to Mr Chomley, no date but the top of the next letter, which is to Samuel Browne reads 'added to his letter of Feb 12 1694/5 & March 5 no. 8 was sent by Mr Chomley'.

⁴⁰¹ MS Sloane 3321, fols. 67, Bulkley to Petiver, 30 January 1701.

⁴⁰² H. A. van Rheedee tot Drakenstein, *Hortus Indicus malabaricus, continens regioni malabarici apud Indos celeberrimi omnis generis plantas rariones*, (12 vols.) (Amsterdam, 1678-1703). For an English translation, Manilal, *Van Rheedee's Hortus Malabaricus*. See also Mohan Ram, H. Y. 'On the English edition of Van Rheedee's *Hortus Malabaricus* by K. S. Manilal (2003)' *Current Science*, 89 (10), 2005, 1672-1680. Chakrabarti, 'Medical Marketplaces beyond the West' p. 206 also notes the collaborative nature of the work of the Tranquebar missionary Johann Ernest Gruendler (1677-1720) and Rev. Samuel John.

Madras, the surgeons kept up a correspondence with the surgeons of other East India Company settlements; with those of the other European companies and missions; and with gardeners, botanists, and apothecaries in Europe. As Madras was a usual calling point for all ships heading further East or returning home, the surgeons were able to distribute instructions and materials for collecting – some of which they received from Petiver⁴⁰³ – and receive the collections on the return journeys. Bulkley distributed instructions for making collections to the Company surgeons in Bencoulen⁴⁰⁴ and Vizagapatam⁴⁰⁵ and refers to acquiring collections from Cochin China from James Cunningham: who was a surgeon in Chusan⁴⁰⁶ and in the short-lived settlement of Pulo Condore, where he was imprisoned.⁴⁰⁷ These men were also embedded within further networks: for example James Cunningham, who also corresponded with and sent collections to Petiver and du Bois,⁴⁰⁸ in turn had acquired collections from Henry Smith in Malacca.⁴⁰⁹ The go-betweens in these networks of doctors were ships' surgeons. Some of these men were also collectors in their own rights: one example is the Alexander Brown, who as well as delivering Samuel Browne's collections to Petiver, sent his own specimens as well as recording his experiments with drugs and dissections of animals in his journal.⁴¹⁰

One of the most important of the international relationships of the Madras surgeons was with the

⁴⁰³ MS Sloane 3321, fol. 19, Bulkley to Petiver, FSG, 13 October 1699, 'pray send store of instructions for collecting &c.'.

⁴⁰⁴ MS Sloane 3321, fol. 104, Bulkley, FSG, 17 August 1702, Bulkley reports sending instructions to Alexander Read at Bencoulen.

⁴⁰⁵ MS Sloane 3321, fol. 19, Bulkley to Petiver, FSG, 13 October 1699.

⁴⁰⁶ MS Sloane 3321, fol. 112, Cunningham to Petiver dated Chusan Feb 12 1702/3. He mentions sending collections to Sloane.

⁴⁰⁷ MS Sloane 3321, fol. 117, [Cunningham – a copy, not in his hand] 'Recd the 4th Aug of a China man att Emoy that came from Cochin his name Watteo Aneos nephew the following letter directed to The Supracargoes & Capts in the service of ye Hon[our]ble Comp[an]y trading to the East Indies'. Describes his capture. fol. 132 – Cunningham to Petiver dated Pulo Condore, 8 January 1703/4 [recd. 20 November 1704 by Mr Elwood] sends collections from Chusan and Pulo Condore to Petiver and Sloane. Collections from Cunningham in Pulo Condore include HS 278, 279, and 280.

⁴⁰⁸ H.S. 59 (Dandy, p. 32) contains Cunningham's collections from China made in 1698 and at the Cape of Good Hope in 1699 and H.S. 252 from Amoy, Chusan and the Crocodile Isles (Dandy p. 62). Plants from Batavia and Pulo Condore are in H.S. 253 (Dandy, p. 63) and from the Cape in H.S. 257 (Dandy, p. 64), more plants from Batavia are in HS 289 (Dandy p. 70).

⁴⁰⁹ Sloane MS 3321, fol. 112 Cunningham to Petiver dated Chusan 12 February 1702/3. This may be the same Henry Smith who was involved with the production of the Malay dictionaries discussed in Chapter 3.

⁴¹⁰ MS Sloane 1689.

Jesuit George Camelli: a lay father who made the first in-depth studies of the wildlife of the Philippines. Bulkley seems to have enjoyed what scholars of the period would have called a 'philosophical correspondence' with Camelli, exchanging gifts of plants and seeds and engaging in discussions of the local uses of plants common to their respective regions.⁴¹¹ Bulkley also acted as a conduit in the Jesuit's correspondence with James Petiver, with whom he published articles in the *Philosophical Transactions*.⁴¹² Camelli sent specimens and drawings to Petiver and Ray.⁴¹³ Bulkley's letters to Petiver demonstrate his respect for the learned man and on his death in 1708 he laments the loss to the public.⁴¹⁴ Camelli, as well as Browne's patients among the Portuguese of San Thomé, also appear to have provided a means for the Madras surgeons to acquire further contacts among Jesuit missionaries: in 1696, Browne wrote concerning obtaining collections of aloes: 'I have written by way of the French and Portuguese padres to their brethren in the vast woods about three months journey to the northwards of Bengal towards Pegu'.⁴¹⁵

Among the Dutch company surgeons, Oldenhand at the Cape was known as an avid collector and botanist: the surgeon Alex Brown and Captain Isaac Pyke give accounts of their meetings and discussions with him.⁴¹⁶ The plant collections of celebrated collectors were fought for within the East Indies. For example, in 1702, Bulkley promises Petiver that 'when any Ship goes hence for Batavia I shall endeavour Enquiry after what Gul: Ten Rhyne had last & try if procureable, as alsoe

⁴¹¹ Sloane MS 3321, fol. 133, Bulkley to Petiver 10 February 1703/4 where he reports a discussion of the 'Punsaloy or fruit of the Panitsjaka mer' HM, Vol 3 Tab 41, p. 45; given as 'Panitsjika-Maram'. Bulkley follows the HM in noting the use of the fruit as a glue, and adds Camelli's report of successfully using it to treat fever.

⁴¹² George Camelli, 'A Description and Figure of the True Amomum, or Tugus. Sent from the Reverend Father George Camelli, at the Phillipine Isles, to Mr. John Ray and Mr. James Petiver, Fellows of the Royal Society', *Philosophical Transactions (1683-1775)*, Vol. 21, (1699), pp. 2-4.

⁴¹³ Petiver notes in the discussion of SB57 that Camelli sent a drawing of indigo to him and Ray. There are several of Camelli's drawings among Petiver's published collections – e.g. *Opera*, Tab. XXVIII (6). Petiver mentions Cunningham sending him a specimen from 'the island of Mischowahi' in the discussion of SB 106 (book 3). *Phyllanthus emblica* EUPHORBIACEAE (Manilal, HM, 1:38).

⁴¹⁴ Sloane MS 3321, fol. 239, FSG 9 January 1708.

⁴¹⁵ Sloane MS 3321, fols. 84-5, Bulkley, FSG, 9 November 1701 and MS Sloane 3333 fol. 201, FSG, 17 October 1696. For the location of these woods Irfan Habib, *An Atlas of the Mughal Empire* (Delhi: OUP, 1982), map 0B 'The Mughal Empire, Economic', who marks them 'aloe-wood forests', 'lac-forests'.

⁴¹⁶ The British Library's collection of Petiver's works with MS notes [443.i.1.] contains a picture of a plant 'Ageratum' that Petiver acquired from Oldenhand, 'a learned physician and very curious botanist at the Cape'. The journals of Alexander Brown and Isaac Pyke are BL MS Sloane 1689 and IOR MS Mss Eur D 5 respectively.

ye needfull relateing to Rumphius'.⁴¹⁷ Willem ten Rhijne was a Dutch naturalist and physician who worked in China and Japan, produced an account of the natural history of the Cape, assisted in the compilation of the *Hortus Malabaricus* and had been in touch with the Royal Society and Rumphius was a well known collector in the Moluccas, sometimes referred to as the 'Pliny of the Indies', whose work during the 1660's and 70's was published posthumously in his Ambonese 'herbal' and 'cabinet of curiosities'.⁴¹⁸ Presumably, Petiver had hoped to get his hands on valuable manuscript materials and collections of the deceased VOC surgeons before they were acquired by other naturalists.

The discussions over particular plants or remedies with Jesuit missionaries and the Dutch Company's surgeons and botanists,⁴¹⁹ demonstrate the closeness of the scholarly investigations taking place among the different European traders and missionaries in Asia at this time. At the same time, the scramble for the manuscripts or collections of Rumphius and Ten Rhijne reminds us that the acquisition of natural knowledge was a crucial part of competition between the European trading companies to acquire and exploit the wealth of the Indies.⁴²⁰

Disease and the Environment

The correspondence of the Madras surgeons reveals the types of medical problems that they, their colleagues, and counterparts were encountering. Unsurprisingly, fever emerges as a major problem: 34 of the 226 plants mentioned in the first five books of Browne's collected volumes are described as used in their treatment.⁴²¹ The Spanish-controlled 'Jesuit's bark' remained difficult to obtain in

⁴¹⁷ BL Sloane MS 3321, fol. 103, Bulkley, FSG, 9 October 1702 [marked 'no 13', no date of receipt]. See Cook, *Matters of Exchange*, pp. 315-317, .

⁴¹⁸ Georgius Everhandus Rumphius, *D'Aboinsche rariteitkamer* (Amsterdam: François Halma, 1705), *Amboinsche kruid-boek* ed. Johannes Burman, 6 parts in 4 vols (Amsterdam: François Changuion, 1741-55). See also Cook, *Matters of Exchange*, pp. 329-332.

⁴¹⁹ MS Sloane 1689 fol. 11v.

⁴²⁰ Cook, *Matters of Exchange*.

⁴²¹ Harrison 'Description of Indigenous Febrifuges' also notes that the Madras surgeons described several treatments used locally again fever.

this period⁴²² and therefore it was necessary to find locally-available substitutes. However, Bulkley also requested Petiver to 'procure the best method of treating fluxes and feavours' admitting 'they are often too hard for me & allso for the natives'.⁴²³ Smallpox is another disease that is mentioned several times: often the plants that are listed as useful in treating it are the same as those used against fevers.⁴²⁴ Treatments for 'bloody flux' (dysentery),⁴²⁵ gonorrhoea,⁴²⁶ leprosy,⁴²⁷ and poison⁴²⁸ are mentioned several times. In general, the collections sent by Browne do not reflect a particular preoccupation with military medicine or particularly 'tropical' complaints. They also include many simples used in the everyday treatment of asthma, colds and consumptions, as well as more serious conditions like epilepsy and diabetes. The collections refer to children's medicine,⁴²⁹ and remedies used by women during childbirth, postpartum recovery, or menstruation.⁴³⁰ References to the treatment of mental problems such as melancholy, hysteria, and even hypochondria, also appear.⁴³¹

The collaborative nature of their production described above means that Browne's volumes provide

⁴²² James Petiver, *Gazophylacii Naturae & Artis* (Londini: ex officinâ Christ. Bateman, 1702) issues an appeal for any information concerning this still-mysterious substance, offering a guinea for any information. By 1704, he had acquired a description of it (James Petiver, 'Advertisement', dated March 15 1704, Aldersgate Street in *Gazophylacii naturæ & artis decas tertia*, (London: Printed for Sam Smith and C. Bateman, 1704) and it is depicted in his 'Hortus Peruviansus or South Sea Herbal' (1715), repr. in *Opera*, Tab 6, no 7 'Kinquina or Jesuits Bark'. William Oliver, 'A Letter from Dr William Oliver, Physician and Fellow of the Royal Society, to Mr James Petiver, F. R. S. concerning the Jesuits Bark,' *Philosophical Transactions* 24 (1704-1705), 1596. Marshall in his MS notes on Bengal refers to encountering 'Rais de Joan Lopis', which Shafaat A Khan, *John Marsh all in India; notes and observations in Bengal, 1668-1672* (London, Oxford University Press, H. Milford, 1927), p. 343 identifies as Cinchona.

⁴²³ MS Sloane 3321, fol. 28 – Bulkley to Petiver, 23 February 1699/1700.

⁴²⁴ SB2 (Tamil: 'Avaree'); SB15 *Sphaeranthus indicus* ASTERACEAE (Manilal, 2003 10:43); SB16 (Tamil: 'Mucotarre'); SB75 (Tamil: 'Cungee'); SB86 (Tamil: 'Perrepan-chedde', 'chedde' meaning plant or bush); SB 119 (Tamil: 'Coadevelle', Telugu: 'Chittra-Mullum'); SB161 *Jasminum augustifolium* OLEACEAE (53: Manilal, 2003, 6:53, p. 187); SB189 *Toddalia asiatica* RUTACEAE (Manilal 2003, 5:41, p. 159); SB211 (Tamil: 'Vulerha'); SB 234 (Tamil: 'Tumba maraum or Carpa maraum').

⁴²⁵ SB64 and SB129.

⁴²⁶ Gonorrhoea: SB 66 (book 2), SB 112 (book 3), SB 120 (book 3), SB 126 (book 3). SB 211 (book 5). Marshall also gives remedies for 'the French pox' (Khan, p. 334).

⁴²⁷ SB 167, *Heliocanthes elasticus* LORANTHACEAE (Manilal, 2003 10: p. 15); SB 179 *Azadirachta indica* MELIACEAE (Manilal, 2003 4:52, p. 191), SB 224, *Ludwigia perennis* ONAGRACEAE (Manilal, 2003, 2:49 p. 180).

⁴²⁸ SB 238, *Gloriosa superba* LILIACEAE (Manilal, *HM*, 7:203). Used as a general counterpoison. Browne reports trying it against the bite of the Cobree de Capello (*Naja tripudians*) without success.

⁴²⁹ SB70 (Tamil: 'Codeseru-paulado') and SB74 (*Pongamia pinnata* FABACEAE (Manilal, 2003, 6:3, p. 11) cure the whooping cough and SB189 is a cure for scabs and itches in young children.

⁴³⁰ For example SB80, *Ardidia solanacea* MYRINACEAE (Manilal, *HM*, 8:28) is listed as a cure for period pains, as is SB126 (Tamil: 'Coola guttee').

⁴³¹ SB212 (Tamil: 'Coattakai') cures hypocondriack melancholy and hysterick passion'.

a small window into the everyday practise of *siddha* medicine in seventeenth century Tamil Nadu. Just over one-third (115) of the 317 plants Browne mentions in the first seven volumes he sent to Petiver are the same as those which occur in the *Hortus Malabaricus* (Appendix 2).⁴³² Several plants are reported to be used in a similar way in late seventeenth century Tamil Nadu as they were a little earlier in Kerala: for example, Browne notes that the same plant was employed to treat toothache.⁴³³ In a few cases, there is evidence for shared uses across South Asia: for example, Petiver notes that he has received reports of the use of 'Ville-Vittree' or 'Indian quince tree', from Bengal, Sri Lanka and Batavia, in all cases being used in the treatment of fluxes and against diarrhoea.⁴³⁴ Nevertheless, the majority of the descriptions of medicinal uses differ in terms of the preparation, the part of the plant used, and the diseases that it is used to treat. Interestingly, descriptions of magical or ritual uses tend to be more uniform across the two collections than the medicinal uses.⁴³⁵ This suggests that while the knowledge of many plants and their associations was shared by medical practitioners across South India, there was also considerable regional variation in terms of the specific uses of *materia medica*.⁴³⁶

As hybrid works, the seven Browne volumes also throw light on European thought about medicine during a period of transition. The rise in imports of foreign drugs into Europe had caused some controversy in Europe and the manner in which compound medicines were marketed, often with their ingredients kept secret meant that these exchanges were frequently viewed as a challenge or threat to the medical establishment, who denounced those who peddled them as quacks and charlatans.⁴³⁷ The origins of the new medical knowledge in the practise of far-off nations could also

⁴³² This is a bibliographic rather than scientific identification based on Petiver's references.

⁴³³ SB125 *Mimusops elengi* SAPOTACEAE (Manilal, *HM*, 1:20).

⁴³⁴ SB108, *Aegle marmelos* RUTACEAE (Manilal, *HM*, 3:37).

⁴³⁵ SB237 *Caesalpinia pulcherrima* FABACEAE (Manilal, *HM*, 6:3).

⁴³⁶ Rama Rao, 'Medico historical information from non-medical sources', *Bulletin of the Indian Institute for the History of Medicine*, 16 (1986), 1-9, p. 5 notes that several commonly used items of *materia medica* like the nimba (*Azadirachta indica*) are not mentioned in Ayurvedic texts. K.S. Manilal believes that some of the *materia medica* listed in the *HM* may be derived from earlier Buddhist pharmacopaeia (personal communication).

⁴³⁷ David Boyd Haycock and Patrick Wallis, *Quackery and commerce in seventeenth-century London: the proprietary medicine business of Anthony Daffy* (London: The Wellcome Trust Centre for the History of Medicine at UCL, 2005). See also Norman Gevitz, 'Pray let the medicines be good': the New England apothecary in the seventeenth

occasion resentment. Even those who were involved in global botanical investigations expressed concern over the dominance of foreign medicines: Linnaeus wrote: ‘It is horrifying to reflect that a poor man here at home can hardly be given a purgative without it being prescribed from the East or West Indies’.⁴³⁸ Not only did such distant prescriptions imply the superiority of the knowledge of foreign medical systems; they were often seen as a part of a taste for the culture and objects of the East that in this period was regarded as a drain on the wealth of Europe.

One solution was to reject the properties of these medicines. As noted in the Introduction, the Italian virtuosi Francois Redi attempted to discredit by repeated public experiments the value of bezoar stones derived from the Indian Ocean and popularly regarded as a valuable remedy against poison.⁴³⁹ The alternative was to co-opt exotic remedies into the medical establishment by planting and studying specimens in botanical gardens,⁴⁴⁰ or in European settlements overseas, comparison with other plants and classifications, and publication of descriptions and illustrations and their dissemination among the scientific elites of Europe. This was the aim of Sloane, Petiver, and their circle of informants and gardener-experimenters and it explains the concern in the correspondence of the surgeons with their botanist friends in Europe to isolate and identify simples and the ingredients of compound medicines that were being brought from Asia and sold in Europe.

A related strand in the debates around the incorporation of foreign remedies in European pharmacopaeia was the debate over the effect of the environment on the human body. This was part of a wider debate that had been raging since the sixteenth century humanists' attempts to remove

and early eighteenth centuries', *Pharmacy in History*, 41 (1999), 87-101; Roy Porter, *Health for sale: quackery in England 1660-1850* (Manchester: Manchester University Press, 1989), John Styles, ‘Product innovation in early modern London’, *Past and Present*, 2000, 168: 124-69. Chakrabarti, 'Neither Meate nor Drinke', p. 14 discusses the Portuguese concealment of the origins of the Kalamba or Columbo root, which was taken from Mozambique to India and exported from there to Europe in order to conceal its origins.

⁴³⁸ c.f. Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge, Mass and London, 1999).

⁴³⁹ Baldwin, 'The Snakestone Experiments'.

⁴⁴⁰ As Grove, *Green Imperialism*, has pointed out, the use of botanical gardens in Europe is also a practice that may be traced back to the spice gardens of the Indian and Arabian world.

exotic plants and herbs from European pharmacopaeia on the grounds that plants cultivated under a foreign sun would be damaging to the constitutions of people raised under colder skies.⁴⁴¹ Some of the comments made by Browne and Bulkley imply that they believed certain drugs might be effective in certain environments but not in others: for example, Browne notes 'Garcia [da Orta] says the distilled water of the fruit was his panacea in cholerick fluxes, but here 'tis of no use against them.'⁴⁴² Bulkley makes a similar comment when recording his experiments with drugs from the Americas including *Psychotria ipecacuanha*, which he had tried using against fevers, although with little success, commenting on a paper by a Frenchman which had recently praised the drug, that 'the monseieur in his paper calls it infallible, if he were here in India he would often find it otherwise'. At the same time, the processes of circulating and comparing drugs from around the world that the two surgeons were taking part in was breaking down traditional ideas that the cure for a particular disease would be found close to its source. For example, in the same letter, Bulkley goes on to compare ipecacuanha with favourable results to a local drug that he sent Petiver, instructing him 'if you find it usefull pray endeavour: to gain it reputation in the world, it may become a good mercantile drugg'.⁴⁴³ Bulkley also borrowed from prescriptions from abroad in using locally-available drugs: he tells Petiver in 1699, 'as to the Sem: Phaseoli I used it as directed by Mr Raye in his Hystory, who received: the account from the West Indies'.⁴⁴⁴

Bulkley and Browne also recognised that the same or similar plants could be found in different areas of the world and tended to produce similar effects. For example, in one letter, Bulkley notes that the effects of the sassaffras tree from Pegu are similar to those of Virginia.⁴⁴⁵ Sending a

⁴⁴¹ Alix Cooper, *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe* (Cambridge: Cambridge University Press, 2007), p. 27.

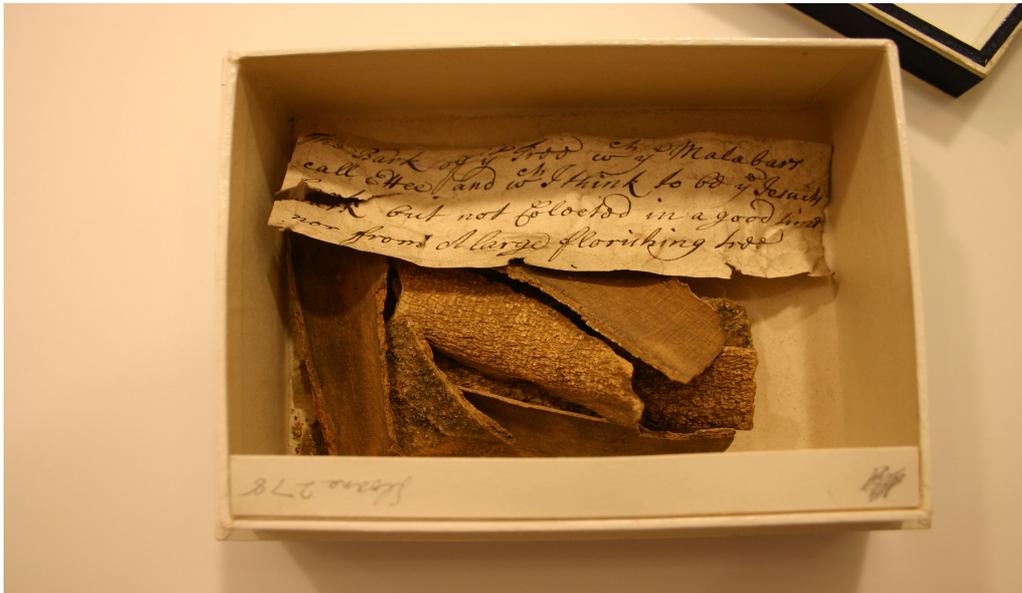
⁴⁴² SB152 (*Areca catechu*)

⁴⁴³ Sloane 3322, fol. 41, Bulkley to Petiver 14/09/1713.

⁴⁴⁴ BL Sloane MS 3321, fol. 18 – Edward Bulkley to James Petiver dated FSG 12 Oct 1699. Phaseoli refers to the lima or kidney bean. The medical uses of this astringent plant include the treatment of fever. It is found in Java as well as the Americas (Plant information taken from the Plants for a Future Species Database: http://www.pfaf.org/cgi-bin/pfaf/arr_html?Phaseolus+lunatus, accessed 17 August 2009).

⁴⁴⁵ BL Sloane MS 3321, fol. 19, 12 October 1699.

collection of myrobalans species to Petiver, Browne comments that they are the same species as those that may be received from Arabia and Persia, but in general smaller, something that he attributed to the inferior quality of the soil in the coastal regions of India.⁴⁴⁶ In some cases, the surgeons made mistaken analogies between different plants. For example, Browne believed that he had found growing locally the tree which was the source of 'Jesuits bark' and sent a specimen of it to Petiver.⁴⁴⁷ In fact, as Browne noted elsewhere, the tree was the source of *Strychnos nux vomica*.⁴⁴⁸ Such exchanges prompted Petiver to read a paper before the Royal Society in 1699 in which he argued that herbs with similar physical properties normally possess comparable medicinal virtues.⁴⁴⁹ He assigned the familiar herbs of England to families along with 'many more no less noble herbs I have received from the East and West Indies'.



Bark of *Strychnos nux vomica*, mistakenly identified as cinchona, Sloane 278, vegetable substances, Sloane Herbarium, National History Museum

⁴⁴⁶ SB227.

⁴⁴⁷ Sloane herbarium, vegetable substances drawers – marked Sloane 278. I believe this is from Browne on the basis of the handwriting and the use of the Tamil word 'Ettee'.

⁴⁴⁸ SB28.

⁴⁴⁹ James Petiver, 'Some Attempts Made to Prove That Herbs of the Same Make or Class for the Generallity, have the Like Vertue and Tendency to Work the Same Effects. In a Discourse Made before the Royal Society, by Mr. James Petiver Apothecary, and Fellow of the Said Society', *Philosophical Transactions (1683-1775)*, Vol. 21, (1699), pp. 289-294.

Browne, like many of his contemporaries, draws no inherent distinction between the constitutions of Europeans and Asian.⁴⁵⁰ Instead he makes use of the humoral theory to describe individual constitutions, and like da Orta before him, aligns it with the five-fold classification of environment and disease basic to Ayurvedic medicine.⁴⁵¹ For example, certain substances are described as hot and therefore good in cold pains.⁴⁵² The alteration in European thought that eventually dissociated plants and diseases from their environments, and hence from their humoral associations with properties like those of heat, cold, moistness, phlegm, cholera, and from local magical associations, perhaps came about eventually because of the kind of comparisons that the Fort St George surgeons, their informants, and their correspondents in Europe were making. Nevertheless, rather than discarding Galenic categories, Petiver, like his predecessors and correspondents, simply expands them to include new plants: for example in the 'Umbelliferous tribe' of plants he writes that they are 'a Degree Warmer than the last, and their Heat consequently to approach nearer to the *Aromatae* or Spices, [than] the Carminatives, and the Effects therefore to be more peculiarly appropriated to such Nervous Diseases, as are more intense'.⁴⁵³

The extent to which Europeans in Asia accepted the magical properties of the plants they used seems to have varied.⁴⁵⁴ The magical elements of medical practise were still much present in European thought during this period, and the main issue with accepting these stories might have been a concern about accepting the religious practises of a different faith rather than any rationalist

⁴⁵⁰ Harrison, *Climates and Constitutions* pp. 25-6 notes that racial differences were commonly explained with reference to environment until the nineteenth century.

⁴⁵¹ Indian medicine has six elements ether (*ākāśa*), wind (*vāyu*), fire (*agni*) water (*āpah*), and earth (*prthivī*), which make up a series of six 'tastes' (*rasa*), which are related to disorders and their treatment in a similar way to the relationship between the four basic environmental and bodily substances in Galenic medicine. For an overview of the former see G. Jan Meulenbald, 'Basic Concepts of Indian pharmacology' in Meulenbald and Wujastyk ed. *Studies in Indian Medicine* and for the humoral theory and the challenges to it during the seventeenth century, Roy Porter, *Flesh in the Age of Reason* (London: Penguin, 2003).

⁴⁵² E.g. SB 121 (*Justicia gendarussa* ACATHACEAE (Manilal, 2003 9:42, p. 137))

⁴⁵³ Petiver, 'Some Attempts Made to Prove That Herbs of the Same Make or Class for the Generallity, have the Like Vertue and Tendency to Work the Same Effects'.

⁴⁵⁴ See Arion Roşu, 'Études āyurvédiques III. Les carrés magiques dans la médecine indienne', in Meulenbald and Wujastyk, *Studies on Indian Medical History*, 95-108, p. 101 on the employment by Louis XIV's envoys to King Narai of Siam of Brahmins in Surat to compose magic diagrams.

skepticism. Although Samuel Browne apparently felt he should stress his disbelief in certain of the magical properties of plants he describes in his letters to Petiver, he does not go to the extent of omitting them altogether. For example, 'Chaddai lackaree' is described as a love potion, Browne adding 'they are full of these ridiculous stories'.⁴⁵⁵ However, Browne apparently felt no need to disprove the claim that rubbing some 'Vushacooddee' on your wife's head would increase her love for you⁴⁵⁶ or that youth might be prolonged with the aid of some 'Chedde meel cheddee'.⁴⁵⁷ Other collections of medicine made by Europeans in Asia include more explicit acceptance of the powers of plants: for example a contemporary manuscript on the medicinal uses of roots⁴⁵⁸ includes several said to be useful in countering love potions,⁴⁵⁹ one that was able to reduce dancing snakes to quavering in their baskets,⁴⁶⁰ and another which could bestow an advantage in battle when tied around the arm or chewed.⁴⁶¹ Petiver was receptive to the more fantastic stories and indeed specimens he received: he co-authored a paper on 'monsters' of the Philippines with Camelli⁴⁶² and places a 'monster' among his more prosaic specimens.

⁴⁵⁵ Specimen 236, book 6. Hymavathi, *History of Āyurvēda*, p. 213 notes the importance of love potions in Siddha and the use of them by women. Like the European commentators, the mainly male authors of the medical compendia of the period expressed horror at their use by women to 'cuckold' their husbands.

⁴⁵⁶ Specimen 199, book 3. *Ipomoea quamoclit* CONVOLVULACEAE (Manilal, Vol. 11, p. 223). The Hortus Malabaricus (Vol. 11, tab. 60) also records this plant as a love potion.

⁴⁵⁷ SB167 *Heliocanthes elasticus* LORANTHACEAE (Manilal, Vol. 10 p. 15). Browne explains the name as 'a tree on a tree', referring to plants like mistletoe.

⁴⁵⁸ MS Sloane 1056. The manuscript, which finally came into the possession of Hans Sloane, is anonymous and undated but the names in 'Malabar' and 'Gentue' indicate that it was also composed in Tamil Nadu.

⁴⁵⁹ MS Sloane 1056, fol. 28 (40) - '...of the root called in Jentu Mangga Veroo & in Mallabar, Maretare Ver..',

⁴⁶⁰ MS Sloane 1056, fol. 27 (38) - '...of the root called in Jentue wazra Nooly veroo and in Mallabar Wazra Nooly Ver..'

⁴⁶¹ MS Sloane 1056, fol. 28v (41) '...of the root called in Jentue Ispra Veroo, & in Mallabar perunkellengoo'.

⁴⁶² Geo. Jos. Camelli and Jac. Petiver, 'De Monstris, Quasi Monstris & Monstrosis: Item de Serpentina etc. Philippensibus', *Philosophical Transactions* 25 (1706-7), 2266-2276.



Petiver, 'Monstrum PHILIP.', *Gazophylacci Naturae & Artis*, Tab XLV, no. 4⁴⁶³

The compilations which Browne and Bulkley sent Petiver must therefore be regarded as complexes of both Asian and European thought: they are neither simple reflections of the *siddha* medicine of Tamil Nadu nor works which simply draw Asian medicinals into a European pharmacopoeia. Instead, they demonstrate the tensions of the different allegiances and influences that the two surgeons were susceptible to. In many cases these were contradictory impulses: while on one hand they felt the need to claim the superiority of the remedies they discovered locally, on the other they were drawn by the wider networks in which they were enmeshed to make comparisons between

⁴⁶³ The key to this plate (p. 71 in the 1702 edition) reads 'F. Kamel sent me a Design of this in an MSS *Tract de Monstris quasi Monstris & Monstruosis*, which ere long shall be printed.'

these plants and those they saw depicted in the herbals from abroad they received from around the world. On one hand, they participated in local medicinal practises and may have accepted the magical properties they were told of along with the medicinal, on the other they knew that in writing to their correspondents in Europe they should present an appropriate degree of scepticism towards the 'superstitions' of another faith.

Conclusions

Looking into the spaces inhabited by Samuel Brown and Edward Bulkley can give us some idea of the world of early modern Europeans in Asia. Unlike the brief stays confined to the world of the factory that some authors have argued was the norm for EIC merchants in this period, both Browne and Bulkley spent most of their lives in India and were buried there; in Bulkley's case, at the end of the garden where he had experimented with plants from across the world. Owing to their access to the camps and capitals of the Mughal rulers, the surgeons became involved in one of the most important periods of negotiations by establishing a new relationship with the rulers of Arcot, which would eventually allow the Company to consolidate its base at Calcutta. The surgeons clearly worked closely with their Indian counterparts at the hospital, in acquiring drugs in the bazaar, and in gathering and naming specimens. The botanical knowledge the surgeons transmitted to natural philosophers and apothecaries abroad should therefore be regarded as hybrid works: reflecting both the local bio-medical environment and the European contacts and books of the surgeons.

Examining the networks in which the surgeons were embedded is one way to move studies of colonial knowledge creation away from the 'centre-periphery' model towards an understanding of the flows of information and people across territories. Contrary to the common assumption that comparisons between materia medica from different parts of the world took place only in a metropolitan 'centre', the East India Company surgeons in Madras received drugs from across the

world through the networks discussed above. They experimented with them and compared them to their locally-available equivalents, and used their books and manuscripts to identify them.

Seventeenth century Madras should therefore be understood not as an outpost but as a globalised space in which knowledge from the Americas and Europe as well as India, China and South-East Asia was circulated, interpreted, and used. This was not a peripheral pursuit, but was tied into the emergence of Madras as the 'most considerable' of the East India Company's settlements by the beginning of the eighteenth century. As Schiebinger notes; 'Botany was 'big science' in the 18th century; it was also big business'.⁴⁶⁴

Some tantalising details are missing from our story. Unlike the contributors to the *Hortus Malabaricus*, we never learn so much as the names of the Tamil and Telugu-speaking doctors who were so crucial in collecting and revealing the medicinal uses of the specimens the surgeons sent to London. Furthermore, we do not know the language in which they communicated: did Browne and Bulkley, like Manucci, know one or more Indian languages, were their counterparts already skilled enough in English to explain the details of the uses of the medicinal plants, or were the exchanges mediated through another language such as Portuguese? Despite such limitations, as the short case study presented here of the volumes of Browne in the Sloane herbarium shows; this resource has great potential for the historical study of ethnobotany.

⁴⁶⁴ Schiebinger, 'Exotic abortifacients'.

CHAPTER 3

Language Learning and the East India Company: English Scholarship on Malay in the late Seventeenth Century

Introduction

The study of Oriental languages is the original sense of the now infamous term 'Orientalism'. As one author puts it: 'the Other is located most fundamentally in language, the medium for representing selves and others'.⁴⁶⁵ Studies of dictionary-making and language learning manuals have seen these scholarly endeavours as defining the boundaries of languages through factors like the selection of script in which a language should be represented, the inclusion or exclusion of loan words, the definition of 'high' and 'low' forms, and the formulation of theories about the origins and spread of languages.⁴⁶⁶ The teaching of English worldwide has been viewed as a vehicle for the spread of colonial power and ideology.⁴⁶⁷ Nevertheless, there have been few in-depth studies of the mechanics of linguistic projects relating to non-European languages before the late eighteenth century. The practical involvement of the early East India Company in language instruction has also been overlooked.⁴⁶⁸

This chapter focuses on the beginnings of English scholarship on the Malay language during the second half of the seventeenth century. This period saw the translation of the four gospels into Malay, the production of manuscript Malay grammars, and culminated in the 1701 publication of

⁴⁶⁵ M. Shapiro, 'A political approach to language purism', in *The politics of language purism*, ed. by B. Jernudd and M. Shapiro (Berlin, Mouton de Gruyter, 1989), p. 28.

⁴⁶⁶ Bernard S. Cohn, *Colonialism and its forms of knowledge*, Chapter 2, 'The Command of Language and the Language of Command', 16-51; Joseph Errington, "Colonial Linguistics", *Annual Review of Anthropology* 30 (2001), 19-39; Geoffrey C. Gunn, *First Globalization: The Eurasian Exchange, 1500-1800* (Lanham, MD: Rowman & Littlefield, 2003), Chapter 9, 'Language, power and hegemony in European Oriental Studies'; Joseph Errington, *Linguistics in a colonial world: a story of language, meaning, and power* (Malden, Mass.: Blackwell, 2008).

⁴⁶⁷ R. Phillipson, *Linguistic Imperialism* (Oxford, Oxford University Press, 2002); Alastair Pennycook, *English and the Discourses of Colonialism* (Routledge, London and New York, 1998);

⁴⁶⁸ For example, Cohn, 'The Command of Language and the Language of Command' claims that no English factors knew any Indian languages until the 1740's or 50's. Earlier attempt to promote language learning are noted in Shreesh Chaudhari, *Foreigners and Foreign Languages in India* (Delhi: Cambridge University Press, 2009), pp. 304-516

the first complete bilingual English-Malay and Malay-English dictionary, attributed to the merchant Thomas Bowrey.⁴⁶⁹ I aim to demonstrate how the grammars and Bowrey's *Dictionary* were assembled through the materials made and collected by a number of merchants over around three decades with the assistance of scholars and the patronage of the East India Company. Examining the process by which the *Dictionary* was produced helps shed light on the aims and practises of language learning in the early East India Company more widely. Looking at the introductions, dedications, dialogues, and other material included in the *Dictionary* and the related material reveals much about the scholarly contexts of linguistic material produced in the period and about the contemporary situation and aims of the East India Company in its settlements in the Malay world. I use the *Dictionary* and the correspondence of Thomas Bowrey with the Oxford Orientalist Thomas Hyde to examine the process of collecting words, scripts, and phrases and making comparisons between them to formulate theories about the spread of languages and cultures.

Malay is an Austronesian language widely spoken in modern Malaysia, southern Thailand, Singapore, Indonesia, and Brunei, also in parts of the Philippines, Vietnam, Cambodia and Taiwan. It has affinities with languages of South Africa, Madagascar, New Zealand, and the Polynesian islands.⁴⁷⁰ Malay had been a language of trade in and beyond the Indonesian archipelago for several centuries before representatives of the English EIC made their rather late appearance in Asia in the early seventeenth century. The regions in which Malay was a lingua franca overlapped with areas in which Portuguese, Arabic or Persia and Chinese were important and the overlaps between these tongues are evident both in the resulting loan words and creoles and in the materials which describe and attempt to define Malay.

⁴⁶⁹ Thomas Bowrey, *Dictionary English and Malayo, Malayo and English* (Printed by Sam. Bridge for the Author London, 1701). The *Dictionary* has no page numbers, references given below are therefore to sections.

⁴⁷⁰ Paulette Dellios, 'A lexical odyssey from the Malay world', *Studia Universitatis Petru Maior – Philologia* 4 (2005), 141-144.

The earliest surviving linguistic material relating to Malay is a rather extensive Chinese list of words and phrases, probably compiled some time between 1403 and the arrival of the Portuguese in 1511, given that it does not contain loan words from that language.⁴⁷¹ The European traders and missionaries who arrived in the East Indies quickly grasped the importance of Malay and began to produce their own linguistic materials. These can be broadly divided into wordlists (vocabularies and phrasebooks), translations of Christian texts into Asian vernaculars, and linguistic studies of Asian vernaculars, although there was much overlap between these categories. These linguistic materials naturally relied heavily on the cooperation of Malay speakers as well as on Malay printed and manuscript materials. The first European work on Malay appears to have been the list of around four hundred words compiled by Antonio Pigafetta, an Italian gentleman companion of Ferninando Magellan with the aid of Magellan's slave Henrique, who spoke Sumatran Malay.⁴⁷² Although no published Malay-Portuguese linguistic materials survive, it seems likely that such works were circulated in manuscript form.⁴⁷³ The Dutch took the initiative for the production of Malay language materials during the seventeenth century. Dutch scholarship moved swiftly from a wordlist of 1599⁴⁷⁴ to the 1603 publication in Amsterdam of a book of Dutch and Malay dialogues compiled by Frederick de Houtman, an interpreter in the service of the VOC.⁴⁷⁵ Religious works followed swiftly, with the Gospel of St Matthew translated into Malay as early as 1612, Mark in 1638, Luke and John in 1646. Several other translations of Biblical texts followed over the course of the century.⁴⁷⁶ A work entitled *Spiegel vande Daleysche Tale* or 'A Looking-Glass of the Malayan

⁴⁷¹ E.D. Edwards and C.O. Blagden, 'A Chinese Vocabulary of Malacca Malay words and phrases', *Bulletin of the London School of Oriental Studies*, 6 (1930-32) 715-745. The vocabulary contains 482 words arranged under headings.

⁴⁷² A. Bausani, 'The first Italian-Malay Vocabulary by Antonio Pigafetta', *East and West*, New Series 11 (1960), 229-248. Pigafetta describes the language as 'Moorish', spoken in the Moluccas. The list includes words relating to religion, parts of the body, people, animals, trade, travel, and numbers.

⁴⁷³ Luis Filipe Thomaz and Denys Lombard, 'Remarques preliminaires sur un lexique Portugese-Malais inédit de la Bibliotheque Nationale de Lisbonne', in *Papers on Indonesian languages and literatures*, ed. by Nigel Philips and Khaidir Anwar (London: Indonesian Etymological Project, 1981).

⁴⁷⁴ William Marsden, *Dictionary of the Malayan Language* (London: printed by Cox and Baylis, 1812), p. iv lists 'the vocabulary collected by the Dutch navigators at Ternatī'.

⁴⁷⁵ Russell Jones, 'Malay Studies and the British: 1: An outline history to the Early Twentieth Century', *Archipel* 28 (1984), 117-48.

⁴⁷⁶ Donald F. Lach and Edwin J. van Kley, *Asia in the Making of Europe*, Vol. III, Book 1, 'Trade, Missions, Literature', (Chicago and London: University of Chicago Press, 1993), pp. 272-3 note the work of Sebastian Danckaerts, a

Tongue' was produced in 1612 for the instruction of Malay youth in Dutch schools in the archipelago.⁴⁷⁷ The Malay dictionary of Wiltens and Danckaerts was first published in the Hague in 1623 and re-issued in 1650⁴⁷⁸ and another dictionary was published in Batavia in 1677, one of several texts printed in the Dutch headquarters.⁴⁷⁹

The advanced state of Dutch scholarship on the Malay language was closely linked to the trade monopolies and territorial dominance of the VOC in the Malay world directed from their headquarters in Batavia (modern Jakarta). Like other scholarly projects, linguistic investigations had practical applications: emerging from the interactions of the multi-ethnic communities populating the ports and colonial towns like Batavia, they were codified through alliances of the VOC merchants with scholars in Holland. The resulting dictionaries, training manuals, and scriptures were deployed to bolster the Company's power through the creation of bilingual colonial elites and converts to Christianity. English attempts to appropriate Dutch linguistic scholarship on Malay were similarly connected with the English East India Company and should be seen in the context of their attempts to compete with VOC control of trading centres in Sumatra and Java.

Indonesian Contacts and Malay Language Projects in Late Seventeenth Century England

Relations between Indonesia and England began with the East India Company's first voyage, when

Dutch missionary in Amboina from 1617 to 1619 who published a Malay catechism and vocabulary.

⁴⁷⁷ According to Kees Groneneboer, 'The Dutch Language in Maluku under the VOC', *Cakalele*, 5 (1994), 1-10, this work was written by the VOC merchant Albert Cornelisz Ruyl and published in 1612 as a sequel to his booklet *Sourat. ABC Akan meng ayd'jer anack boudack/ seperti deayd'jern'ja capada segala manusia Nassarany: daen berbagy sombahayang Christaan* ('Book to teach the alphabet to the boys, as it is taught to all Christians, with some Christian prayers'). The 'mirror' was intended to instruct the youth in Christianity as well as language.

⁴⁷⁸ C. Wiltens and S. Danckaerts, *Vocabularium ofte Woort-boek naer order vanden Alphabet in 't Duytsch-Maleysch-Duytch....* ('d-Gravenhage: 1623). See also John M. Echols, 'Dictionaries and Dictionary Making: Malay and Indonesian', *The Journal of Asian Studies*, 38 (1978), 11-24, p. 15. Echols also notes that a Latin version was issued in 1631. W. Lineham, 'The Earliest Word-lists and Dictionaries of the Malay Language', *Journal of the Royal Asiatic Society Malayan Branch*, 22 (1949), 183-187 identifies this as David Haex, *Dictionarium Malaico-Latinum et Latinum-Malaicum* (Rome, Congr. de Propag. Fide, 1631).

⁴⁷⁹ F. Gueynier, *Vocabulaer, ofte Woorden-boeck, naer ordre van den Alphabet, in't Duytsch ende Maleys* (Batavia, 1677), c.f. Echols, 'Dictionaries and Dictionary Making', p. 15, note 19. For discussion of the production of Malay language materials in Batavia during the eighteenth century, Gunn, *First Globalisation*, p. 233-4.

James Lancaster visited Aceh in Northern Sumatra and Bantam, a port on the north-west of the island of Java, establishing agreements for trade. A brief list of Malay words also appears in the description of this voyage, published in 1603.⁴⁸⁰ Some of the earliest Malay language materials in England are the royal correspondence with the rulers of Aceh.⁴⁸¹ Houtman's dialogues were translated into German and Latin and then into English in 1614, the second edition corrected by Augustus Spalding, who had been employed by the English East India Company, rising through the ranks after showing an aptitude for language to become President at Bantam in 1609 and 1613.⁴⁸² Works of travel were also produced containing word lists, including Sir Thomas Herbert's 1634 *Relation of his voyages to the East Indies*⁴⁸³ and Ogilby's account of the Mughal Empire.⁴⁸⁴

Competition between the English and Dutch during the first half of the seventeenth century for control of the spice trade was fierce and included the temporary expulsion of the English from Bantam in 1621 and the infamous Amboyna massacre of 1623. At the time of the reformation of the Company in 1658-62, English trade in Sumatra was centred on Aceh (also referred to as Achin or Acheen),⁴⁸⁵ where Thomas Bowrey wrote 'all masters of English ships and vessels are very Nobly Entertained'.⁴⁸⁶ Despite the welcome English traders received, the port was firmly under the control

⁴⁸⁰ Anon, *A true and large discourse of the voyage of the whole fleete of ships set forth the 20. of Aprill 1601. by the Governours and assistants of the East Indian marchants in London, to the East Indies* (London, 1603), pp. 23-24.

⁴⁸¹ For example, Bodleian MS Douce Or e. A is the end of a letter from 'Alā-uddīn, Sultan of Aceh to Queen Elizabeth, 1011 AH/ 1602 AD. This and others are described in W.G. Shellebear, 'Some old Malay Manuscripts', *JSBRAS*, xxxi (1901), pp. 110-11.

⁴⁸² Anthea Fraser Gupta, 'The imagined learner of Malay', in *Bilingualism: Beyond Basic Principles*, ed. by Jean-Marc Dewaele, Alex Housen & Li Wei (Clevedon: Multilingual Matters, 2003); David Keith Bassett, 'The factory of the East India Company at Bantam, 1602-1682' (unpublished PhD dissertation, University of London, 1955), ii.

⁴⁸³ Thomas Herbert, *A relation of some yeares trauaile*, (London: William Stansby, and Iacob Bloome, 1634), 202-204. Herbert also includes vocabularies of the 'Troglodite' language (pp. 16-17), Arabic (pp. 42-44), and Persian (pp. 171-182).

⁴⁸⁴ John Ogilby, *Asia. being an accurate description of Persia, and the several provinces thereof: the vast empire of the Great Mogol, and other parts of India*, (London: Printed by the author, 1673) pp. 129-133.

⁴⁸⁵ A list of the company personnel required in 1662 lists: 18 in addition to the President for Surat, Persia, and Synda; 6 for Rajapore and Deccan; 4 for Calicut and Caile Velha, and 4 persons 'to be employed when occasion shall require in voyaging to Atcheen etc...'. (L.B. Vol. 3 p. 113, Letter, London to Surat, 18th August 1662, copy in MSA, Collections of Papers Received from the India Office, fols. 9-16). The Courteen Association had had a factory at Achin but it was short-lived and impoverished according to Smart, who arrived there with some of the settlers from Madagascar in 1647 (William Foster, 'An English Settlement in Madagascar', *English Historical Review*, 27 (1912), 239-250).

⁴⁸⁶ Thomas Bowrey, *A geographical account of the countries round the Bay of Bengal 1669 to 1679*, ed. by Sir Richard Carnac Temple. (Hakluyt Society: Cambridge, 1935), p. 306.

of the Queen and her officials and the East India Company was never permitted to build the fortified settlement it coveted there. By the 1660's, Bantam had developed into a thriving port under Sultan Agung and was exporting opium and textiles throughout the region, to the detriment of the Dutch factory at Batavia.⁴⁸⁷ However, by the mid-seventeenth century, the English presence in both Java and Sumatra was again under threat. The VOC's drive to bring as much of the Malay world as possible under the control of Batavia involved enforcing trade monopolies, collaborations with enemies of Aceh like Johor and Ternate and the use of military force to exclude Asian and European competitors. The English East India Company therefore stepped up its efforts to forge diplomatic ties in the region to combat the Dutch offensive and supplied arms to the rulers of Bantam from the 1660's to use against the Dutch.⁴⁸⁸

In August 1675, two visitors from Bantam arrived in London, accompanied by an elephant. Less information about the men is available than about their exotic charge, but they stayed in London until February of the next year⁴⁸⁹ and it seems likely that, as with other visitors, they would have been scrutinised and questioned by the literati of London. The visitors may therefore have been part of the impetus for the first Malay language project in England, a translation of the four gospels, the *Jang Ampat Evangelia*⁴⁹⁰ by the Orientalist Thomas Hyde and the philologist and churchman Thomas Marshall. Marshall had learnt Malay in the Netherlands, where he spent twenty-four years as chaplain to the Company of Merchant Adventurers in Rotterdam before returning to England in 1672.⁴⁹¹ The text was adapted from the Malay translations of the Dutch scholars Ruyl and

⁴⁸⁷ Femme Gaastra, 'War, Competition and Collaboration: the Relations between the English and Dutch East India Companies in the Seventeenth and Eighteenth Centuries', in Bowen, Lincoln, and Rigby eds. *Worlds of the East India Company*.

⁴⁸⁸ William Foster, *John Company* (London: Bodley Head, 1926).

⁴⁸⁹ Foster, *John Company*, pp. 84-85. The elephant was described in an eight-page pamphlet entitled *A True and Perfect Description of the Strange and Wonderful Elephant sent from the East Indies and brought to London on Tuesday the Third of August, 1675*. Foster notes that the Court Minutes record the men's return on 8 February 1676.

⁴⁹⁰ Thomas Hyde ed., *Jang Ampat Evangelia derrivi tuan kita Jesu Christi, daan Berboatan derri jang Apostoli Bersacti Bersalin dallam bassa Malayo* (Oxford: printed by H. Hall, 1677).

⁴⁹¹ K. Dekker, 'Marshall, Thomas (1621–1685)', *Oxford Dictionary of National Biography* (Oxford University Press, 2004), [<http://0-www.oxforddnb.com.catalogue.oxford.ac.uk/view/article/18149>, accessed 2 May 2010].

Heurnius⁴⁹² with alterations in orthography to suit English pronunciation. The work was published in 1677 with the aid of the gentleman scientist and religious adviser to the East India Company, Robert Boyle.

The early East India Company actively supported efforts to make converts to Christianity in Asia and copies of the *Jang Ampat Evangelia* were sent to the Bantam factory for distribution.⁴⁹³ This followed similar incentives elsewhere. For example, in 1660, permission had been granted by the Court of the East India Company for Richard Baxter, 'an eminent divine', to distribute among the East India Company's factors a translation of Grotius' *de Veritate Religionis Christianae*, translated into Arabic at the expense of Robert Boyle.⁴⁹⁴ In 1664, the Surat factors noted with pride that their library contained several volumes of the Bible in 'the language which is much esteemed by those that are learned amongst these people'. They also requested an ornate display for their chapel in which the Christian creed was to be surrounded by the names of God in 'as many of the eastern languages as Arabick, Persian &c. as can be procured'.⁴⁹⁵

The collaboration between Hyde, Marshall, and Boyle to produce the *Jang Ampat Evangelia* sparked further enthusiasm among the overlapping circles of churchmen, scholars, and members of the East India Company for emulating the Dutch in supporting scholarship and the production of

⁴⁹² Probably A.C. Ruyl, *Het Nnewe Testament: in Neder-duyt ende Malays overgeset* (Enchuysen, 1629), the gospel of Matthew, and A.C. Ruyl and J. Heurnium, *De vier heylige Euangelien ... ende ... de Handelingen der h. Apostelen, overgeset in Nederduyts ende Maleys* (Amsterdam, 1651). See Thomas Birch ed. *Works of Robert Boyle*, 6 vols (London: Printed for W. Johnson and others, 1772), VI, p. 561, Hyde to Boyle, 3 September 1676. Hyde also implies in the *Jang Ampat Evangelia*, p. 2, that he used translations of all four gospels found among the manuscripts of the Leiden Professor of Arabic, Jacobus Golius, which were auctioned after his death (for a contemporary account of which, see Bodleian MS Smith 66, fol. 19 letter to Wallis dated 12 September 1692). The extracts given at the end of OR 70 from the Dutch versions of the Lord's Prayer also indicate that Marshall had access to more Dutch works than are currently extant.

⁴⁹³ According to Anthony Farrington, *Trading places: the East India Company and Asia 1600-1834* (London: British Library, 2002), the work appears among a list of 185 books in the Bantam factory. The distribution of the book is noted in IOR G/21/7, fol. 23.

⁴⁹⁴ Yule, *Diary of William Hedges*, ii, p. cccliii. Yule notes this is from the *Court Book* c. 1660 but that the original has been lost. The Arabic translation of Grotius' 1640 work was made in 1660 by Edward Pococke and a copy is retained in the Bodleian library (arab e. 3). The translation is also noted by Stephen Neill, *A History of Christianity in India* (Cambridge University Press: Cambridge, 1984), I, p. 364 claims that the work was also translated into Malay, Chinese, and Persian.

⁴⁹⁵ Maharashtra State Archives, *Surat 'Outwards'*, Vol. 1A pt. II, Surat to London 28 January 1664 fols. 4-37.

religious works in Eastern languages. Many of those involved had spent time in Holland and regarded with admiration the strong links that had been built up there between scholarship, trade and religion. A letter of Robert Boyle's written in 1677 refers to Bishop John Fell of Oxford and Lord Berkley as involved the plans of East India Company to sponsor the propagation of the gospel and suggests that to this end, 'sober & learned men should be fitted in the university to be sent into India, & furnished not only with the Arabick tongue, but with Arithmetick and other parts of the Mathematicks & other Qualifications fit to recommend them & make them appear more considerable & grow more usefull in those parts'. Boyle suggests that as well as sending Englishmen to preach in local languages, 'we breed some of their forward hopeful youths to the knowledge of the English Tongue & European Learning, that they may afterwards be able to confute the idolatrous Priests and convert and instruct their owne Countrymen'.⁴⁹⁶

In June 1681, Bishop John Fell of Oxford corresponded with Archbishop William Sancroft of Canterbury about the East India Company's plans to raise money for the translation of more Christian scriptures.⁴⁹⁷ In his second letter, Fell reported a meeting with Robert Boyle in which, 'I enlarged upon the shame that lay upon us, who had so great opportunities by our Commerce in the East, that we had attempted nothing to the conversion of the natives; when not only the papists but even the Hollanders, had laboured'.⁴⁹⁸ Boyle donated one hundred pounds to the cause of further translations of scripture into Malay, and Gilbert Burnett, who had witnessed some of the conversation, reported it to Sir Josiah Child, Governor of the Company. Child then ordered a committee to be formed to raise money for the instruction of young scholars at Oxford and Cambridge in the Malay language and the production of more religious texts in Malay as well as 'grammars vocabularies & other subsidiary books'. Minutes of the committee held in May 1682

⁴⁹⁶ BL MS Add 4293, fols. 45-7, Robert Boyle to Robert Thomson, 5 March 1677.

⁴⁹⁷ Bodleian MS Tanner 36*, fol. 57, John Fell to William Sancroft, 19 June 1681 and fol. 61, John Fell to William Sancroft, 21 June [1681].

⁴⁹⁸ Bodleian MS Tanner 36*, fol. 61, John Fell to William Sancroft, 21 June [1681].

record their assent to the idea and several donations made by members of the East India Company, totalling £122 pounds.⁴⁹⁹

By late April 1682, an important embassy from the ruler of Bantam, Sultan Haji (Abdul Kahhar), had arrived in London.⁵⁰⁰ The Ambassadors remained until July, meeting several London intellectuals.⁵⁰¹ Despite the rather dismissive comment of John Evelyn, who met them at a dinner party, that they were not interested in anything apart from the fact that men in England were allowed to own their property,⁵⁰² the visit, along with the support of the East India Company, provided a catalyst for what seems to have been the second English attempt to publish a grammar of the Malay language. The circle around the two Ambassadors included members of the government and court, including Lord Berkley (the recipient of the elephant brought by the last visitors), Master of Ceremonies Sir Charles Cotterel, and the merchant and member of the Royal Society Sir Jeremy Sambrooke. East India Company agents with experience in the Malay world were present to translate and advise. These included Henry Dacres (previously the chief in Bantam), Robert Marshall, another former Bantam factor, and William Mainstone.⁵⁰³ Like Spalding, Mainstone had risen through the ranks of the East India Company by virtue of his linguistic skills. After spending some time as a merchant in Holland and France, Mainstone was posted to Bantam as fifth in command in 1658; he was in Macassar in June 1660 and in 1667 in Jambi in Sumatra.⁵⁰⁴ Perhaps through Sambrooke, Mainstone seems to have become involved with Boyle, Marshall, and Hyde and the attempts to produce scripture and subsidiary publications in Malay.

English-Malay Grammars, c. 1680-1684

⁴⁹⁹ Bodleian MS Tanner 36*, fol. 69, [2] May 1682. [The first part of the date is obscured by damage to the edge of the page].

⁵⁰⁰ Russell Jones, 'The First Indonesian Mission to London', *Indonesia Circle*, 28 (1982), 9-19: p. 10 gives selections from the Dutch account of the visit. See also Foster ed., *John Company* p. 97.

⁵⁰¹ Foster, *John Company*, p. 116.

⁵⁰² John Evelyn, *Diary*, entry of 19 June 1682 (reproduced in Foster, *John Company*, pp. 113-114).

⁵⁰³ Foster, *John Company*, pp. 102-103.

⁵⁰⁴ According to Jones 'The First Indonesian Mission in London'.

The first original English work on Malay is a grammar of the language which remains in three manuscripts in the Bodleian library: two undated draft versions in the collections of Thomas Marshall⁵⁰⁵ and one finished version among the Ashmole manuscripts.⁵⁰⁶ There is also an copy in the British Library annotated by the oriental scholar J.H. Hindley during the eighteenth century.⁵⁰⁷ The Ashmole manuscript appears to have originally been intended as a presentation copy. It is dated 1682, dedicated to Sir Josiah Child, then Director of the East India Company, and signed by William Mainstone. The grammar provides a comprehensive discussion of the grammar and parts of speech of the language, arranged according to the basic principles of a Latin grammar, but with several innovations to explain particular features of the Malay language. Hyde's knowledge of Arabic and Persian might have provided him with other grammatical models. The Ashmole grammar gives the Arabic script as well as the transliteration and also includes samples of the scripts of Java and Macassar, numbers in Chinese, and words in transliterated Chinese with attempts at the Chinese characters for some. The material towards the end of the manuscript looks as if it was added later, perhaps after the idea of presenting this version of the manuscript was abandoned. The transliterated Chinese words given are similar, though not identical, to those in two merchant vocabularies dating from after 1673 and collected by Thomas Hyde.⁵⁰⁸ One of these attributes the vocabulary it contains to 'Fokien' (Hokkien in southern China), and the place names, including Formosa and Camboija (Cambodia) also imply that the vocabulary was collected from traders from southern China and reflects a dialect of this area rather than Mandarin Chinese.⁵⁰⁹

⁵⁰⁵ Bodleian (special collections) MSS Marshall OR 70 and OR77.

⁵⁰⁶ Bodleian MS Ashmole 1808 is a presentation copy dedicated to Josiah Child. According to Richard Greentree, and Edward Williams Byron Nicholson, *Catalogue of Malay manuscripts and manuscripts relating to the Malay language in the Bodleian library* (Oxford: Clarendon Press, 1910), p. 20 it was transferred from the Ashmolean to the Bodleian in 1860 and was possibly in the possession of Anthony a Wood prior to his death in 1695.

⁵⁰⁷ BL MS Eur 7043. It is accompanied by a slip which identifies the paper as English and attributes it to 'G. Jones, 1805' (the watermark actually looks like 1807) and attributes the transcript to J. H. Hindley.

⁵⁰⁸ Bodleian MS Hyde 6 and 7. These are by the merchant John Dacres (see MS Eur. E. 192. 2 (a), item 15, transcribed in Appendix 3).

⁵⁰⁹ Bodleian MS Hyde 7, fol. 1 reads 'China numbers dialecto Fokien^en^' (Hokkien). These are the same as the transliterations of numbers in Ashmole 1808. A list of 'Numeri Dilecto Mandarinicâ', clearly different from the 'Fokien' numbers, is given inside the cover of MS Hyde 7.

The Marshall manuscripts are both less complete than Mainstone's grammar, but the latter clearly borrowed much of its content from them. Both Marshall manuscripts lack the dedicatory material of the Ashmole MS and begin with the 'Malayan Alphabet', whereas Mainstone places this after an initial discussion of the adoption of the Arabic script and loan words that seems to have been adapted from the earlier observation made by Marshall in his introduction to the *Jang Ampat Evangelia*. The text in this section is also slightly different in each manuscript: the text in OR 70 appears to be the first draft, Ashmole 1808 has an expanded, and OR 77 a shorter version of the text. OR 70 also incorporates a comparison between the Dutch versions of the Lord's prayer in Malay given by several Dutch authors and a section of text copied from the Malay version of the *Rāmāyana* that had been given to the Bodleian by Archbishop Laud in 1633.⁵¹⁰ An announcement made in 1680 announcing the forthcoming publication of a 'Grammar of the Malaian Tongue' probably means that Marshall's first manuscript can be dated to this period.⁵¹¹

Annotations were added to OR 77 by someone with experience in the Malay world. The most obvious conclusion might therefore be that it was Mainstone himself, who then made his own version on the basis of Marshall's original and his own corrections. However, the annotations are in a different hand to that of Mainstone's own dictionary, employ a different system of transliteration, and do not correspond to the differences between the presentation manuscript and Marshall's drafts. The verso of the last leaf of OR 77 reads 'For Dr Gilbert Burnett', showing that the grammar had been sent to Burnett, who was involved with the Company's plans for sponsoring scholars, sometime after September 1680 (when he was created doctor). Burnett presumably passed the

⁵¹⁰ The Malay *Rāmāyana* (Hikāyat Srī Rāma) is Bodleian MS Laud OR. 291. Described in Greentree and Nicholson, *Catalogue of Malay manuscripts*, pp. 2-3. The versions of the Lord's prayer are taken from Ruyl, Hasel, Danekaerts, Brouwer, and Caron. As Greentree and Nicholson, *Catalogue of Malay manuscripts*, p. 16 note, the publication date of Caron's work places the earliest date of composition of this part of OR 70 after 1678. Greentree and Nicholson speculate that the earlier sections may have been composed during Marshall's time in Holland.

⁵¹¹ The undertakers of the Theatre Press, Oxford, *An Advertisement, concerning the Printing and Publishing of Ancient and other Vseful Books*, (1680), Bodleian Library, Madan, III, 3273 (I am grateful to Samuli Kaislaniemi for this reference). As Greentree and Nicholson, *Catalogue of Malay manuscripts* note, this manuscript and OR77 cannot have been composed later than 1685, when Marshall died.

manuscript on to another Malay-speaking acquaintance who made the annotations before returning it to his correspondences in London.⁵¹²

Another attempt at publication came in May 1683 when Mainstone wrote to Boyle, enclosing for his ‘judicious and impartial censure’, the final version of his Malayan grammar, an earlier draft having received his approval.⁵¹³ Asking for his patronage for ‘this pygmy’ Mainstone adds that ‘the success of this previous manual will much contribute to the animation or abortion of my impregnate intentions for a Malayan dictionary, and the translation of the sacred Evangely &c. into those Oriental idioms’.

Mainstone died shortly after his second letter to Boyle. However, Boyle seems to have made some attempt to recover another copy of his work. In a letter to Boyle dated 23 September 1684, which confirms the connection between Mainstone and Marshall's work and the continued involvement of Bishop Fell in the Malay language projects, Thomas Hyde writes: ‘As for the Malayan grammar of Mr Mainstone, Dr. Marshall is not now in Oxford, but the bishop tells me that it is a pitiful trifle, not of any worth. However, when Dr Marshall comes home, I will discourse further with him about it’.⁵¹⁴ Thomas Marshall died in 1685, however, and the efforts to publish the grammar came to nothing. Meanwhile, the EIC's presence in the archipelago had received a severe blow. The Ambassadors returning to Bantam on a Company ship were met off the coast with the news that the English had been expelled by a Dutch-backed rebellion of the Sultan's son and were diverted to Batavia, where the factors had set up a temporary base. The Ambassadors had the present of

⁵¹² Greentree and Nicholson, *Catalogue of Malay manuscripts*, pp. 17-18 speculate that the annotator was one of the factors expelled from Bantam, but given that the factors only left around the time the Ambassadors returned to Bantam, this would push the date of OR 77 back to after March 1683. However, it seems just as likely that the annotator was one of the other former factors who attended the Bantam Embassy.

⁵¹³ Birch, *Works of Robert Boyle*, vi, p. 614, William Mainston to Robert Boyle, 19 December 1682 (a request for the return of the draft copy) and 15 May 1683 (enclosing the final copy).

⁵¹⁴ Birch, *Works of Robert Boyle*, vi, p. 573, Hyde to Boyle, Oxford, 23 September 1684. This is probably Bishop Fell who is referred to as having supported the training of priests in Malay in a letter of Hyde to Boyle dated 11 June 1691 (pp. 576-7).

gunpowder given to them by Charles II confiscated by their hosts and were left to make their way home overland.⁵¹⁵

Mainstone's Malay projects had not been completely forgotten, however. During 1688, Hyde and Boyle corresponded about a project of printing the gospel of St Luke and the *Acts* in Malay.⁵¹⁶ In early 1689, Thomas Hyde wrote to Robert Boyle, 'it were earnestly to be wished, that you would use your interest with counsellor Jones of Lincoln Inn to procure the Malayan papers of his brother-in-law, Mr Mainstone, deceased, who, when he lived in India, prepared for that language, a dictionary, which he intended to print. And the sooner this may be done, so much the better, that so I may have time to study the language and fit myself for the business to be done'.⁵¹⁷ No version of this dictionary has yet been identified, but it seems likely that if Boyle succeeded in finding these papers they would have been used in the next linguistic project that Hyde was involved with:

Thomas Bowrey's *Dictionary English and Malayo, Malayo and English*.

Producing the *Dictionary English and Malayo, Malayo and English*

Like Mainstone's grammar, Bowrey's 1701 *Dictionary* was dedicated to the East India Company. By this stage, there were two companies: the 'old' and 'new', which were beginning their consolidation into the United Company, a process in which Bowrey appears to have been interested.⁵¹⁸ After spending decades abroad, Bowrey had sailed for England on 20 October 1688 on the *Bengall Merchant*. February 1689, when Hyde wrote to Boyle, would therefore have been around the time that Bowrey is likely to have arrived. Like Robert Knox's account of the composition of his *Historical Relation*, Thomas Bowrey claims he composed his dictionary during idle hours on his voyage home. Bowrey explains that he had learned Malay during the nineteen

⁵¹⁵ Foster, *John Company*, pp. 118-120.

⁵¹⁶ Birch ed., *Works*, VI, pp. 575- 577, Hyde to Boyle, 25 October 1688; 29 December 1688; and 23 February 1688/9.

⁵¹⁷ Birch ed., *Works*, VI, pp. 576-7, Hyde to Boyle, 23 February 1688/9.

⁵¹⁸ Documents in MSS Eur D1076 fols. 1-12.

years that he spent in the region in order to dispense with the services of 'a prevaricating interpreter, as they generally are'. However, he adds that when the *Dictionary* was written, it had been some time since he had been in the area or spoken Malay.⁵¹⁹ As with Knox's *Relation*, it is clear that the production of the *Dictionary* was in fact the result of a longer process of collaboration and collation of material involving several scholars, merchants, and informants.

The *Jang Ampat Evangelia*, which appears among Bowrey's list of his books,⁵²⁰ was clearly used in the preparation of the *Dictionary*. Marshall's 'Address to the English Reader', which discusses the introduction of loan words from Arabic with the acceptance of Islam in the archipelago, and which was reproduced in Mainstone's grammar, makes another appearance in Bowrey's introduction to his *Dictionary*, expanded again from the original version. A letter from Hyde to Bowrey suggests that he prompted Bowrey to introduce this section.⁵²¹ Unlike Mainstone's grammar, Bowrey's dictionary does not use the Arabic script, except in some separate word lists given at the end of the *Dictionary*, but gives the Malay words transliterated into Roman characters. The section on grammar in the *Dictionary* differs from the Ashmole and Marshall manuscripts, meaning that Bowrey probably did not see these manuscripts himself. In the grammatical section of his *Dictionary* Bowrey writes: 'I was discouraged about the method, especially having no light from any Predecessor, having nothing in this kind that ever was Attempted by any English Man, that has gone before me that I know of'.⁵²² However, he does include 'a Specimen of the Malayo Character, which I have obtained from the Reverend Doctor Hyde'. This specimen is taken from the alphabets which begin all three manuscript copies of the grammar in Oxford. The Malay words in the Arabic script in the lists that follow was also supplied by Hyde.⁵²³

⁵¹⁹ Bowrey, *Dictionary English and Malayo, Malayo and English*, Introduction.

⁵²⁰ Guildhall Library MS 3041/09, ii 'Catalogue of my books, Dec – 1711', which includes the 'Malaya testament'. Unless this refers to one of the Dutch works, this is likely to be the *Jang Ampat Evangelia*.

⁵²¹ He writes: 'There are pretty many Arabian words therein mixed, which you may venture to say in your Preface, and I will justify it, if required.' BL MS Eur. E. 192.2. item 7, fol. 1 Hyde to Bowrey 29 Nov 1700.

⁵²² Bowrey, *Dictionary English and Malayo, Malayo and English*, grammar section.

⁵²³ MS Eur E. 192 (c) J. 767, Item 11 is the draft lists with the Malay script and some minor corrections added in Hyde's hand. Drafts for these lists with the English and transliterated Malay but not the Arabic script are in Guildhall MS

Aside from the grammar, at the end of Bowrey's *Dictionary* there are some dialogues in English and Malay. Three of the dialogues are taken from the work of Spalding, in turn copied from Houtman.⁵²⁴ In 1677, Hyde wrote to Boyle 'I suppose, that at the factories in *East India* there are vocabularies for teaching the *Malayan* tongue to merchants and interpreters, if any such could be procured it would do us good service'.⁵²⁵ One such vocabulary appears among Bowrey's papers at the British Library⁵²⁶ and two others of roughly the same period remain in the Marsden collection now at SOAS.⁵²⁷ It seems likely that the *Dictionary* was compiled with the aid of such lists as well as the Dutch dictionaries that Hyde and his circle were familiar with. Like the Chinese vocabularies added to Mainstone's grammar: the 'Chinese compass' at the end of the *Dictionary* was probably drawn in from another source.⁵²⁸ It resembles a physical object that Hyde would have been aware of: a compass which was part of the Sheldon collection, which had been acquired by the Bodleian in 1659.⁵²⁹

MS 3041/8.

⁵²⁴ Gupta, 'The imagined learner of Malay'.

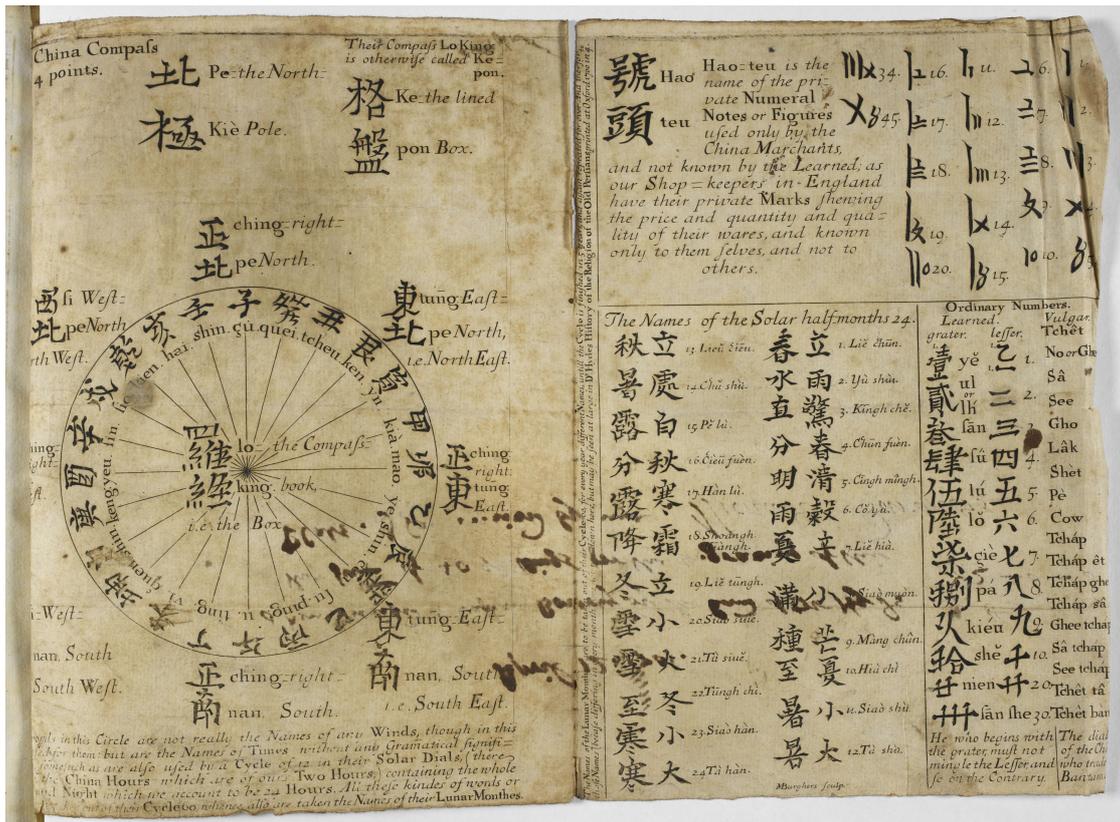
⁵²⁵ Birch ed. *Works of Robert Boyle*, p. 567, Hyde to Boyle, Oxford, 16 October 1677.

⁵²⁶ MS Eur A 33.

⁵²⁷ SOAS special collections, 40326 (the rough copy) and 40325 (a neater copy, arranged under subject headings). The original archivist attributed it to William Marsden but a pencil note points out that this is not his hand. The hand and the paper (which has the same or a similar watermark to EB70.10/11608) suggests that it dates from the seventeenth century. I am grateful to Samuli Kaislaniemi for his suggestions about these manuscripts.

⁵²⁸ The plate is omitted in several versions of the dictionary but appears in the British Library version at shelfmark 68.c.12. On the back of this sheet is the text 'April 12. 1701. This received of Captain Bowrey by the hand of Dr Hyde the summ of 40 shillings for the engraving of this Plate. I say received by me. Michael Burghers'. The compass is also present in Thomas Hyde, *Syntagma Dissertationum* (Oxford: Clarendon Press, 1767).

⁵²⁹ The copper plates for the 'China compass' is in the list of Hyde's possessions at his death in MS Sloane 3323. The object is in the database of the Museum for the History of Science as object MHS 44055 (I am grateful to William Poole for this reference). The collection of the English jurist and Orientalist John Selden (1584-1654) arrived at the Bodleian Library in 1659, and Hyde would certainly have been aware of the object's existence.



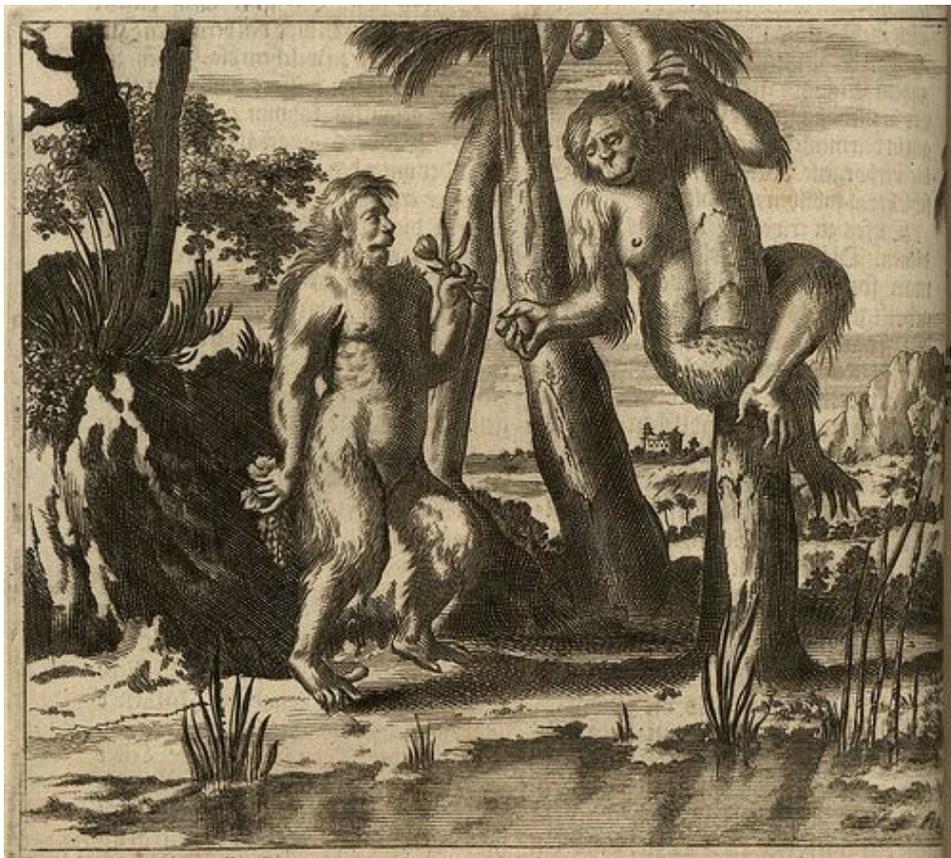
The 'Chinese Compass', foldout in the last page of the British Library copy of Thomas Bowrey, *Dictionary English-Malayo, Malayo-English* (British Library, shelfmark 68 c. 12)



The Chinese Compass in the Museum of the History of Science, Oxford (MHS 44055)

Bowrey also borrowed from contemporary works of travel and natural history for some of the descriptive material in the *Dictionary*. Most obviously, the description of the 'Ōrang ootan' or 'man of the woods' as 'very ready to learn any actions, but never heard to speak' is part of a contemporary

myth among European travel writers developing around the beast, which the Dutch physician and natural historian Bontius described as 'a curious monster with a human face...[that] has the human habit of sighing as well as shedding tears'.⁵³⁰ This description was picked up on in other contemporary travel works: for example, an orangutan couple is depicted in Ogilby's translation of Montanus with human faces, the male offering a rose to the female.⁵³¹ In fact, as Dellios points out, the Malay word for the creature was *mawas*, but the word orangutan persisted and is now commonly used,⁵³² one example of how the linguistic writings of this period with their often comical misunderstandings could affect language.



An orangutan couple imagined by Arnoldus Montanus, *Atlas Japannensis*, trans by John Ogilby (1670)

The evidence which most strongly challenges the straight-forward presentation of Bowrey as the

⁵³⁰ c.f. Gunn, *First Globalisation: The Eurasian Exchange, 1500-1800*, p. 41.

⁵³¹ John Ogilby, *Atlas Japannensis (from the Dutch of Arnoldus Montanus)*, (London, 1670).

⁵³² Dellios, 'A lexical odyssey from the Malay world', p. 144. Marsden gives 'Orang-utan' as 'man of the woods' under the entry for 'Orang'.

sole author of the *Dictionary* is a copy of the work, which seems to have been bound from proof copies⁵³³ and that contains extensive manuscript corrections. This copy was previously owned by the nineteenth century orientalist William Marsden and is now in the library of the School of Oriental and African Studies.⁵³⁴ The author of the corrections, which Marsden regarded as 'for the most part judicious', was Henry Smith. Temple identifies Smith as the brother of Bowrey's uncle, who was ordered to be sent back from India in 1669 for being a 'ne'er-do-well'.⁵³⁵ Smith seems to have disobeyed this command, leaving the employment of the East India Company to trade privately and spent enough time in Asia to acquire competence in Malay.⁵³⁶ In one section of the SOAS *Dictionary*, Smith adds the complaint that 'My Dictionary, which the foregoing should have bin onley the Copsy off, is so strangely perverted thro' [deleted: Ambition] Ignorance of the genuine Elegence and Meaning of the language, that it would have puzzled a learned Malay to have pickt out the meaning of the short sentences, for they are very concisive in there discourse, using noe circumlocations or tautologie'.⁵³⁷

If Smith's claim to have produced the original copy of the manuscript is correct, this provides an important source for Bowrey's dictionary. The reason Smith was apparently willing to consign his own work to Bowrey is revealed in the correspondence between the two men, which shows that in summer 1700, around the time when the dictionary was being prepared, Smith was awaiting trial at Newgate prison, probably on charges of piracy.⁵³⁸ Bowrey seems to have helped Smith out of his

⁵³³ The volume has been bound after Smith's annotations were made, as some are cut off at the edges of pages. I am grateful to Samuli Kaislaniemi for pointing this out.

⁵³⁴ SOAS special collections, EB760.10/11608. This manuscript was transferred along with other parts of Marsden's collection from King's College to SOAS.

⁵³⁵ Richard Carnac-Temple ed. *The Papers of Thomas Bowrey 1669-1713*, Second Series, No. LVIII, (London: Hakulyt Society, 1927), p. xxx, note 1, and Richard Carnac-Temple ed. *New Light on the Mysterious Tragedy of the "Worcester" 1704-5* (London: Ernst Benn Ltd., 1930), pp. 382-3.

⁵³⁶ He may be the same Henry Smith who Cunningham mentions passing on collections to him, for which see Chapter 2.

⁵³⁷ Annotations in SOAS EB760.10/11608 following the 'English-Malayo' section. Marsden's comments on the annotated version, which he says has come 'accidentally' into his possession are in Marsden, *A dictionary of the Malayan Language*, note to p. xli. He adds 'nothing further respecting this Henry Smith has ever come to my knowledge'.

⁵³⁸ Guildhall Library MS 24176/1-2 [item numbers, pages are not foliated], Henry Smith to Thomas Bowrey dated 9 May 1700, 3 June 1700, and 29 June 1700. Smith's letters are unclear about the exact nature of his crime but contain

difficulties and later employed him as an agent, or 'mole' as Smith referred to himself, in Scotland, where Bowrey was attempting to recover compensation for his ship, the *Worcester*, whose crew had been hanged as pirates and its cargo confiscated.⁵³⁹ In return, Smith handed over his linguistic work to Bowrey, who enlarged it with the aid of the other materials supplied to him by Hyde, other wordlists and narratives, and his own memories of the Malay language.

While Marsden claimed that Bowrey had 'derived...no advantage whatsoever from the preceding publications',⁵⁴⁰ in fact, the *Dictionary* drew heavily on the published and unpublished dialogues, grammars, wordlists, travel accounts, and Smith's, and possibly Mainstone's, dictionary and is likely to have benefited from the oral contributions of visitors from Asia such as the Bantam Ambassadors. Collaborative work was not unusual in the making of dictionaries or linguistic works: as Wilkins notes in the dedication of his work to the Royal Society, the dictionary produced by the French Academy begun in 1634, had been distributed among the members to hasten its production and pool their expertise.⁵⁴¹ Neither was the unattributed borrowing of the earlier Dutch work unusual in linguistic projects of the period.⁵⁴²

The copy of the Malay dictionary with Smith's corrections implies that a second edition of the dictionary was planned. However, there was no further edition. The death of Thomas Hyde in 1703 was perhaps one reason for this: no-one with a similar breadth of interest in language took his place for some time.⁵⁴³ In addition, by the turn of the century, the East India Company's attentions were

several complaints about Captain Thomas Gullock. According to a letter from Lord Bellomont to the Board of Trade, dated Boston the 29 November 1699 transcribed in John Franklin Jameson, *Privateering and Piracy in the Colonial Period: Illustrative Documents* (New York: Macmillan, 1923), Captain Gullock's ship, the *America* was taken by pirates with the aid of mutinous crew members. It seems likely that Smith was among the latter.

⁵³⁹ For Smith's negotiations in Scotland, Temple, *New light on the mysterious tragedy of the 'Worcester'*, pp. 382-406.

⁵⁴⁰ Marsden, *A dictionary of the Malayan Language*, p. xl.

⁵⁴¹ John Wilkins, *an Essay Towards a Real Character and a Philosophical Language*, (London: Printed for Sa: Gellibrand and for John Martin, Printer to the Royal Society, 1668), Dedication. Probably in reference to *Le Dictionnaire de l'Académie française*, first published in 1687.

⁵⁴² N. E. Osselton, *Branded words in English dictionaries before Johnson*, Groningen Studies in English 7 (Groningen: Wolters, 1958) p. 102. I am grateful to Samuli Kaislaniemi for this reference.

⁵⁴³ P.J. Marshall, *Thomas Hyde: Stupor Mundi* (London: Hakluyt Society, 1982).

gradually beginning to shift from the Spice Islands towards a more focused interest in the Indian sub-continent. Despite their support for language learning, the East India Company lacked the resources in this period to follow Hyde's suggestion that Asian scholars should be brought to England in order to teach languages⁵⁴⁴ and the optimistic plans for sponsoring scholars to learn Malay seem to have floundered following the loss of Bantam. Therefore, scholars of oriental languages remained dependant on conversations with occasional visitors from Asia and the word lists and books brought back by company agents.

The process of compiling the Malay dictionary provides an example of how early modern scholarly enquiries into linguistics took place. Much like early modern enquiries into botany or ethnography, linguistic works were not to be the sole work of one author but a compilation of information gathered at different times, often translated several times, sometimes compared or checked by further informants.⁵⁴⁵ In terms of the words and phrases included in the *Dictionary English and Malayo*, then, it would be difficult – and in fact mistaken – to regard them as representative of any one region of the Malay world. Nor does the *Dictionary* solely reflect the language of the late seventeenth or early eighteenth century: the dialogues lifted from Houtman via Spalding were based on inquiries made in the Malay world over a century previously. What might be noted, however, is the tendency of linguistic materials to attempt to smooth out the confusing diversity they encountered in their sources by adopting a preferred form of Malay, which is often described as the most original or correct while variations are described as 'vulgar' or 'despicable'. In the Marshall grammars, this idea of eliminating variation is made explicit in the conclusion: 'And thus much shall suffice to be spoken of the parts of speech observed in this Malayan Tongue, wher doubtless

⁵⁴⁴ Birch ed. *Works of Robert Boyle*, vi, p. 563, Hyde to Boyle, Easter-Tuesday, 1667. 'It were to be wished, that we had in Oxford a college for the maintenance of some able men out of the several Eastern countries; it would be a great help to all Eastern learning: and when the church of *England* shall be so zealous as to have a college *de propaanda fide*, such eastern men being amongst us, would enable us to be so accustomed to the true and genuine pronunciation of those languages, so that our emissaries might be enabled to discourse readily with the natives'.

⁵⁴⁵ Pier Larson, *Ocean of letters: language and creolization in an Indian Ocean diaspora* (Cambridge: Cambridge University Press, 2009), p. 64 makes a similar point about seventeenth century French language manuals on Malagasy.

divers exceptions might be added; but it would prove tedious to enumerate all such as might be found in so unpolished a language. These rules are taken from the dialect which seems best and most used & will give occasion to others to cultivate & adorn these Rudiments more accurately.⁵⁴⁶

The 'dialect which seems best' varied according to the personal experiences of the individual authors: for example, the annotator of OR 77 notes that Jambi in Sumatra was where the best Malay was spoken,⁵⁴⁷ while Bowrey located it in the Malay peninsula.⁵⁴⁸

Teaching and learning languages in the East India Company

Mainstone concludes the dedication of his dictionary to Sir Josiah Child by arguing that although 'few trouble their brains for any more knowledge in foreign Dialects, than so much as may serve them to procure Necessarily, Victualls, and Money', a more thorough approach to the language is essential 'for such as candidly aim at the propagation of the Christian religion, or the transplantation of the English dialect in such remote Regions'.⁵⁴⁹ While Cohn claims that no significant number of the EIC's servants learned Indian languages until the 1740's or 50's,⁵⁵⁰ examining the records of the early Company demonstrate that the EIC made consistent efforts to promote language learning among their servants. On the earliest voyages, the main tactic was to send young boys to the Indies to learn languages. However, the high rate of mortality meant that such training was often wasted and, as noted in Chapter 1, the early Company relied heavily on interpreters and go-betweens of various nationalities. Nevertheless, from the 1670's onwards, the early East India Company financed missionary publications, supported the teaching of English in its settlements, and encouraged its factors to learn Asian languages, achieving some success by the end of the century.⁵⁵¹

⁵⁴⁶ MS Marshall OR 77, fol. 33.

⁵⁴⁷ MS Marshall OR 77, annotations to fol. 12.

⁵⁴⁸ Errington, *Linguistics in a Colonial World*, pp. 139-142 discusses the ways in which Dutch linguistic projects tended to homogenise and unify Malay to produce a 'general, cultured Malay'.

⁵⁴⁹ MS Ashmole 1808.

⁵⁵⁰ Cohn, 'The Command of Language and the Language of Command'.

⁵⁵¹ Errington 'Colonial Linguistics'; Ines G. Županov, 'Goan Brahmans in the Land of Promise: Missionaries, Spies and Gentiles in Seventeenth- and Eighteenth-Century Sri Lanka', in Jorge Flores ed. *Re-exploring the links: history and constructed histories between Portugal and Sri Lanka*, South China and Maritime Asia Series (Wiesbaden: Harrassowitz and the Calouste Gulbenkian Foundation, 2006), 171-210, p. 187 notes that the Dutch settlers in seventeenth century Sri Lanka could be fined by the VOC for not teaching Dutch to their households.

As Mainstone's comment shows, this was part of deliberate policy to encourage conversion to Christianity and the learning of English, in part to combat the influence of Catholicism and Portuguese.

Although the committee set up by the East India Company to consider religious affairs in the early 1680's had failed to provide an ongoing scheme of training for young men in the oriental languages, it did begin an association between the East India Company and missionary groups: most notably the Society for the Propagation of the Gospel and the Danish-German Lutheran mission at Tranquebar.⁵⁵² Minutes of the EIC committee note that 1500 copies of St Matthew's gospel had been printed and 500 sent to the East Indies. With this consignment was also sent to the Tranquebar missionaries: 'a Collection of Catechetical and practical Tracts, written by our own Bishops and Eminent Divines, to be translated into such Language or Languages in India, as shall render them most usefull to the Heathen in those parts'.⁵⁵³ The writings of the Tranquebar missionaries reveal that work was quickly begun to produce Tamil translations of Christian scriptures and begin schools which would teach Christianity and European languages⁵⁵⁴ and within a few years they had issued a 'Malabar' (Tamil) Dictionary and works on Hinduism and medicine.⁵⁵⁵ The letters of the missionaries were translated into English by 1711 and appeared in several editions thereafter.⁵⁵⁶ The Tranquebar missionaries were also associated with the Society for Promoting Christian Knowledge,

⁵⁵² According to E. Arno Lehmann, *It began at Tranquebar* (Madras, Veprey Press, 1956), p. 6, the mission was based on a tiny piece of land near the Coromandel coast which had been granted by the King of Tanjore to the Danish in 1620 for an annual rent. Lehman dates the arrival of the first missionaries to 1706. For discussion of the involvement of the Tranquebar missionaries in natural history and collecting, Pratik Chakrabarti, *Materials and Medicine*, Chapter 4, 'Materials and *Materia Medica* in India'.

⁵⁵³ Bodleian MS Tanner 290, fol. 238, 'The Charitable Subscriptions upon the Proposal for encouraging the Protestant Missionaries, and erecting Charity Schools in the East Indies' (n.d. but 1681 according to M.D. Wainwright and Noel Matthews, *A guide to Western manuscripts and documents in the British Isles relating to South and South East Asia* (London: Oxford University Press, 1965) p. 321).

⁵⁵⁴ Letter of Bartholomaeus Ziegenbalg to unknown correspondent, 25 September 1706 transcribed in Lehmann, *It began in Tranquebar*, pp. 8-12.

⁵⁵⁵ Lehmann, *It began in Tranquebar*, p. 21-34. 'Malabar' here refers to Tamil. Ziegenbalg's works included the *Genealogy of the Malabar Gods*, *Malabar Heathenism*, and *Bibliotheca Malabarica*, which remained in manuscript until the nineteenth and twentieth centuries and Grundler's *Malabar Medicus*. But see also pp. 66-82 for conflicts between the secular authorities and the missionaries, which resulted in Ziegenbalg's imprisonment.

⁵⁵⁶ Bartholomaeus Ziegenbalg, *Propagation of the Gospel in the East* (London: J. Downing, 1709-10).

another organisation that sponsored translation of the Bible into non-European languages.⁵⁵⁷ In the new charter received by the Company in 1698, they were instructed for the first time to appoint chaplains for each factory, who were to be trained in Portuguese and local languages, 'the better to enable them to instruct the Gentoos, that shall be the Servants or Slaves of the same Company, or of their Agents, in the Protestant religion'.⁵⁵⁸

The East India Company's interest in language learning was not confined to matters of religion, however: they were also keen for their agents to become familiar with the local languages, systems of administration, and court protocol. Therefore, from the 1670's onwards, they offered incentives to their servants to acquire such skills. In 1671, the Court wrote to the factory at Fort St George to order them to appoint a 'schoolmaster' to teach local languages and to reward factors who attained proficiency in local languages 'as to transact business with the natives'.⁵⁵⁹ The languages to be acquired varied depending on the location of the factories: in Surat the young factors were rewarded for learning the 'Banian language' (presumably Gujarati).⁵⁶⁰ At around the same time, a proposal was delivered to the Company suggesting that the young writers at the Masulipatnam factory should be forced to learn Portuguese by threatening them with punishment each time they spoke English.⁵⁶¹ Meanwhile, the Secretariat in Bombay wrote to the Persian factory ordering that writers 'may be severally sent and confined to some Armenian houses, where they may not talk English to one another...for a year or more, until they are perfect in the persian language, and the armenian and persian way of accompting to qualifie them the better hereafter to serve the company as linguishters and to rise to preferment in Council'.⁵⁶²

⁵⁵⁷ Lehmann, *It began in Tranquebar*, p. 98. Some of the meetings of the Society beginning in 1699 are recorded in Bodleian MS Rawlinson c. 844.

⁵⁵⁸ Neill, *History of Christianity in India*, I, p. 368, who notes this was the new Company's charter and became the charter of the united company when the two rivals merged in 1708. 'Gentoos' refers to Hindus.

⁵⁵⁹ *Sundry book* (TNSA), Vol. 7, fol. 22.

⁵⁶⁰ London to Surat, 'Encouragement to those learning the Banian language', London to Surat, 15 March 1677, copied in (TNSA) *Public Despatches from Court*, Vol. 1, pp. 186; 194.

⁵⁶¹ *Records of FSG: Diary and Consultation Book 1672-9*, (Madras: Government Press, 1910), p. 82. Papers delivered to the Agent and Council by William Puckle, 16 February 1676.

⁵⁶² Maharashtra State Archives (hereafter MSA), *Secretariat Outwards*, V, 3 January 1693, fols. 144-156.

The Company make it clear that their aim in having their servants trained in Asian languages was to minimise the use of interpreters and go-betweens, who, as discussed in Chapter 1, were widely regarded as devious and untrustworthy. For example, the Directors wrote to Surat in 1693: ordering them to follow the 'virtue and wisdom' of the Dutch by sending writers to Persia 'to be bred up in that language...and not altogether to trust such Syrian knaves as the Predecessors of the Syrian cast have always proved to the Company, as also the Bannian brokers'.⁵⁶³ The Company also believed that interpreters recruited elsewhere and trained in English could prove useful: in 1698, the Court of Directors instructed Fort St George to send to Bencoulen young English-speaking 'native boys' to be trained in Malay as interpreters.⁵⁶⁴ The Company appear to have been aware that it was easier for younger people to learn new languages: a letter of December explains that 'the boys are sent so young that they might the sooner & perfecter attaine the languages of the Country'.⁵⁶⁵ Three 'hospitall boys...that might very easily learne the perfection of the country language' were sent as writers to the Bencoulen factory in 1688.

These efforts seem to have born some fruit. By 1686, the Fort St George Council wrote to the factors in Sumatra expressing the hope that some of them now spoke Malay 'very perfectly' and that the circuitous method of corresponding with the Sultan of Bantam via a Portuguese translation could be avoided.⁵⁶⁶ By 1690, William Dampier reported that the Chief at Indrapore indeed spoke very good Malay.⁵⁶⁷ In Madras, regular teaching was being provided for agents by 1693, when the

⁵⁶³ MSA, *Secretariat Outwards*, V, fols. 138-144, London to Surat, 27 October 1693.

⁵⁶⁴ Yule, *Diary of William Hedges*, ii, cccliv. Yule notes that 'the last word, the copyist's error for interpreters, must have come naturally to his pen, after the constant writing on the subject of the pernicious violators of the Company's privileges!' Yule does not give an exact reference for this extract but dates it to the mid-1690's.

⁵⁶⁵ BL IOR G/35/2, fol. 125, London to Bencoulen, 30 December 1687.

⁵⁶⁶ BL IOR G/35/2, fol. 22 (46r).

⁵⁶⁷ William Dampier, *Voyages and Descriptions Vol. II, in Three Parts* (Printed for James Knapton, London, 1699), p. 58. Moody's proficiency in Malay and well as his experience in the pepper trade is also noted in the letter from Fort St George appointing him second in command (G/35/2, fol. 216, FSG to Bencoulen, sent 15/05/1690 received 01/11/1690). Moody was swiftly sent to Manjuta to negotiate concerning opening the pepper trade to Indrapora. Dampier's presence is noted in the Bencoulen correspondence for 1690 (G/35/2).

records note the appointment of 'a Brahminy as Gentu Mooshi'.⁵⁶⁸ By January 1698, one English factor's employment at Fort St George was listed as 'translator of Jentue' (Telugu).⁵⁶⁹ By the turn of the century, the Madras factory were issuing coins with Telugu and Malay inscriptions and communicating with the inhabitants of 'black town' in Telugu.⁵⁷⁰ By 1710, the United Company factory at Fort St George had employed a teacher of Persian⁵⁷¹ and by the middle of the decade incentives, including preferment in positions in Council, were being provided for the factors to learn Tamil and Telugu as well as 'Hindustani', Persian and Arabic.⁵⁷² The problem of high mortality rates continued to retard the Company's plans to equip all their factories with English linguists, however. For example, in 1701, the Surat factory of the 'new' Company lamented the death of 'Deniel Meuse, a writer having attained to great proficiency in speaking and reading Persian and [who] might have been serviceable had God spared his life'.⁵⁷³

For the Company factors, skills in language could earn promotions to important positions and the production of linguistic manuals could function as recommendations, hence Smith's reference to Bowrey's 'ambition' in enlarging and publishing the *Dictionary* under his own name. In addition, for agents who wished to supplement their meagre salaries with private trade, entering alliances with local rulers, or supplying information to the Company or scholars in return for patronage the

⁵⁶⁸ FSG, *Public Consultations* (TNSA) XX, fols. 71-2, 11 September 1693. The word 'mooshi' is a corruption of *munshi*, for which see *Hobson-Jobson* p. 581. 'Gentue' here signifies a high-caste Hindu, probably Telugu-speaking.

⁵⁶⁹ 'Thomas Harris, listed as having arrived in India in November 1692. *Diary and Consultation Book, 1698*, (Madras: Government Press, 1921), p. 131.

⁵⁷⁰ Records of FSG *Diary and Consultations of 1688* (Madras: Government Press, 1916) 7 August 1688, p. 126.

Discussion of the various types of silver coins to be minted, those for Madras should bear 'the Rt Honble Compa mark on one side cutt in a wreath of Lawrell for the circle and under to be Madras and the date of the year, the reverse of by The English: four fanams. The English, four fannams...[etc] to be wrote cross the piece in Jentue...for Sumatra the same only add the Bencolen piece in Mallay'. FSG, *Public Consultations* (TNSA), XXXI, fols. 160-161, 03/08/1702 orders 'a paper to be read in the Jentue language to all castes to raise money for the walling-in of Black Town'.

⁵⁷¹ FSG *Public Consultations*, (TNSA), XLI, fols. 102-3, 26 June 1710, 'Entertainment of a person to teach the Persian language'.

⁵⁷² FSG *Sundry Book*, (TNSA) Vol. 5, fol. 76. '27 Oct. 1714 (79) 'Such servants as can attain a knowledge of the Eastern languages and Particularly Tilinger [Telinga] and Malabar languages, otherwise called Telugu and Tamil to have on that account the preference of Employments or Situations (80) A Gratuity to be given to such servants as acquire a knowledge of the Persian language'; (81) 'Servants especially the younger to speak and write the Hindustan or moor Languages and to be encouraged therein by suitable rewards'.

⁵⁷³ MSA, *Surat Diaries*, Vol. 2, 1669-1707 (according to the catalogue, although this is actually an 'outward' letter book that begins in 1699 rather than 1669), fol. 221, letter from Surat to London, 28 February 1702.

acquisition of local languages was essential. The collection of linguistic information therefore went on autonomously both within and beyond the Company's settlements. One agent of the East India Company in the early period who acquired and translated manuscripts in Indian languages was John Marshall, the first English translator of the *Samaveda* and *Bhagavad purana*.⁵⁷⁴ The production of linguistic manuals was also encouraged by Asian rulers. This was the case in seventeenth century Siam, where King Narai sponsored the production of the Thai language manual, the *Chindamani*, partly intended for the information of the many foreigners in his kingdom.⁵⁷⁵ Similarly, King Rajasingha II of Kandy patronised José Vaz, who compiled a Sinhalese-Portuguese dictionary and translated a medical text from Portuguese to Sinhalese.⁵⁷⁶

In the years after the publication of the *Dictionary*, Bowrey and Hyde were able to use the eagerness of the Company's agents to provide linguistic information to further their investigations into several Asian languages. Around the time his dictionary was published, Bowrey wrote to the Directors of the East India Company requesting their help in compiling similar vocabularies in other languages. Language manuals would, he wrote, provide 'a foundation and intimation to those who go in your Honourable service to India'.⁵⁷⁷ The correspondence of Bowrey and Hyde shows that they had alphabets and wordlists printed to distribute among members of the East India Company. Receipts from an engraver during 1702 and 1703 reveal that Bowrey had plates engraved of the Sanskrit (devanagāri),⁵⁷⁸ Telugu, and Tamil scripts.⁵⁷⁹ These vocabularies are preserved among Bowrey's papers in the British Library and were eventually printed in the posthumous collection of Thomas Hyde.⁵⁸⁰ It has been claimed that another set came into the possession of Hans Sloane, who

⁵⁷⁴ P. J. Marshall, 'Marshall, John (1642–1677)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk/view/article/67985>, accessed 30 March 2010]. The translation of the *Samaveda* is in IOR MS Eur. C 461.

⁵⁷⁵ Hodges, 'Western Science in Siam', p. 87.

⁵⁷⁶ Županov, 'Goan Brahmans', p. 181.

⁵⁷⁷ BL MS Eur. E. 192.2. item 31, fol. 2 undated but c. 1701 or 1702, Thomas Bowrey to the Directors of the East India Company.

⁵⁷⁸ A letter from George Grierson to Richard Temple enclosed with BL MS Eur E.192.2 states that the Sanskrit letters are copied from Kircher.

⁵⁷⁹ Guildhall MS 3041/8. Receipts from engraver John Sturt dated 10 September 1702 and 9 February 1703.

⁵⁸⁰ Appendice de lingua Sinensi, aliisque linguis Orientalibus, una cum quamplurimis tabulis Aenais, quibus earum

forwarded them on to a French correspondent.⁵⁸¹ As part of this project, Bowrey asked that the Company instruct each of their factories 'in India and China' to actively collect and compile wordlists. No answer to this petition is recorded, but the correspondence of Hyde and Bowrey reveals that they had built up a network of collectors who sent them information about languages and language materials. Some men mentioned in Hyde's letters include Mr Fraunce, chaplain at Bombay, who had acquired some 'Eastern books' for him,⁵⁸² a Mr Lee, a factor in Bengal who is said to have translated the Bible into Persian,⁵⁸³ an unnamed friend of Bowrey's said to understand Telugu,⁵⁸⁴ and a chaplain who informed Hyde that the sacred language of the Brahmins was 'Sanscree' and not 'Hanscree'.⁵⁸⁵

Another method of collecting linguistic information was through the acquisition of books in the language. For example, a letter from Hyde dated April 1701 requests Bowrey's help in obtaining vocabularies from Bengal 'of all the sorts of Tartars who trade there, especially (and by name) for the language of the Chylay Tartars, and the Boutan Tartars, and the Mogul Tartars about Samarcand and Ouzbek'.⁵⁸⁶ For all these 3 sorts do trade at Bengale and all nations in the world have small Vocabularies wherewith they teach their children as we by our Primers.' He directs Bowrey to take a similar approach at 'Surat (or rather at Nissary 30 miles from it)' in acquiring vocabularies from 'the old Persses' (Parsis), added 'but they being very close and not apt to impart anything, this must be

Characteres exhibentur: auctore Greg Sharpe.

⁵⁸¹ H. Christof Wolfart and David H. Pentland, "The 'Bowrey' Dictionary of Henry Kelsey." In *Papers of the Tenth Algonquian Conference* ed. by William Cowan (Ottawa: Carleton University Press, 1979), 37-42, who do not give a reference.

⁵⁸² Birch ed. *Works of Robert Boyle*, vi, p. 567, Hyde to Boyle, Oxford 29 November 1677. He mentions specifically a book called the 'Zundavastaw', probably a reference to the 'Zend-Avesta', a name used in the West to denote the oldest of the holy texts of Zoroastrianism. Fraunce's death may have meant that Hyde never finally received these works.

⁵⁸³ BL MS Eur. E. 192.2. item 19, fol. 1, Hyde to Bowrey, 3 October 1701.

⁵⁸⁴ BL MS Eur. E. 192.2. item 5, fol. 2, Hyde to Bowrey, 20 November 1700 and 6, fol. 1, Hyde to Bowrey, 25 November 1700

⁵⁸⁵ BL MS Eur. E. 192.2. item 5, fol. 2, Hyde to Bowrey, 20 November 1700.

⁵⁸⁶ BL MS Eur. E. 192.2. item 12. fol. 1, Hyde to Bowrey, April 13 1701 The reference to 'Chylay Tartars' is unclear. Samarcand or Samarkand is in modern Uzbekistan. In a later letter (BL MS Eur. E. 192.2. item 18, fol. 1, Hyde to Bowrey, 3 October 1701), Hyde names the 'tartar nations' as 'Bontum [Bhutan], Tibbet [Tibet], Cathay [Northern China], Sifan [possibly Isfahan in Persia], Pristoa [unclear], Turkistan [Turkestan]'.

don[e] by a little Bribing one of their priests and telling him it is for one who is a great lover of their religion'.⁵⁸⁷ Given the reference to religion, it is presumably Farsi or Pahlavi, the language used in the Zoroastrian religion, that Hyde was interested in. 'Nissary' refers to Navsari, which is about twenty miles from Surat in South-East Gujarat and was the original site of migration in India for Parsis. The relative accuracy of this information obtained by Hyde, who had never visited India, testifies to the strength of the intelligence networks already formed around the East India Company by this period.

The methods of collecting words employed by Hyde and Bowrey were in fact very similar to the strategies the circle of botanical scholars discussed in Chapter 2 employed to acquire plant and animal specimens. In fact, the two activities often overlapped: as well as linguistic materials, Hyde requested Bowrey to procure specimens of coffee trees and sago, samples of medicinal seeds, the picture of a jackal, and more bizarrely, the hand of a giant mermaid.⁵⁸⁸ Meanwhile Petiver and his correspondents placed particular importance on learning the local names for the plants and seeds they amassed. Both methods were open to misinformation however, and just as Petiver included the fictional 'monster' among his specimens, Bowrey and Hyde were taken in by a linguistic fiction: the 'Formosan' of the man who called himself George Psalmanazaar and produced a travel narrative containing a completely fictional account of the language and customs of Formosa.⁵⁸⁹ Psalmanazaar, whose bizarre methods of constructing an 'Asian' identity famously included sitting under chairs and eating raw meat, corresponded with Bowrey over the details of his imagined language.⁵⁹⁰

⁵⁸⁷ BL MS Eur. E. 192.2. 12. fol. 1, 13 April 1701, fol. 1 Marshall interprets this passage in both *Thomas Hyde: stupor mundi* and the DNB entry as showing Hyde's 'sympathy' for other religions, whereas it in fact seems to reveal subterfuge to obtain linguistic information.

⁵⁸⁸ BL MS Eur. E. 192.2. (a), item 27, fol. 1, 2 Aug 1702 and item 28, fol. 1, 7 August 1702. for the sago tree, item 8 fol. 1 – letter to Bowrey from Thomas Hyde, dated 7 February 1700. Transcribed in Appendix 3.

⁵⁸⁹ George Psalmanazar, *An historical and geographical description of Formosa* (London: printed for Dan. Brown; G. Strahan, and W. Davis; and Fran. Cogan, 1704).

⁵⁹⁰ BL MS Eur. E. 192.2 (a), item 3, fol. 1 (Appendix 3) is a letter from 'G. P. Salmanaazaar', dated only 'Thursday evening' and Guildhall Library MS 3041/09, i, contains 'notes on the 'Formosa epoch'. For more on Psalmanazaar see Michael Keevak, *The Pretended Asian: George Psalmanazar's eighteenth-century Formosan hoax* (Detroit: Wayne State Press, 2004).

Bowrey's dialogues and the East India Company in Indonesia

As well as his fictional travel narrative, Psalmanazaar produced a set of dialogues between a Japanese and a Formosan on the question of religion. While these tell us nothing at all about the real views on religion of seventeenth century Japanese or Taiwanese people, they provide a mirror to the obsession of Protestant writers of the period with classifying the customs of foreign religions as on the one hand 'superstitious' and packed with pointless ceremonials and the vain worship of graven images – thus recalling the 'popish pomp' of the Catholics – or on the other, reasoned and enlightened, as they considered their own creed.⁵⁹¹ In the same way, while the dialogues in Bowrey's *Dictionary* tell us nothing about the ways in which seventeenth century Malay speakers would have conversed, they do reflect some of the aims of the East India Company in the archipelago and beyond.

Five of the dialogues in the *Dictionary* involve English merchants competing with Dutch for spices. One involves inquiries about the geographical and political situations of the major trading cities of the archipelago, ending with the expressed hope that the English will at some stage settle factories in 'proper places', enabling them to compete fully with the Dutch. Proselytizing is indicated by the inclusion of a dialogue in which a Christian and a Muslim friend agree to tell one another about their religions (despite the initial promise of reciprocity, Islam is not in fact described).

Bantam in this period appears to have served as a central point from where converts to Christianity could be sent as intermediaries and translators could be sent out to serve the more remote factories.⁵⁹² That the English factors had had some success in sowing the seeds of both their language and religion is indicated by the mention of 'Mallay Padres' in both Bencoulen and

⁵⁹¹ 'G. P. _____', *A Dialogue between a Japonese and a Formosan About some Points of the Religion of the Time* (London: Printed for Bernard Lintott at the Cross-Keys next Nando's Coffee House, Fleetstreet, 1707). The aim of the dialogue, which Psalmanazaar pretends to have overheard, 'is to vindicate the Japoneses from that unjust Character this Part of the World is pleased to give them, viz of being a People much given to Superstition'.

⁵⁹² For a report on converts to Christianity sent from the Bantam factory to Tonquin, Sloane 998, fol. 17r, Sunday 18 August.

Tryamong factories by 1695. These men doubled up as interpreters and 'writers of Malay' to the English factories.⁵⁹³ The references to the spread of Islam along with trade in the literature produced on the Malay language in the seventeenth century as well as the dialogue in the *Dictionary* relating to conversion demonstrate that the Company was aware that they were in competition with Islam to attract converts and trading partners. The other competitors were Catholic missionaries, in particular the Jesuits, whose success in attracting converts was paralleled by a rigour in linguistic scholarship that their Protestant rivals were hard-pressed to rival.⁵⁹⁴ The Dutch had already confronted this issue: for example the 'Looking-Glass of the Malay tongue' mentioned previously was aimed at Portuguese-speaking youth who had been converted to Catholicism.⁵⁹⁵

As Gupta notes, phrases and dialogues included in language teaching material reflect the anticipated social relations of language learners.⁵⁹⁶ The scope of Bowrey's *Dictionary* extends well beyond the words needed to conduct trade and demonstrates the East India Company's intention to establish 'colonies' and 'plantations' in the archipelago. Phrases indicating settled agriculture include: 'Go water my garden, Prune the trees, gather me a nosegay, and tomorrow begin to dig a ditch round it'; 'Reap the Rice in the east field, sow the west field with beans, plow the field by the river side, and mend the banks'; and 'Rice is now dear, therefore tread out the paddy in the barn, winnow it well and a munday I will sell it'. The common practice of marriages or sexual alliances between Englishmen and Malay-speaking women also emerges from the selection, including: 'Don't tickle me, I shall laugh until my spirit is gone'; 'That whore plays the whore with her sister's husband'; and 'He does love a pretty woman'. Other phrases indicate the sharing of practical and ethnographic knowledge: 'I am amazed to see a little Ruther steer a great ship too and fro'; 'Tis the loadstone that

⁵⁹³ BL IOR G/35/3, fols. 33-37 Consultation of 15 July 1695 in which the 'Malay padre' for Bencoulen complains that he has not been paid. *Hobson-Jobson* (p. 651) notes that the word 'padre' was being applied to Protestant as well as Catholic priests by the early 18thC in Fort St George.

⁵⁹⁴ Although strangely enough no Portuguese work on Malay was printed, dictionaries in several other South Asian languages were produced. For discussion Županov, *Missionary Tropics*, especially chapter 7 'Twisting a Pagan Tongue: Portuguese and Tamil in Jesuit Translations'.

⁵⁹⁵ Groneneboer, 'The Dutch Language in Maluku under the VOC'.

⁵⁹⁶ Gupta, 'The imagined learner of Malay'.

causes the compass to traverse'; 'The Malayos twist thread on their thighs'; and 'The Mahometans do not eat swines flesh'.⁵⁹⁷

The first dialogue in Bowrey's *Dictionary*, a conversation between two friends, one Malay and the other English, begins with a discussion of the suicide of a mutual acquaintance 'Joseph' (it is not clear whether this refers to a European or a Malay convert to Christianity). The two friends walk together and drink a cup of wine with water although the Malay friend refuses to accept the suggestion of smoking some tobacco as 'I am not yet used to it'. The reference to suicide here, although it contains none of the customary horror at the sin usually expressed by Christians in this period, might hint at the general concern for the mental as well as physical malaise which the climate of Bencoulen was feared to visit upon both Europeans and locals (see Chapter 5).⁵⁹⁸

Tobacco and alcohol, as well as other intoxicants including betel and cannabis, provided revenue for the Company, who issued licenses to those who vended them in their settlements in return for a fee.⁵⁹⁹ It was therefore in their interest to encourage the local population to take up drinking and smoking, as the imagined Englishman urges his Malay friend here.

The inclusion of the Chinese elements in the *Dictionary* is also revealing in terms of the type of society the Company envisaged creating. The Chinese were important middle men in the pepper trade carried on in local craft around the centres of pepper production on the east coast of Sumatra

⁵⁹⁷ Bowrey, *Dictionary*, 'Miscellanies English and Malayo'.

⁵⁹⁸ Royal Society, *Register Book*, Vol. 9. fol. 71 (no author or date, placed between documents dated 1701 and 1703) 'A Memoriall to live under the Equinoctial and between the Tropicks; the Common Distemper incident to the Inhabitants of those Climates with ye Manner of Cure by the Natives and likewise by other European practitioners in Physick.' This document claims that the inhabitants of Bencoulen were in danger of suffering 'venery and grief'. Several similar concerns emerge in the EIC's records. See Chapter 5.

⁵⁹⁹ Reports of the revenue received from the tobacco, betel, 'ganjee' and liquor farmers occur frequently throughout the Fort St George and Fort St David records. See for example, Fort St George, *Public Consultations*, Vol. XXIX (TNSA), fols. 215-16. *Public Despatches From Court* (TNSA), Vol. XVII, fols. 1-6 notes that the factors at Fort St David had imprisoned several old tobacco and betel farmers for debt and orders that they be released. In 1695, the Bencoulen factory received an order from Fort St George to supply their soldiers with arrack from their own stores. The consultations notes that this would lose them 200 dollars of yearly revenue, the license having previously been farmed out to members of the Chinese community (BL IOR G/35/3 fols. 12-13, Consultation of 27 June 1695). On 'narco-botany', see Chapter 2.

and elsewhere. Again following the example of the Dutch, the Bencoulen factory was eager to recruit Chinese merchants to live in their settlement, writing in 1686 that the settlement must be fortified in order to protect the Chinese 'who are the only trading people'.⁶⁰⁰ As Farrington notes, Bencoulen was a less attractive area for settlement in terms of this trade, and the Chinese population only ever reached an estimated 1,000 by the mid eighteenth century.⁶⁰¹ Nevertheless, the Chinese were an important part of the settlement, opening bazaars and market gardens and selling arrack. The inclusion of the Chinese compass in the *Dictionary* demonstrates that the English seamen in the region were expected to join the crews of Chinese junks and local craft in their trading missions. As will be discussed further in Chapter 5, the other group who were important to the success of the settlements were slaves, mostly brought from Madagascar. This can be demonstrated by the inclusion of the Malay word for a 'Negro or Caffre' in the Malay wordlists in the Marsden collection and a Malay word for 'slave man' in the lists among Bowrey's papers in the British Library.⁶⁰²

The Intellectual Context of Seventeenth Century Linguistics

As early commands from the East India Company to confine young writers within another linguistic community demonstrate, it was understood that immersion in language was an equally if not more effective way of learning language than through memorising grammatical patterns and approximations to words in a known language. This argument had also been made in the discussions that intensified during the seventeenth century surrounding the proper methods of teaching Latin and the vernaculars.⁶⁰³ However, studies of grammar had philosophical as well as

⁶⁰⁰ BL IOR G/21/7, fols. 100-101 – Bencoulen, 8 October 1686 and G/35/1(3) fol. 72. See also Anthony Farrington, 'Bengkulu: An Anglo-Chinese Partnership', in Bowen, Lincoln and Rigby eds. *Worlds of the East India Company*, 111-117. For the collaboration between the English and Chinese in Bantam, Bassett, 'The factory of the English East India Company at Bantam', pp. 226-7.

⁶⁰¹ Farrington, 'Bengkulu: An Anglo-Chinese Partnership', p. 115.

⁶⁰² SOAS MS 40325 and 6. The word given is *Pàpooā* rather than the words (of Arabic origin) listed by Marsden, p. 497, 'kafirī' or 'kapīrī' or for Ethiopians 'sengi' or 'habashī'. In the manuscript wordlist, MS Eur E. 192 (c) J. 767, Item 1, fols. 1-17, the word given for slave is 'tubusan'. The published *Dictionary*, somewhat bizarrely given Bowrey's experience as a seaman, incorrectly defines slave as 'lascar', an error that was noted by Smith in his corrections.

⁶⁰³ Vivian Salmon, *The Study of Language in Seventeenth Century England*, Studies in the History of the Language Series, Vol. 17 (John Benjamins Publishing company: Amsterdam/ Philadelphia, 1988) notes Webbe's argument that language learning in children was innate and behavioural and that teaching should follow the same pattern.

practical purposes. Bacon and Descartes argued that languages displayed the thought or natural reason of humankind, and could hence be reduced to universal rules or patterns. Attempts at a universal grammar like that of Charles Sorel or a universal language like that of John Wilkins, were based on the idea that existing languages were a better or worse approximation to a universal and underlying thought and that studying and comparing them would therefore yield an ideal form.⁶⁰⁴ Chinese was an influence on Wilkins' universal character, and he also includes the languages of Madagascar, China, 'Poconchi', and New England in his comparisons of the Lord's Prayer.⁶⁰⁵ These intellectual debates were by no means divorced from the practical aims of the East India Company and Boyle and Hyde would have been well aware of them via their contacts with the Royal Society and the circle of Samuel Hartlib. Wilkins apparently saw his own work as a potential aid for colonialism in the Far East and the Americas⁶⁰⁶ and indeed the strange little story he gives to illustrate the power of languages is concerned with the mastery of colonial subjects.⁶⁰⁷

The influence of these debates is evident in some of the introductory material to the Malay grammars and dictionaries produced in England during the late seventeenth century. For example, Mainstone begins his dedication with the claim that all languages have implanted in them by divine providence a 'native elegance and harmonious congruity' and that 'the worst of Tongues hath some secret rule or Clavis, to unlock its most recluse Mysteries'. Mainstone claims that the *ars grammatica* have deservedly been regarded as the most important of the liberal arts because 'without it, men may gabble (like parrots) but can prescribe no true rule for the speech'. He adds that while providence fits the 'souls and tongues' of a people to their own language, others can only

⁶⁰⁴ Noam Chomsky, *Cartesian Linguistics* (New York: Harper & Row, 1966) and Salmon, 'Pre-Cartesian Linguistics', repr. in *The Study of Language in Seventeenth Century England*.

⁶⁰⁵ A specimen of Chinese is given in Wilkins, *Essay Towards a Real Character* pp. 450-1. See also Salmon, *The Study of Language in Seventeenth Century England*, p. 118.

⁶⁰⁶ Sidonie Clauss, 'John Wilkins' Essay Toward a Real Character: Its Place in the Seventeenth-Century Episteme', *Journal of the History of Ideas*, 43 (1982), 531-553, p. 538.

⁶⁰⁷ John Wilkins, *Mercury; Or the Secret and Swift Messenger* (1641), passage repr. in Umberto Eco and Stefan Collini, *Interpretation and Overinterpretation*, (Cambridge: Cambridge University Press, 1992), p. 40. The story is of the Indian slave who stole his master's figs but was outwitted by the accompanying letter giving their number.

imitate unless they learn the rules of the language.⁶⁰⁸ The debates also have a religious element: it was believed to be necessary to learn the rules of a language in order to use it to convincingly explain complex and alien theological concepts: as noted above, Mainstone argues that understanding the structure of the language was necessary for the 'propagation of the Christian religion'. Furthermore, as Psalmanazaar's dialogues demonstrate,⁶⁰⁹ the capacity for foreign peoples to accept Christianity was often assessed based on their perceived level of rationality or freedom from superstition, determined based on analyses of their customs and language.⁶¹⁰ Therefore, the linguistic materials produced around the circle of Boyle make their argument for the East India Company to support proselytizing activities both by providing the means of composing religious tracts through elucidating the structure of languages and by demonstrating the 'reason' underlying the language, and hence psyche, of those to be converted.

Elucidating the rules of vernacular languages was also one way of demonstrating their validity alongside the 'classical' languages: a definition that had emerged to denote Latin and Greek in the early seventeenth century and was coming to be applied to Persian, Arabic, and Sanskrit by the end of the century.⁶¹¹ The Mainstone and Marshall grammars and Bowrey's *Dictionary* all link the Malay language to the perceived level of civilisation of its speakers and identify the Malay peninsula as the original home of both the language and the Malay 'race'. Drawing on a passage originally from Linschoten and cited by others including Ogilby,⁶¹² Mainstone writes that the people of Malacca were 'naturally more inclined to Trade and Commerce; blessed with better laws, milder

⁶⁰⁸ MS Ashmole 1808, Dedication.

⁶⁰⁹ *A Dialogue between a Japanese and a Formosan*, Preface.

⁶¹⁰ Surehka Davis, 'Circulation of European Knowledge about non-European Idolatry', paper presented at RSA, 6-8 April 2010 in reference to Jesuit studies of language and culture. Errington, *Linguistics in a Colonial World*, p. 28 'A grammar itself counted as direct evidence of a civilised condition and could be used to legitimise the work of conversion'.

⁶¹¹ Salmon, *The Study of Language in Seventeenth Century England* and Richard Steadman-Jones, *Colonialism and Grammatical Representation* (Oxford: Blackwell, 2007).

⁶¹² Ogilby, *Asia*, p. 134: 'Linscot tells us that many People of divers Nations which came to build the City, and settle in Malacka, made this peculiar language of all the other Indian tongues, consisting of the most pleasing words and neatest manner and way of speaking, which makes this Language to be the best and most eloquent of all *India* and also the most useful and easiest to learn'.

government and (consequently) more civilised than their adjacent Neighbours'. This, he claimed, was reflected in their language, which '(whither by vicinity of situation, intermixture of families, elegance of style, or peculiar assertion) is still in great request and use by the neighbouring Regions on the Northern and Western parts of Sumatra'. William Dampier makes a similar connection between trade, the Malay language and 'civilisation', describing the Muslim 'Indians' who spoke Malay as 'the trading and politer sort'⁶¹³ and Jean-Baptiste Tavernier referred to Malay as the language of 'cultured' people.⁶¹⁴ Marsden noted that the Malay-speaking people of the peninsula were likely to be immigrants, locating the origins of Malay in Sumatra.⁶¹⁵ Nevertheless, like his predecessors he argues for the spread of the Malay language on the grounds of the 'enterprising and commercial character of the people' and of the qualities of the language itself, being 'remarkably soft and easy of pronunciation, simple in the grammatical relation of its words, and in the construction of its sentences, plain and natural'.⁶¹⁶

Such assessments about the 'civility' of certain peoples or linguistic groups were fluid, often shifting along with allegiances of the East India Company. For example, in Bowrey's description of 'Janselone'⁶¹⁷ in his earlier travel narrative he shows less appreciation for the Malay civilisation: 'The Inhabitants Up in the Countrey are Naturall Syamers, for the most part a very Civil good humoured people; but downe att the Sea Ports most of the Inhabitants are Malayers, a very roguish Sullen ill natured people'.⁶¹⁸ Nevertheless, both the early arguments made about both the 'civility' of Malay speakers and the argument for the origin of the language in the 'Malay peninsula' persisted into the colonial period, when Malay speakers were granted recognition as the 'indigenous' people

⁶¹³ Dampier, *New Voyage*, in a section describing the native language of the 'painted prince' Joely he writes: 'And indeed all the Indians who spoke Malayan, who are the trading and politer sort, looked on these Meangians as a kind of barbarians; and upon any occasion of dislike would call them bobby, that is hogs; the greatest expression of contempt that can be, especially from the mouth of Malayans who are generally Mohammedans.'

⁶¹⁴ Errington, p. 135 (although Errington seems to have mistaken Tavernier's birth date for the date of this quote, which he takes from Werndly's 1736 work, p. xxxvii).

⁶¹⁵ Marsden, *A dictionary of the Malayan Language*, p. v.

⁶¹⁶ Marsden, *A dictionary of the Malayan Language*, p. ii.

⁶¹⁷ Later Hobson-Jobsoned to 'Junk Ceylon', this probably derives from the Malay name for Phuket; 'Ujung Salang'.

⁶¹⁸ Bowrey, *A geographical account*, 235-7.

of the peninsula at the expense of other groups such as the Orang Asli regarded as less 'civilised'.⁶¹⁹ The early assumptions about the common 'civilisation' of the 'Malay people' also led into later 'racial' definitions in colonial and post-colonial discourse.⁶²⁰

The other great debate that had raged since the first European encounters with native Americans in the fifteenth century was how America could have come to be peopled, given the Biblical three-fold division of mankind following the dispersal of the progeny of Noah. This had led to several attempts to demonstrate the similarities of the language or culture of the North Americans to other previously known peoples.⁶²¹ Bowrey's preface addresses this issue by arguing that since the Malay archipelago was the closest known landmass to South America, the study of the Malay language could reveal affinities with the tongues of the Americas and therefore unravel this great mystery.⁶²² Although this claim was of course erroneous, such investigations into the spread of languages and loan words foreground later attempts to organise languages into families and gauge their antiquity and origins. The idea of comparisons between languages is evident in the tables of languages and scripts and versions of the Lord's Prayer collected by Bowrey and Hyde.

While Bowrey, Marshall, and Mainstone all note the spread and variation of the Malay language, they correctly note that the use of the Arabic script was an innovation that had arrived with Islam, rather than assuming an original similarity with the Arabic language itself. Bowrey also notes the presence of loan words from India and Persia that would have been borrowed along with trade.⁶²³ In the early nineteenth century, Marsden drew on these arguments: indeed, his account of the spread of

⁶¹⁹ Alice H. Nah, '(Re)Mapping Indigenous 'Race'/Place in Postcolonial Peninsular Malaysia', *Geografiska Annaler. Series B, Human Geography*, 88 (2006), 285–297. As Nah notes, 'Orang Asli' was in fact a name bestowed to denote their indigenous status.

⁶²⁰ Nah, '(Re)Mapping Indigenous 'Race'/Place'.

⁶²¹ Joan-Pau Rubiés, 'Hugo Grotius' Dissertation on the Origin of the American Peoples and the Use of Comparative Methods', *Journal of the History of Ideas*, 52 (1991), 221–244. Errington, *Linguistics in a Colonial World*, p. 57 notes that Leibnitz had observed that comparisons between languages, 'the most ancient monuments of peoples', could provide clues to the common origins of peoples.

⁶²² Bowrey, *Dictionary*, Preface.

⁶²³ Bowrey, *Dictionary*, Preface. Marsden, *A dictionary of the Malayan Language*, p. xxiv notes that Heurnius had also mentioned loan words from India as well as Java in Malay.

Arabic loan words along with Islam is remarkably similar to that which was developed in Marshall's 'Address to the English Reader' more than a century earlier, although it also bears evidence to contemporary debates over the relative ages of Asian languages⁶²⁴ and with the difference that while Bowrey had assumed that the Malay language was previously unwritten, Marsden argued in favour of a forgotten script.⁶²⁵

The question of whether grammatical rules designed for Latin could be applied to languages like Malay with different linguistic features was necessarily addressed in the attempts to explain Malay. Bowrey writes simply, 'Almost all persons among us have had some knowledge of the Latin Grammar... The division of the parts of Speech, the Declining of Nouns and the forming of Verbs &c. are things which are so well riveted into their memories that they never forget them, and therefore they will naturally endeavour to Reduce any foreign language to these Rules... For this reason, I have as well as I could, reduced this Specimen of Grammar to the Rules following.'⁶²⁶ Bowrey's grammar section in fact only discusses nouns, adjectives, and verbs and does not deal directly with the problems of explaining Malay according to grammatical rules derived from Latin, except to note that nouns are not declined.⁶²⁷ Attempting to fit Malay grammar into the structures of foreign grammar might have been one reason for the incomprehensibility of Bowrey's sentences noted by Smith, which appears to have been written originally in English and translated 'backwards' into Malay.⁶²⁸

The Ashmole and Marshall manuscripts demonstrate the evolution of a more sophisticated way of

⁶²⁴ Marsden, *A dictionary of the Malayan Language*, Introduction. Marsden argues that the common use of the Malay language demonstrates its antiquity, an argument which relates to William Jones' claims for Sanskrit as the common ancestor of all South Asian languages.

⁶²⁵ Bowrey, *Dictionary*, Preface, and Marsden, *A Dictionary of the Malayan Language*, p. xxxvi (on the grounds of the scripts of Java and the Celebes 'all exhibiting traces of a Nagri origin').

⁶²⁶ Bowrey, *Dictionary*, Grammar section.

⁶²⁷ Bowrey, *Dictionary*, Grammar section. See also Kader, 'Some Aspects of Seventeenth-Century Malay'.

⁶²⁸ Bowrey, *Dictionary*, SOAS copy with annotations, EB70.10/11608. In addition to his comments, Smith has gone through most of the work crossing through Bowrey's example sentences. Marsden, *A dictionary of the Malayan Language*, p. xlii and Kader, 'Thomas Bowrey's Bilingual Dictionary' 111 also note that the sentences make little sense.

explaining Malay grammar that borrowed from but did not rely exclusively on the principles of Latin grammar. They divide the parts of speech into 'Nouns, Pronouns, Verbs, particles, Adverbs, Conjunctions, prepositions, & Interjections',⁶²⁹ a very similar division to that made by Marsden in the early nineteenth century.⁶³⁰ While these grammars also refer to the noun classes of Latin, they note the problems of matching them consistently to the grammatical rules of Malay. For instance, in attempting to define the ablative case, both Marshall and Mainstone refer to the use of the prepositions *derri* or *derri-pada*, giving the sense 'from', as the closest approximation to the ablative. In contrast, Marsden writes 'in the instance of *rumah*, a house, *deri pada rumah* signifies "from a house" but it would be without use or meaning to say that *deri pada* is the sign of the ablative case of that noun, for then every preposition should equally require an appropriate case'. Despite Marsden's more explicit rejection of the grammatical rules of Latin, the solution to the problem he presents is very similar to that given in Mainstone's grammar. This is to highlight the central role of the particles in determining the part of speech to which words belong.⁶³¹

It is not clear whether Marsden himself saw the Ashmole manuscript. The copy annotated by Hindley appears to date from after the publication of Marsden's own dictionary, as it contains several notes drawn from that work. Nevertheless, the copy shows that early nineteenth-century Orientalists remained aware of Mainstone's work. Marsden also admits the debt his grammar owes to that of the Dutch scholar Werndly.⁶³² Werndly was in turn aware of Hyde's work,⁶³³ demonstrating the continuing competition and collaboration between Dutch and English scholars of Malay.

⁶²⁹ MS Ashmole 1808, fol. 26; MS Marshall OR 70, fol. 11; MS Marshall OR 77, fol. 11.

⁶³⁰ Marsden's divisions are: 'Nouns; adjectives; numerals; pronouns – personal and demonstrative, including the article; Verbs or affirmatives of being, acting, or suffering; Adverbs or modals; Prepositions or directives; Conjunctions or connectives; Interjections or exclamations, Inseparable Particles or formatives', *A dictionary of the Malayan Language*, pp. 28-9.

⁶³¹ MS Asmole 1808, fol. 22-26 and Marsden, *A dictionary of the Malayan Language*, p. 28.

⁶³² Marsden, *A dictionary of the Malayan Language*, p. xlii, referring to George Hendrik Werndly, *Maleische Spraakkunst* (Amsterdam: 1736).

⁶³³ Werndly, *Maleische Spraakkunst*, p. xii in relation to Hyde's work on ancient Persian and theories on the origins of the name 'Java'.

Legacies: the later history of seventeenth century Malay materials

Despite its deficiencies, Bowrey's *Dictionary* was referred back to in the next wave of British interest in Malay, which again was closely linked to its colonial aims in the archipelago. Stamford Raffles, the founder of Singapore, may have originally learnt his Malay from the work, which remains in his collection in the National Library of Singapore.⁶³⁴ The next Malay dictionary published in England,⁶³⁵ John Howison's Malay grammar published in 1800, was merely a copy of Bowrey's work with an attempt at Malayan orthography in Arabic script.⁶³⁶ Unfortunately, as Marsden noted, the characters given are simply Persian approximations to the sound of the letters produced by Bowrey and bear no relation to the Malayan alphabet. Marsden's horrified reaction demonstrates the continued alliance between scholars and the EIC. He writes that '[t]he injury done by a work of this description to the literary reputation of the country among foreign oriental scholars need not be insisted upon; but that which may be sustained by the servants of the East India Company and others, into whose hands it may have been put for instruction is of much more importance'.⁶³⁷

The history of Malay linguistics thus demonstrates more continuity between the seventeenth and nineteenth century than allowed for by Cohn, who claims that the study of Asian languages by the British began only in the mid-eighteenth century. The incorporation of materials from Dutch linguistic works by English linguists from Hyde to Marsden and the East India Company's support for the missionaries at Tranquebar also challenges Cohn's assertion that the English were unaware

⁶³⁴ R. Mee, 'An Old Malay Dictionary', *Journal of the Malayan Branch, Royal Asiatic Society*, VII (1929), pp. 316-326. A digitised copy of Raffles' version of the *Dictionary* is accessible from <http://sgebooks.nl.sg/details/020001493.html> (accessed 2 May 2010).

⁶³⁵ A grammar of the Malay language was published in Calcutta entitled *Grammar rules for the attainment of the Malayo language* (Calcutta, 1798). Unfortunately I have not been able to access a copy of this work. It is interesting to note that a copy of the *Jang Ampat Evangelia* is currently in the rare books department of the National Library in Kolkata, although it is not clear when the copy was acquired.

⁶³⁶ Anonymous [John Howison], *A grammar of the Malay tongue, as spoken in the peninsula of Malacca, the islands of Sumatra, Java, Borneo, Pulo Pinang, &c. &c. Compiled from Bowrey's dictionary, and other authentic documents, manuscript and printed* (London, 1800); John Howison, *A Dictionary of the Malay Tongue ... to which is prefixed a Grammar of the Malay Tongue*, 2 parts (London: S. Rousseau, 1801-1804).

⁶³⁷ William Marsden, *A dictionary of the Malayan Language to which is Prefixed a Grammar with an Introduction and Praxis* (London: Cox and Bayliss, 1812).

of the earlier linguistic experiments of other European powers.⁶³⁸ A similar process of compilation of materials gathered over a long period by missionaries and traders of various nationalities is evident in some of manuscript materials relating to the study of other Asian languages. For example, a Tamil-Latin Dictionary presented to the Company in 1821 by William Duffin, Madras Medical Service 1767-97, is said to have been copied from an earlier manuscript by the Jesuit missionary Father Costanzo Giuseppe Beschi (1680-1747) and passed on to Duffin by the Danish missionary Reverend Christian Friedrich Schwartz (1726-98).⁶³⁹ Another instance is a Telugu grammar embodying the work of successive Jesuit missionaries and completed c1730 that was annotated by a Madras civil servant, Charles Philip Brown (1798-1884).⁶⁴⁰ Attention to such manuscript materials might reveal both more diversity in languages themselves and more continuity within the study of linguistics than can be assumed from an exclusive focus on published materials.

The reliance of eighteenth and nineteenth century works on earlier sources in fact seems somewhat odd when their authors would have had access to the knowledge of contemporary native speakers. One of the strangest cases of this is that the invented language of the hoaxer Psalmanazaar continued to be taken seriously by colonial linguists in the eighteenth and nineteenth centuries despite his own admission of its falsity.⁶⁴¹ Perhaps the preference for following the rule-based learning methods of predecessors when learning or explaining languages reflects some concerns about the methods of immersion in a foreign culture that the Company advocated in some of its earlier commands. While having servants with the ability to communicate in Asian languages was an advantage to the Company and ignorance of them was seen as dangerous,⁶⁴² a too-great immersion in the local way of thinking was regarded as potentially subversive. For example, one

⁶³⁸ Cohn, 'The power of language and the language of power'.

⁶³⁹ BL MS Eur D 104.

⁶⁴⁰ BL MS Eur F70.

⁶⁴¹ Terrien de Lacouperie and E. Colborne Baber, 'Formosa Notes on MSS. Races and Languages', *Journal of the Royal Asiatic Society of Great Britain and Ireland*, new series, 19 (1887), 413-494.

⁶⁴² For the arguments made for the dangers of the inability to communicate fluently in Asian languages, Steadman-Jones, *Colonialism and Grammatical Representation*; Cohn, 'The power of language and the language of power'.

complaint about a factor in the Sumatra settlement of Bencoulen made by his fellow agents was that he 'speaks the [Malay] language, [and] keeps a house for his women'.⁶⁴³ The gradual institutionalisation of language learning in the later Company period may partly reflect their concern to regulate the ways in which their servants learned languages, averting the perceived dangers of 'going native'.⁶⁴⁴

Conclusions

Examining Bowrey's *Dictionary* and the manuscript material on Malay gives some idea of how early bilingual dictionaries and grammars were composed: by amassing and comparing information from a number of different informants, published works, manuscript wordlists, and even physical objects over several years. The correspondence of Hyde and Bowrey demonstrates how these materials were acquired through networks of informants in the East India Company's settlements, compiled with the assistance of scholars like Hyde and re-distributed to informants abroad for corrections and additions. The method of collecting, comparing, listing, and classifying words and phrases in the early modern period thus resembled and overlapped with the other branches of 'natural philosophy' in this period and was produced and circulated among the same circles of scholars and merchants.

As I have argued, the approach of collecting words from a range of sources meant first that the 'Malay' represented in Bowrey's *Dictionary* cannot be said – at least not without further attention to the different manuscripts on which the published sources are based – to represent one time or place. Rather it is drawn instead from a range of informants of different social classes – from the Bantam Ambassadors to the sailors and sexual partners encountered by EIC merchants – amassed from lists gathered over a long period and compiled by the cooperation of merchants and scholars, also with

⁶⁴³ IOR G/35/7, York Fort General, 07 October 1705. For the 'house of women', see Chapter 5.

⁶⁴⁴ Steadman-Jones, *Colonialism and Grammatical Representation*, p. 63 notes that Fort William College was in part a measure to counter the spread of 'seditious' ideas among members of the Company.

different levels of education and prejudices. Rather than producing an idea of 'high' and 'low' varieties of Malay, this diversity appears to have been smoothed out in the *Dictionary* and related material by the rather arbitrary selection of certain words and the deliberate homogenisation or 'polishing' of the language.

Second, it meant that the works were open to misinformation, as in the case of the word 'orang-utan' or the fake 'Formosan' language. The continuation of both of the methods of collecting information and the errors that they resulted in into the linguistic work of the eighteenth and early nineteenth century is evidence of a slow process of evolution from early methods of gathering linguistic information rather than a 'scientific' method with its roots in the late eighteenth century. Conversely, although the influence of the ideas of Bacon and Descartes are evident in the claims for language as expressive of natural reason and the assumption that grammars could be formulated on the same principles to explain any language, the comparisons between different languages made by Hyde and Bowrey reveal not a narrow concern with evaluating the closeness of language to an ideal form, but also a genuine interest in how language could be used to trace the origins of peoples, religions and ideas, as is revealed in the discussion of loan words from Arabic and Indian languages that emerges from several of the linguistic works of the period.⁶⁴⁵ The grammars also display a serious engagement with the problems of defining and teaching a language that was difficult to reduce to the grammatical rules designed for Latin and Greek. As I have argued, early investigations into non-European languages deserve more attention in studies of seventeenth century innovations in linguistic practise.⁶⁴⁶

⁶⁴⁵ Steadman-Jones, *Colonialism and Grammatical Representation*, p. 98, dates comparative philology to the work of Schlegel in 1808 after the decline of 'language evaluation'. Nevertheless, as Chomsky, *Cartesian Linguistics*, p. 19, points out, there has never been any real replacement for the Cartesian idea of language as the distinguishing feature of mankind, reflective of some form of innate reason. Although see Errington, p. 50-53 on Herder.

⁶⁴⁶ Georg Bossong, "The influence of missionary descriptions of Far Eastern languages on Western linguistic thought. The case of Cristoforo Borri, S.J., and Tommaso Campanella" in *Missionary Linguistics III: Morphology and Syntax* ed. by Otto Zwartjes, Gregory James & Emilio Ridruejo, Amsterdam studies in the theory and history of linguistic science series III; studies in the history of linguistics, vol. 111 (Amsterdam: John Benjamins, 2007) 123–143 makes a similar point.

Like botany, ethnography, or cartography, the study of languages had practical applications in the East India Company's quest for trading partners and converts. Wilkins makes this connection explicit in his dedication to the Royal Society. The universal language, he says, will be essential for 'facilitating mutual commerce among the several nations of the World and improving of all Natural knowledge' and 'very much conduce to the spreading of the knowledge of Religion'.⁶⁴⁷ The involvement of members of the Royal Society that began with their interest in world languages continued into the eighteenth century along with the rather haphazard accumulation of wordlists and manuscripts. For example, Joseph Banks made a collection of Malay poetry which became part of Marsden's collection along with two Malay vocabularies and various works in Malay.⁶⁴⁸ And as is well known, the Asiatic Society, begun by Banks' associate, William Jones, was modelled on the Royal Society and it continued the connections established between trade and the study of language begun during the seventeenth century rather than initiating them.

In this chapter, I have challenged to some extent the assumptions in most studies of colonialism and language that the East India Company was uninterested in language learning or teaching in the early period; that few of the Company's agents knew any Indian languages before the mid eighteenth century; and that there was no connection between the linguistic studies undertaken by other Europeans in India and the later work of institutions like the Asiatic Society and Fort William College. Although it is clear that the resources available to the Company to invest in linguistic projects did increase after the territorial expansion into India, the Company was aware of the need for servants with linguistic skills from the earliest voyages to Asia. It was providing incentives and teachers for its servants to learn Asian languages by the 1670s and had achieved some success by the end of the century. Agents of the Company also learned languages, collected and translated

⁶⁴⁷ Wilkins, *Essay towards a Real Character*.

⁶⁴⁸ Previously at SOAS under the shelfmark MS 12139 but unfortunately now lost. The Malay vocabularies according to the description in the card catalogue are by W. Rogers and W. Butler Hunnings.

manuscripts, and produced wordlists and manuals of their own accord and at the request of Asian rulers. Some of these materials reached scholars in England through networks like those of Bowrey and Hyde.

Demonstrating a longer history of the study of Asian languages in England and the involvement of the Company in language teaching and learning than has previously been assumed to exist does not undermine the fundamental argument for the connections between the mastery of languages, along with other forms of knowledge, and the control of people and territory that has been made by other authors. The conclusion is rather that, as revealed by the imagined exchanges we find in Bowrey's phrases and dialogues, the aims of the East India Company included settlement and colonialism in the period when they have traditionally been portrayed as 'mere traders'. The project of colonial settlement in the early period was closely connected with the aims of attracting converts to Christianity and teaching and encouraging the use of the English language, as revealed by Boyle's 1677 letter and Mainstone's comments in his dedication to Sir Josiah Child as well as the translations of works of scripture produced in the period. In their attempts to encourage conversion, the EIC were competing with the other European companies and missionaries, notably the Dutch and Portuguese as well as with Muslim traders. The English appropriation of Dutch materials on Malay should be seen as part of the competition between the two countries for mastery of the Malay archipelago. The East India Company were also aware of the subversive potential of unregulated language learning as demonstrated by the complaints about factors who had become too immersed in the local culture for their liking, and this is perhaps one of the reasons, along with the aim of reducing the influence of Asian go-betweens and the need for increased administration, for the increasing interest in sponsoring and regulating language learning in the later period.

CHAPTER 4

Using the *Historical Relation of Ceylon*: Bioprospecting and Transplantation

Introduction

In mid-1680, Captain Robert Knox (1641-1720) arrived in London after almost twenty years spent in Ceylon (Sri Lanka), an experience which he began to record during his long voyage home as a passenger.⁶⁴⁹ The first person to greet the bearded and be-whiskered traveller was a ‘drugster’; a peddler of the exotic remedies which were growing ever more popular in late seventeenth century London,⁶⁵⁰ He had come onboard the ship as soon as it docked, eager to buy the produce and the recipes of those aboard. By chance, the drugster recognised Knox and reunited him with his brother-in-law and sister. Knox would soon meet several other people interested in the knowledge he had brought back from Ceylon: after being called into the East India Company’s Court of Directors to give an account of his travels,⁶⁵¹ he was taken aside by Jeremy Sambrooke, a member of the Royal Society.⁶⁵² Through either Sambrooke or his own brother James,⁶⁵³ Knox was introduced to the polymath Robert Hooke.

By the following year these new contacts and the contribution of his cousin, the minister and

⁶⁴⁹ Robert Knox, *An Historical Relation of the Island Ceylon* (London: Richard Chiswell, 1681), Chap. IX-XIII. The account Knox and his fellow captive Steven Rutland gave to the Dutch in Batavia on his arrival with Ryckloff van Goens Junior is translated in F. H. de Vos, ‘Extracts relating to Ceylon from the Dag-Register, Batavia, AD. 1678-1680’, *Journal of the Ceylon Branch of the Royal Asiatic Society*, 16 (1918), 181-198.

⁶⁵⁰ Bodleian MS Rawl Q. c. 15, fol. 1 (Paulusz Vol II, p. 527). The autobiography was first printed in *An Historical Relation of Ceylon together With somewhat concerning Severall Remarkable passages of my life that hath hapned since my Deliverance out of my captivity* ed. by J. Ryan (Glasgow: James MacLehose and Sons, 1911) and reprinted in *An Historical Relation of Ceylon, Revised, Enlarged & Brought to the verge of Publication as The Second Edition*, ed. by J.H.O. Paulusz, 2 vols, (Dehiwala: Tisara Prakasakayo, 1989). Hereafter referred to as *Autobiography* with folio numbers and page numbers of Paulusz vol. 2 in brackets. Knox says that the drugster recognised him as someone who had been abroad for a long time from his old-fashioned beard and whiskers.

⁶⁵¹ On 15 September 1680 Knox and Rutland were directed to attend the Committee for Shipping ‘to communicate what they had observed of affaires in those parts’ (Yule, *Diary of William Hedges*, ii, p. ccclii).

⁶⁵² *Autobiography* 3 (528).

⁶⁵³ Hooke was known to Knox’s brother James, from whom he learnt of the escape of Robert Knox. Hooke’s diary entry on Sept 12 1680 reads ‘Knox his brother escaped out of Ceylon after 22 years detainer’. Robinson and Adams eds., *The Diary of Robert Hooke*, p. 454.

historian John Strype, had helped him to compose his notes into *An Historical Relation of the Island of Ceylon*. The book was printed by the Royal Society's printer, Richard Chiswell in August 1681, financed by subscribers from the East India Company. It became hugely popular during the author's lifetime and has remained a standard source for the island's history ever since.

In Chapter 1, I looked at the composition of Baron's *Description of Tonqueen* in the context of the author's relationship with both the East India Company and members of the Royal Society as well as his connections with the society he describes. In Chapter 3, I discussed in detail the process of compiling and arranging the *Dictionary English and Malayo, Malayo and English* using a number of informants and different types of sources. This chapter examines the final stages in the production and use of a 'manual for colonialism'. Here, after briefly discussing the arrangement of Knox's text with the assistance of scholars in London, I will examine its translation into other European languages, often being added to and re-orientated in the process. I will then demonstrate that the text circulated in the possession of travellers to the East Indies, including Knox himself, and show that the process of comparing the written account with experiences led to annotations and borrowings that served as the basis for further writings. Using Company records and Knox's own unpublished works, I will reveal how the *Relation* was used as the basis for bio-prospecting for naturally occurring drugs and food sources and in efforts at agricultural transplantation spanning the Indian and Atlantic oceans.

Directing travel

Recent scholarship has examined the connections between travel narratives, geographical accounts, or 'natural histories' and European expansion and the contribution of both to emerging forms of scholarship.⁶⁵⁴ The methodising of travel through the interactions of scholars and merchants, sailors,

⁶⁵⁴ Since Said, *Orientalism* travel accounts have been discussed in a number of contexts. While some have followed his interpretation that European travel accounts tend to perpetuate imperialistic images of the 'other' for example Ronald Inden, 'Orientalist constructions of India', *Modern Asian Studies* (1986), 20, 401-46 and Kate Telscher,

local informants, colonial and Creole officials has been traced from the Iberian world into the writings of the later Renaissance of Northern Europe.⁶⁵⁵ Following on from the writings of men like Bacon and Hartlib, the Royal Society from its inception in the early 1660's was involved in producing instructions for travellers and guidelines for the authors and compilers of natural histories.⁶⁵⁶ The East India Company's own use of writing, including travel narratives and directed enquiries, as a source of information and thus power has also begun to be explored.⁶⁵⁷ The production of Knox's *Historical Relation* should be seen as part of the ongoing collaboration between the East India Company and the Royal Society to lay claim to the wealth promised by the knowledge of the East by producing travel accounts making use of such guidelines.

Bacon's essay 'On Travel' advises that the traveller should carry with him 'some card or book describing the country where he travelleth; which will be a good key to his inquiry'.⁶⁵⁸ This highlights a point which seems rather obvious but that has been somewhat overlooked in many of the recent discussions of travel literature: that the accounts were not intended primarily for the entertainment and information of European elites, but were designed to be carried on journeys, with the traveller using them as starting points for his own impressions and scribbling comparisons or

India Inscribed: European and British Writing (Delhi: Oxford University Press, 1995, others including Gerald MacLean, *The Rise of Oriental Travel: English Visitors to the Ottoman Empire, 1580-1720* (Basingstoke, Palgrave, 2004); Rubiés, *Travel and Ethnography in the Renaissance*; J. Carrillo, 'From Mt Ventoux to Mt Masaya: the Rise and Fall of Subjectivity in Early Modern Travel Narratives' in Jas Elsner and Joan-Pau Rubiés, *Voyages and Visions: Towards a Cultural History of Travel* (London: Reaktion Books, 1999), 57-73) have sought evidence for more diversity in European writings about Asia than claimed by Said. Finally, some authors including Muzaffar Alam and Sanjay Subrahmanyam, *Indo-Persian Travels in the Age of Discoveries*, (Cambridge: Cambridge University Press, 2007) have challenged the genre by extending the frame of reference outside Europe. Works that discuss the practical use of travel narratives in the collection of botanical information and species include Raj, *Circulation and the Construction of Knowledge in South Asia and Europe*; Cook, *Matters of Exchange*; Chandra Mukerji 'Dominion, Demonstration and Domination: Religious Doctrine, Territorial Politics and French Plant Collection' in Schiebinger and Swan *Colonial Botany*.

⁶⁵⁵ Cañizares-Esguerra, *Nature, Empire, and Nation*; Joan-Pau Rubiés. 'Instructions for Travellers: Teaching the Eye to See', *History and Anthropology*, 9, 2-3, 1996, 139-90. See also J. Stagl, *A history of curiosity: the theory of travel 1500-1800*, Chur, Harwood Academic Publishers, 1995 Ch 1, esp. 78-81, for the sixteenth century methodizing of travel narratives within Europe; Peter C Mancall ed. *Bringing the world to early modern Europe: travel accounts and their audiences* (Leiden: Brill, 2007).

⁶⁵⁶ Michael Hunter, 'Robert Boyle and the early Royal Society: a reciprocal exchange in the making of Baconian science', *British Journal for the History of Science*, 40 (2007), 1-24; Carey, 'Compiling Nature's History'; Cook and Lux. 'Closed circles or open networks'.

⁶⁵⁷ Bayly, *Empire and Information*; Ogborn, *Indian Ink*.

⁶⁵⁸ F. Bacon 'On Travel', in *The Essays or Counsel, Civill and Moral (1625)*, ed. by M. Kiernan (Oxford: Clarendon Press, 1985), pp. 41-2.

corrections in the margins. Knox's work provides an especially interesting example of this process of comparison and annotation because he took an interleaved copy of his own work with him on his later journeys, using the extra pages, as well as unpublished journals, to draw comparisons between his knowledge of Ceylon and the observations he made on his later travels.

Robert Knox has previously been studied almost exclusively in relation to his work on Ceylon, and while it is undeniable that the period of his captivity would have been formative of his ideas about the world at large, the scope of his travel was far wider. Here, I will explore how the comparisons Knox made between his own description of Ceylon and his observations on later voyages were used by the East India Company in its search for new settlements capable of producing coveted Asian crops for food and medicine. The process of observation was guided at every stage by Knox's ongoing relationship with the Royal Society.

Robert Knox's Career

Robert Knox had been captured in Ceylon along with his father and other members of crew of the East India Company ship *Anne* in 1660 and remained in the central kingdom of Kandy⁶⁵⁹ for nineteen years, becoming fluent in Sinhalese and well acquainted with local ways of life through his employments as farmer, moneylender, and pedlar. Despite never entering the employment of the King, Knox was evidently well informed about events at the court of Rajasingha II (r.1634-1686). Knox says that he began to compose the *Relation* on his return journey to England in 1680, after his escape via the Dutch fort at Arippu.⁶⁶⁰

⁶⁵⁹ Kandy emerged as an independent kingdom in the late fifteenth century and remained under indigenous rule until finally falling to the British in 1815. See Kingsley M. de Silva, *History of Sri Lanka*, revised ed. (London, Vijitha Yapa Publications, 2005) and Chandra Wickremesekera, *Kandy at War: Indigenous Military Resistance to European Expansion in Sri Lanka 1594-1818* (Colombo: Vijitha Yapa Publications, 2004).

⁶⁶⁰ Knox's time in Kandy and the political background of the period, are discussed in more detail by Paulusz, op. cit. Vol. 1 and by M.C.M. Iqbal, I. Raheem and K. Tennakone, 'The Royal Society, Robert Hooke and a captive from Ceylon: fascinating facets from the 17th century', *Notes and Records of the Royal Society of London* (forthcoming).

The *Relation* contains a detailed description of the geography, politics, wildlife, agriculture, religion, languages, laws, learning, medicine, and domestic lives of the inhabitants of Kandy as well as an account of the author's own capture and way of life and the circumstances of other Europeans in the kingdom. It quickly became very popular and was soon translated into German, Dutch, and French.⁶⁶¹ John Locke drew on the work in his *Second Treatise of Government* (c.1689).⁶⁶² The *Relation* is also said to have provided one inspiration for Daniel Defoe's heroes in *Robinson Crusoe* (1719) and *Captain Singleton* (1720). Along with the Dutchman Philip Baldaeus' description of the mainly Tamil-speaking North of the island, published in 1672,⁶⁶³ and the Portuguese Captain João Ribeiro's description, which also focuses on the mainly Sinhalese-speaking part of the island,⁶⁶⁴ Knox's account continues to form the basis for accounts of the island in the mid seventeenth century.⁶⁶⁵ The work has also been studied for its literary style,⁶⁶⁶ its description of the caste system and religion of Ceylon,⁶⁶⁷ the Sinhalese vocabulary that it incorporates,⁶⁶⁸ and, most recently, the natural history it contains.⁶⁶⁹ Sarojini Jayawickrama's study provides a much-needed re-reading of

⁶⁶¹ The French versions were published by Paul Marret in Paris (1684) and Amsterdam (1693) and the German text appeared in Leipzig in 1689. The Dutch version, Simon de Vries trans, *t'Eyland Ceylon in syn binnenste, of 't koningrijck Candy: geopent en nauwkeuriger dan oyt te vooren ontdeckt* (Utrecht: by Wilhelm Broedelet, 1692), was based on the German version. See *Bibliothèque Universelle et Historique*, Amsterdam, 1692, 219-244, for a review of the Dutch edition. Sumana D. Saparamadu, 'Introduction' to *An Historical Relation of Ceylon*, *Ceylon Historical Journal* 5 (1958), vii-lv notes that the illustrations in all of these accounts differ being based on a combination of various illustrations in the original and the artist's imagination.

⁶⁶² Locke refers to the 'late relation of Ceylon' in his discussion of the effects of absolute monarchy on civil society (Locke's *Second Treatise of Government*, 7:92). He purchased a copy of Knox's *Relation*, soon after its publication in August 1681. (P. Laslett. 'The English Revolution and Locke's 'Two Treatises of Government' *Cambridge Historical Journal*, 12 (1956), 48-49.

⁶⁶³ Philippus Baldaeus, *Beschrijving der Oost-Indische Kusten Malabar en Coromandel...[&] Ceylon* (Amsterdam: Johannes Janssonius van Waesberge, 1672).

⁶⁶⁴ João Ribeiro, *Fatalidade Historica da Ilha de Ceilão* was not published in Portuguese until 1836, but according to Županov, 'Goan Brahmins in the Land of Promise', n. 4., it was composed some time after 1680, the preface being dated in Lisbon 1685. The French edition of 1701 is discussed below. I used João de Ribeiro, *The Historical Tragedy of the Island of Ceilao* trans. by P.E. Pieris (Columbo, 1930).

⁶⁶⁵ Saparamadu, 'Introduction'.

⁶⁶⁶ H. White, 'Knox in its Literary Aspect', *Ceylon Branch of the Royal Asiatic Society*, (1893), 13, 23-35; Brian Yothers, 'Global Captivities: Robert Knox's An Historical Relation of Ceylon and the New England Captivity Narrative Tradition', *Journeys* 8, (2007), 1-2.

⁶⁶⁷ C. R. Boxer, 'Ceylon through Puritan Eyes: Robert Knox in the Kingdom of Kandy 1660-1679', *History Today*, 4 (1954), 660-7.

⁶⁶⁸ Donald W. Ferguson, 'Knox's Sinhalese Vocabulary', *Ceylon Branch of the Royal Asiatic Society*, 14 (1896), 155-200. Ferguson also includes the Sinhalese words listed by Hooke in BL MS Sloane 1039. Richard Boyle, *Knox's Words. A study of the words of Sri Lankan origin or association first used in English literature by Robert Knox and recorded in the Oxford English Dictionary* (Colombo: Visidunu Prakashakayo, 2004).

⁶⁶⁹ Iqbal, Raheem and Tennakone, 'Fascinating facets'.

Knox's text within both the context of the East India Company's attempts to define and conquer the 'others' presented in the text and the social practises, customs, institutions, and representational practises of the Kandyan kingdom.⁶⁷⁰

Knox also left several other manuscripts, which, added to the records of the East India Company and the Royal Society, allow a fairly comprehensive picture of his life after leaving Ceylon to be pieced together.⁶⁷¹ Those found so far are his autobiography, the interleaved copy of the *Relation* containing significant additions to the original manuscript and intended for publication as a second edition,⁶⁷² several letters to his cousin John Strype,⁶⁷³ and one to Lady Worcester, daughter of the East India Company Governor Sir Josiah Child,⁶⁷⁴ a truncated account of his voyage to Tonqueen in 1681,⁶⁷⁵ and his will.⁶⁷⁶ References to Knox appear in both the Journal Books and Council Books of the Royal Society and in the Court Books, Letter Books, Original Correspondence, and Factory Records of the East India Company as well as in the diary of Robert Hooke.⁶⁷⁷

In January 1681, Hooke recorded the first of several meetings with Knox, who was accompanied this time by his cousin James Bonnell.⁶⁷⁸ Around the same time, Hooke showed a leaf of the talipat

⁶⁷⁰ Sarojini Jayawickrama, *Writing that conquers: re-reading Knox's an historical relation of the island Ceylon* (Colombo: Social Scientists' Association, 2004).

⁶⁷¹ The most comprehensive attempt was made by Donald W. Ferguson, *Captain Robert Knox... Contributions towards a biography* (Columbo and Croyden, 1896-7), before the discovery of Knox's autobiography or the interleaved copy of the *Relation*. See also H.A.I. Goonetilleke, 'Robert Knox in the Kandyan Kingdom, 1660-1679. A Bio-Bibliographical Commentary', *The Sri Lankan Journal of the Humanities*, 1 (1975), 81-151; I. B. Watson, 'Knox, Robert (1641-1720)', *Oxford Dictionary of National Biography*.

⁶⁷² According to a letter to his cousin Strype, the interleaved book was given to Knox by Richard Chiswell before the first voyage he made after returning from Ceylon and later returned to him for a final check before its intended publication as a second edition (Ferguson, *Captain Robert Knox*, p. 53). The interleaved version with its marginal notes is kept in the British Museum's Centre for Anthropology (M10836) and was published in Paulusz ed., *An Historical Relation*. Hereafter referred to as *Relation* (interleaved) with folio numbers and the page numbers of Paulusz vol. 2 in brackets.

⁶⁷³ Cambridge University Library MSS Add. 1 and Add. 9.

⁶⁷⁴ BL MS Sloane. 4067, fol. 6.

⁶⁷⁵ BL MS Lansdowne 1197, fols 12-13v.

⁶⁷⁶ Published in Ryan ed., *An Historical Relation* and Ferguson, *Captain Robert Knox*, p. 55. Dated 30 November 1711.

⁶⁷⁷ Felicity Henderson, 'Unpublished material from the memorandum book of Robert Hooke, Guildhall Library, MS 1758' *Notes and Records of the Royal Society of London* 61 (2007), 129-175 and in BL MS Sloane 4024.

⁶⁷⁸ Henderson, 'Unpublished material from the memorandum book of Robert Hooke', 144.

palm that Knox had brought back from Ceylon to the Royal Society.⁶⁷⁹ In August the same year, Hooke notes that he had given Knox ‘queries for the Indies’.⁶⁸⁰ At around the same time, Knox was presented with the interleaved copy of the *Relation*.⁶⁸¹ Knox carried these documents with him when he departed the following month on the *Tonqueen Merchant* to Tonkin (Vietnam) via the Cape Verde archipelago off West Africa,⁶⁸² then Bantam and Batavia, and returning via Batavia in early 1682⁶⁸³. In November 1683, the Council voted to give Knox a present in return for a long list of items that he had given the Society’s repository.⁶⁸⁴ As well as collecting these items during his second voyage, Knox also made and recorded observations relating to difference in tide times in the northern and southern hemispheres.⁶⁸⁵

On 22 September 1683, Robert Hooke provided Knox with ‘a picture box, an azimuth perspective [and] a longitude clock’ to make further observations on the Royal Society’s behalf.⁶⁸⁶ A few months later, Knox sailed in the *Tonquin Merchant*, which had since been lengthened, to Madagascar, where he acquired a cargo of slaves for St Helena. He was then intended to go to Timor to procure wood.⁶⁸⁷ However, in May 1685 while at St Helena, Knox’s crew seized the boat and returned with it to England, Knox following as a passenger and suing some of the deserters. In March 1686, Knox was commissioned to take part in the East India Company’s war against the Mughal Emperor Aurangzeb in Bengal.⁶⁸⁸ He seems to have then traded independently on the

⁶⁷⁹ ‘Talipat’ is from the Sinhalese word, Talapata. The botanical name for the plant is *Corypha umbraculifera*. Described and depicted in Knox, *Relation*, 15. See also T. Birch, *The History of the Royal Society*, 4 vols, London, 1756-7, iv, 64 (meeting of 12 January 1681). Hooke mentions the leaf again in his diary of 1682 Henderson, op. Cit., 153 (18 May 1682), and *Relation* (interleaved) Part II, Ch. 5 (Paulusz, 166). The talipat leaf was again produced in a Royal Society meeting in 1694: *Royal Society Journal Book* (hereafter JB), x, 6 June 1694.

⁶⁸⁰ Knox, *Relation*, p. 150, Tuesday 16 August, 1681.

⁶⁸¹ Paulusz, *An Historical Relation*, ii, p. xv.

⁶⁸² BL MS Lansdowne 1197.

⁶⁸³ *Autobiography*, 4-6 (530-533).

⁶⁸⁴ Royal Society, *Minutes of Council*, ii, 24 November 1683 The objects were presented on 3 November 1683 and included a plough, pictures and medicinal herbs (Birch, *The History of the Royal Society*, iv, 226).

⁶⁸⁵ 23 April 1684, c.f. Ferguson, *Captain Robert Knox*. Hooke refers to it being in the hands of the Earl of Clarendon. The journal has not yet been identified.

⁶⁸⁶ BL MS Sloane, 1039 fol. 156.

⁶⁸⁷ *Autobiography*, 8-24 (535-552) BL IOR, E/3/90, fols. 170-182-3. St Helena Archives (hereafter SHA) Consultation Books (hereafter CB), ii, fols. 164-5, Knox recorded at a Council Meeting of 7 April 1685.

⁶⁸⁸ *Autobiography*, 31-2 (559-561) and BL IOR E/3/91, fols. 47r-48 (or 96-97), 20 March 1685/6.

Malabar coast and probably returned to Ceylon before going via the Cape and St Helena to Barbados in 1688⁶⁸⁹ where he repaired his ship before returning to England.

During 1690, Knox is recorded in Hooke's diary as presenting him with various types of exotic plants and seeds, including cannabis and wood from the Mascarene islands of Mauritius and Rodrigues ('Diego Rois').⁶⁹⁰ In a Cutlerian lecture, Hooke also noted that Knox had agreed that on his next voyage, he had been equipped with a pendulum watch and would perform some of the ongoing series of experiments which the Royal Society commissioned with the aim of finding better ways to determine latitude and, ultimately, the true shape of the earth.⁶⁹¹ In January 1691, bearing a commission to fight any French ships he encountered, Knox returned via Tenerife to Madagascar where he remained until September to procure slaves for Bencoulen (Bengkulu, on the West Coast of Sumatra).⁶⁹² After arriving from Bencoulen to Fort St George (Madras, now Chennai) via Tranquebar, he was swiftly dispatched to Bengal to trade in cloth, reaching Calcutta (now Kolkata) and staying there until February 1693. After leaving, he returned to St Helena and then to Barbados, losing several men to illness,⁶⁹³ before returning to England where he arrived in December 1693.⁶⁹⁴ Although there are no records of Knox carrying out any specific instructions on this voyage, his discussions of natural history with Hooke apparently continued after his return; he is mentioned as

⁶⁸⁹ *Autobiography*, 32 (561). There is little information about either journey to Barbados. Presumably Knox was trading in slaves in this voyage. He claims in fol. 48 that the second voyage was 'by order'. Paulusz i, 425-6 transcribes a section from the Dutch records which note his arrival on 3 October 1688, an account he had given them of chasing an English pirate ship to Mascarenhas (Bourbon, Reunion Island) two years previously, and his departure on 13 October. SHA CB vol. 3 fol. 55 (69) notes that Knox left St Helena on 31 October 1688. A later passage mentions that Knox left behind five Portuguese men, who according to a letter to Strype dated 1 July 1689 (c.f. Ferguson, *Captain Robert Knox*, p. 42) he had picked up from Mascharinas (Reunion) where they had been shipwrecked. A letter from Josiah Child to Governor Blackmore of St Helena dated 20 March 1689 says that he believes Knox is lost (c.f. H. F. Janisch. *Extracts from the St Helena Records*, (Jamestown, 1885), online version at http://www.bweaver.nom.sh/janisch/janisch_1686-99.html, accessed 11/06/08).

⁶⁹⁰ BL MS Sloane 4024.

⁶⁹¹ Lisa Jardine, *The Curious Life of Robert Hooke* (London: Harper Perennial, 2003), p. 283.

⁶⁹² *Autobiography*, 34-43 (563-572), Ferguson, *Captain Robert Knox*, pp. 43-5. Knox appears in the Bencoulen records in 1691, G/35/2, fol. 284r, 19 February 1691.

⁶⁹³ *Autobiography*, 43-44 (572-573). Knox notes that none were sick until 'my men were taken away to serve in one of the King's ships, where they got the infection & brought it one board with them into my Ship that out of 38 men which I brought into this rode I had remaining but 25 to saile the Ship for Eng...3 of which ware Indians'. On 59 (590), Knox describes two of the sailors as slaves. See also Ferguson, *Captain Robert Knox*, 46.

⁶⁹⁴ Yule, *Diary of William Hedges*, ii, cccliii notes that Knox appeared at the Court in January 1694 and informed the Directors of the death of Job Charnock.

an informant in the Royal Society's records.⁶⁹⁵

After falling out with Sir Josiah Child and refusing several employments offered by the East India Company, Knox accepted an offer from Samuel Sheppard to go as a free merchant, or 'interloper' in his ship, the *Mary*. Leaving in May 1698 for Cadiz, he acquired silver for Surat, where he arrived in February 1699 after calling at St Augustine and trading in Ceylon and on the Malabar coast for pepper.⁶⁹⁶ Knox returned to England in 1701 where he remained thereafter,⁶⁹⁷ attending two further meetings of the Royal Society (Hooke having died in 1703) to present a number of items from Persia and the Malay world.⁶⁹⁸ As this overview demonstrates, Knox travelled globally, something which the understandable focus of most of the literature on his captivity in Ceylon tends to undermine.

Producing the Relation

Knox states in his dedication to the Company, 'I have writ nothing but either what I am assured of by my own personal knowledge to be true...or what I am assured of by the inhabitants'.⁶⁹⁹ This statement, the portrait of Knox that accompanies the text, and the framing story of his captivity, escape, and composition of the text on the homeward journey create the idea of the text as the product of one man's direct experience that was taken up by Defoe. Like his autobiography, Knox's *Relation* does have personal elements: in both, the author describes his survival of a series of perilous voyages and captivities with the intention of demonstrating the workings of providence.⁷⁰⁰ Nevertheless, the *Relation* is also a composite work. Like the linguistic works on Malay discussed in Chapter 3, it was produced, illustrated, financed, and finally enlarged through the collaboration of

⁶⁹⁵ Royal Society, *JB*, x, fol. 16, 24 February 1697, 15 December 1697 and 4 December, 1700.

⁶⁹⁶ *Autobiography*, 60c-62 (592-595).

⁶⁹⁷ *Autobiography*, 70 (603).

⁶⁹⁸ *Autobiography*, x, fol. 19, 7 April 1703, fol. 24, 9 June 1703 and fol. 124, 12 November 1707.

⁶⁹⁹ Knox, 'Dedication' in *An Historical Relation*.

⁷⁰⁰ Jayawickrama, *Writing that Conquers*, pp. 255-287; Yothers, 'Global Captivities' for a comparison with captivity narratives from New England.

the East India Company and various scholars.

In his *Autobiography*, Knox recognises the involvement in the *Relation* of his cousin, John Strype, who ‘Composed it into heads & Chapters, for my papers were very promiscuous and out of forme’ and assisted him in adding ‘severall enlargements [on] such heads as I had but touched briefly’.⁷⁰¹

The extent of Robert Hooke’s direct involvement with the content or structure of the original *Relation* is uncertain.⁷⁰² However, his preface to the first edition and notes in the draft second edition suggest that he had significant editorial input into the ‘natural history’ section of the work.⁷⁰³

The illustrations to the *Relation* are another element in which input from someone other than the author seems certain, given that Knox’s surviving sketch does not provide enough detail for the depictions of costumes and equipment that accompany the final work.⁷⁰⁴ The majority of the illustrations seem to have been composed from a combination of other sources and by referring to objects like the talipat leaf that Knox had brought back with him from Ceylon.⁷⁰⁵ One illustration in which the source of the borrowing is clear is the outline of Knox’s map of Ceylon, clearly lifted from Baldaeus’ 1672 work *Malabar en Coromandel*.⁷⁰⁶ Baldaeus’ work was published by Johannes Janssonius van Waasberge, whose plates Moses Pitt had acquired as part of the *English Atlas* project.⁷⁰⁷ This suggests that Hooke – who also had significant input into this project – might have

⁷⁰¹ *Autobiography*, 5 (516).

⁷⁰² Ferguson, *Captain Robert Knox*, p. 27 speculates that Hooke corrected the spelling and ‘dressed’ the language throughout.

⁷⁰³ Rubiés. ‘Instructions for Travellers: Teaching the Eye to See’ discusses Hooke’s preface with reference to drawing up heads of inquiry for travellers and instructions for the authors of natural histories. Alam and Subrahmanyam, op cit, note that the authorship of several European travel texts of this period is problematic, pointing to the co-authorship of the travel text of François Pyrard de Laval by Pierre Bergeron and the probable organisation of the notes of Jean-Baptiste Tavernier by the Protestant writer Samuel Chappuzeau.

⁷⁰⁴ Knox, *Relation* (interleaved), 194 (271). Paulusz (op. cit. Vol. 1, p. 383-392) speculates that the illustrator was Knox’s brother who died shortly before the publication, perhaps explaining the unfinished appearance of some illustrations. Hooke’s diary refers to purchasing Knox’s prints from Edward Lascelles, Knox’s brother-in-law but noted that he was ‘offended’ with them (Henderson, op. cit., 148, entry for 17 May 1681).

⁷⁰⁵ These include J. J. Saar, *Ost Indianisge* (Nuremburg, 1662), which Paulusz ‘Introduction’ *An Historical Relation* thinks served as an model for the wrongly proportioned elephant depicted in one illustration. The talipat palm depicted on p. 15 is relatively accurate (M. C. M. Iqbal, personal communication), suggesting it was drawn with reference to the talipat leaf first shown to the society on January 1681.

⁷⁰⁶ As noted by Saparamandu, ‘Introduction’.

⁷⁰⁷ Waasberge had in turn acquired plates from the map-maker Jansson, E.G.R. Taylor, ‘Robert Hooke and the

had access to the original plates as well as consulting the published text in the Royal Society's library.

The draft second edition of the *Relation* gives a clearer indication of how the process of using guidelines, queries and drawing on other works is likely to have functioned in the composition of the original text. For example, Hooke seems to have shown Knox an illustration of the coconut tree from the *Hortus Malabaricus*, before going on to describe the tree's stages of growth and uses in detail.⁷⁰⁸ A second passage enlarging on the process of tapping a coconut tree for 'toddy' refers again to the picture of the tree. These questions are addressed in the interleaved sheets that follow.⁷⁰⁹

Robert Hooke's hand appears in the preamble and the first two chapters of the interleaved copy making editorial corrections and explanations, expanding a section concerning the medicinal use of leeches, and speculating about why it tends to rain more in mountainous places.⁷¹⁰ At the end of the text, Hooke has added a list of queries for Knox to address. These include requests for detail about medicines and manufacture in Ceylon, and ask for description of particular plants and topographical features in various locations including Tonkin and Mauritius.⁷¹¹ Hooke then made small corrections and elaborations to the text that Knox produced in response. The cooperation between Hooke and Knox to produce the *Relation* thus functioned in a similar way to Bowrey and Hyde's collaboration in making the *Malay Dictionary*.

A similar process of questioning, editing and arrangement of travel texts or natural histories produced by members of the East India Company with the assistance of scholars is evident in

Cartographical Projects of the Late Seventeenth Century (1660-1696)', *The Geographical Journal*, 90 (1937), 529-540: p. 539. Hooke's involvement is evident from his notes on the project in BL MS Sloane 1039 and from his correspondence with Leibnitz on the subject (Royal Society, *Early Letters*, L5, M^o Leibnitz to RH 18/20 Jan 78). Hooke also documents the project in his diary from 1675, in which he eventually referred to Pitt as a 'rascal' for his failure to deliver the promised payment for his involvement. See L. Rostenburg. *The Library of Robert Hooke and the Scientific Book Trade of Restoration England* (Santa Monica, Calif.: Modoc Press, 1989).

⁷⁰⁸ Knox, *Relation* (interleaved copy), 93, (481).

⁷⁰⁹ Autobiography, 97-102 (497-502)

⁷¹⁰ Knox, *Relation* (interleaved), I, 1 (Paulusz, p. 5).

⁷¹¹ Knox, *Relation* (interleaved), 235, (Paulusz, 495-6). The passage is given in full in Iqbal, Raheem, and Tennakone, 'Fascinating Facets', 14.

several other texts of the period. In 1681, the year of publication of the *Relation*, it is also possible to see the guidelines for the composition of natural histories being put into practice in the production of two other texts: the East India Company surgeon John Fryer's account of his experiences in Persia and India,⁷¹² and Moses Pitt's *English Atlas*.⁷¹³ The English Atlas was explicitly intended as a composite work, as demonstrated by the public advertisement for any gentlemen with 'any curiosities of any country whatsoever' to bring them to be incorporated in the Atlas, if 'approved of and judg'd fit to be Printed by those Learned men, whose Judgements are consulted'.⁷¹⁴

While the Royal Society and other scholars were routinely consulted about the content of natural histories, the Court of Directors of the East India Company often financed them by collecting subscriptions from among their members. In return, they received dedicatory epistles praising them for 'bringing 'not only the Wealth but the Knowledge of the Indies...home to us'.⁷¹⁵ The Company, whose status was often uncertain during its first century of existence, was keen to be seen to benefit the nation by sponsoring the publication of useful information. French and Dutch works of the period exhibit a similar concern to claim that their work contributed to the national good.⁷¹⁶

However, the circulation of information around European capitals and their settlements in the East Indies also raises the question of the tension between the urge to publicise claims to the knowledge and wealth of the Indies and the need to prevent certain information from falling into the hands of

⁷¹² John Fryer, *A New Account of East India and Persia 1672-1681* (London, 1698). Chiswell also presented the interleaved copy of the *Relation* to Knox.

⁷¹³ M. Pitt, *The English Atlas*, 5 vols., (Oxford, 1680-1683). The fifth volume appeared as text-only, Moses Pitt being imprisoned for debt shortly afterwards.

⁷¹⁴ Moses Pitt, 'Advertisement about the English Atlas now Printing at the Theatre in Oxford by Moses Pitt Bookseller in London' in J.B. Tavernier, *The six voyages of John Baptista Tavernier*, trans. by J. Philips, published by Daniel Cox (London: printed for William Gobbid and Moses Pitt, 1677).

⁷¹⁵ Knox, dedication to the EIC, published in Paulusz, *An Historical Relation*, ii, xxxviii.

⁷¹⁶ For example, Tavernier's dedication to Louis XVI reads: 'j'espère SIRE, que ces Relations exactes & fidèles que j'ai écrites depuis mon retour sur les Mémoires que j'avais recueillis, ne seront pas moins utiles à ma Nation que les riches marchandises que j'ai rapportées de mes voyages.' J. B. Tavernier, *Les six voyages de Jean Baptiste Tavernier* (Paris, 1676), p. 4.

European rivals by enforcing secrecy. Therefore, most of the writing generated within the Company, although often copied and circulated, was not published: in fact most was closely guarded from European rivals, who tried equally hard to gain access to it.⁷¹⁷ For example, in a letter to England, the President at Surat notes that Jean-Baptiste Tavernier, who he describes as a ‘Dutchified Frenchman’ had been given passage to Persia several times on East India Company ships and had therefore been trusted by the Persian factory to carry their letters to Surat. However, Tavernier had then visited the ‘Dutch house’ in Persia where the factors, overcoming him with ‘drink or persuasion’, had ‘possess’d themselves of the paquet and in lieu thereof made up another seal’d with its subscription wrote by the originall...imitating the English hand’. This counterfeit letter was then mixed in amongst some Dutch letters and returned to Tavernier.⁷¹⁸ Cartographic information was also often acquired by the English from the Dutch by a similar combination of theft and covert copying.⁷¹⁹ Competition over medicinal drugs and recipes was especially fierce: as the drugster who boarded Knox’s returning ship recognised, there were considerable profits to be had from the knowledge that sailors and merchants had acquired overseas.⁷²⁰

⁷¹⁷ E/3/29, 3144, fol. 152-62.

⁷¹⁸ See also Donald Lach, *Asia in the Making of Europe*, i, 151-4 and Rubiés, *Travel and ethnography*.

⁷¹⁹ An example of a Dutch collection of maps acquired and copied by the English despite a VOC ban on releasing cartographic information is the collection of maps that were until recently in the library of Corpus Christi College, Oxford (de Meer and Loomeijer, *De schat van Corpus Christi: VOC-kaarten boven water*).

⁷²⁰ For example, Schiebinger, *Plants and Empire*, 92-93 notes that the French Co des Indes blocked British attempts to buy Michel Adanson’s papers concerning the natural history of Senegal and that Hans Sloane’s guarding of his recipe for curing sore eyes.



An imagined scene in which the Historical Relation of Ceylon is presented to Rajasingha II of Kandy from Simon de Vries trans, t'Eyland Ceylon in syn binnenste (Utrecht: by Wilhelm Broedelet, 1692)

The process of assimilation of the work of Baldaeus and others into Knox's work continued with the translation, circulation and re-appropriation of the published *Historical Relation of Ceylon*. The translations reorient it through the additions of new prefaces, dedications, and illustrations. One particularly interesting feature of the Dutch version is a new illustration that shows the text of the *Relation* written on an ola leaf being presented to the King of Kandy himself.⁷²¹ This illustration

⁷²¹ Simon de Vries, *t'Eyland Ceylon*, frontispice. For a description of priests producing olas and presenting them to great men, as is shown in the picture, Knox, *Relation* (1681), p. 109-110.

serves as a reminder that travel texts in European languages also circulated outside Europe: a point that will be discussed in more detail below. In this case, it raises an intriguing question: was Rajasingha II aware of Knox's work? The Kandyan king was undoubtedly well informed about the Europeans in his kingdom and, as noted in Chapter 3, had sponsored the translation of European works into Sinhalese.⁷²² Knox's letters to his fellow captives in Ceylon, which, like other correspondence are likely to have been screened by the Kandyan court,⁷²³ explicitly mention the publication of the work. Whether the text was known in the Kandyan kingdom is likely to remain speculation. However, Knox's depiction of the kingdom of their enemy was certainly scoured and used by the Dutch. The geographical information provided by the *Relation*, as well as Knox's oral comments on a map he was shown in Colombo in 1679, was incorporated into Dutch maps.⁷²⁴ Knox's map seems likely also to have been used in a French map attributed to 'Sieur de l'Isle' of which several copies survive, including that which appears in the French translation of João Ribeiro's account of the island printed in 1701.⁷²⁵

⁷²² Županov, 'Goan Brahmins', p. 181.

⁷²³ Knox, *Relation* (1681), p. 150 describes Knox being interviewed by the King to determine whether he could read and write English. Knox apparently pretended to have forgotten how to in order to avoid the King's service but mentions another Englishman, Richard Varnham, who had entered the King's service and presumably acted as a translator of English.

⁷²⁴ Paulusz, *Relation*, i, 442-445 identifies the map Knox was shown as a twin of No. 326 in the Ryksarchief and notes that Bandara-Kosvatta and Eladetta, unknown until Knox's work, appeared on Dutch maps soon after the publication of the *Relation* and the text was also drawn on for the 'Map of Ceylon surveyed along its length and breadth by order of the late Rt Hon'ble and Austere Ryklof van Goens', David Mill, Professor of Theology at Utrecht, published by Johannes van Keulen, c. 1710-12.

⁷²⁵ I consulted the copy of Sieur de L'Isle's map in the National Archives of India (where unfortunately there is no evidence relating to its provenance). It is reproduced in Jean Riberio, *Histoire de L'Isle de Ceylan*, trans. by L'Abbé le Grand (Amsterdam: Chez J.I. de Lorme, 1701) and elsewhere. The de L'Isle family (also written Delisle or de Lisle) were influential French cartographers during the seventeenth and eighteenth centuries (see Konvitz, *Cartography in France, 1660-1848*).



Detail from 'Map of Ceylon...by order of the late Rt Hon'ble and Aurstere Ryklof van Goens', published by Johannes van Keulen (c. 1710-12), Leiden University Library

The incentives for close guarding of information should therefore be counterpoised to the importance of national claims when considering whether or not a manuscript was published. It is interesting to note that, in contrast to the fairly extensive, and often unflattering,⁷²⁶ coverage of Dutch relations with the Court, the *Relation* makes little mention of English attempts to negotiate with Kandy. For the English Company, Ceylon was a coveted site for trade, particularly in cinnamon, and they had made several attempts to treat with Rajasingha II to establish an alliance against the Dutch. These included letters sent under the pretext of attempting to free Knox and the other English prisoners. These attempts had been obstructed by the Dutch⁷²⁷ and forestalled by the

⁷²⁶ For example, in contrast to the version given by the Dutch records, Knox describes the conflict between the Dutch and Rajasingha after the expulsion of the Portuguese from Columbo in 1656 as having been due to Dutch treachery (IV, XIII, 179 see Paulusz's footnote to vol. 2: 452). The Dutch are also described as being unable to match the King militarily and having to resort to flattery. Apart from the favourable description of a friendly Ambassador, the Dutch inhabitants of Kandy are generally described as drunkards and addicted to vice (IV, XIII, 183).

⁷²⁷ A letter from Madras to the Court dated 8 December 1664 (c.f. Ferguson, *Captain Robert Knox*, p. 12) describes the Dutch blocking an English vessel sent to Cotiar and continues to say that the Madras factory had asked one of the captives, William Vassall, about the possibility of starting a factory and that the King of Kandy had written to Charles II on the matter. A section from the Dagh-Register of 30 January 1664 summarised by Ferguson (p. 13) describes Edward Winter's negotiations with Antonio d'Almeyda, a servant of Rajasingha II. See also London to Fort St George, 7 December 1669 (c.f. Ferguson, *Captain Robert Knox*, p. 20) and London to Fort St

rebellion of the King's son in 1664. The *Relation*, with its description of the remaining English captives, could even have served as a potential pretext for further interventions.⁷²⁸

Printed books therefore need to be regarded as part of a scale of texts, circulating on various levels of openness, which informed the policy of the East India Company and the investigations of scholars. The extensive translation of European travel texts, as exemplified by that of the *Relation* itself, meant firstly that the texts of one's rivals would be closely scoured, re-appropriated, and 'corrected' and secondly that the most coveted information was often closely guarded. The next section will explore how the often imprecise descriptions of medicinal plants and agriculture given in the *Relation* were built upon in Knox's unpublished manuscripts to form the basis of practical experiments in biosprospecting and transplantation.

The desirableness and facility of this undertaking: using the Relation

a. Bio-prospecting

As noted above, travel texts were meant to be read and used not only – or even primarily – in European capitals, but also in settlements abroad and during travel. When travel books were taken on voyages, comparison between the written descriptions and first hand experience took place, sometimes generating further written accounts, like Samuel Baron's *Description of Tonqueen*, which as he states, is partly an attempt to correct Tavernier's account.⁷²⁹ Similarly, Allen Catchpole's discussion of the possibility of establishing a factory at Pulo Condore makes extensive comparisons

George, 15 December 1676 (c.f. Ferguson, *Captain Robert Knox*, p. 25) which combines inquiries about the captives and the possibility of opening up trade in cinnamon or acquiring cinnamon plants for transplantation to St Helena. In 1689, the factory at Fort St George made a further attempt, writing to Raja Devora of Tutecaree (from Tamil *Tüttukkudi*, *Hobson-Jobson*, p. 946) 'desireing his intercession with the new King of Candy for the releasemt of the English Captives that were unhappily cast away on Zealoan as also proposals for a trade & settlement in his Dominions, there being great quantities of pepper procurable there' (BL IOR G/19/6, 26/08/1689, transcribed in 'Records of Fort St George, Diary and Consultation Book of 1689, Madras, 1916, p. 72).

⁷²⁸ *Autobiography* 63-4 (596-597) – A copy of a letter from Knox to his fellow captive in Ceylon, John Morgan and William Vassall. Knox reassures them that their circumstances have been 'published in print'. However, the letter also notes that there seems to be little current hope of intervention on their behalf and suggests that they resign themselves to remaining in Kandy. On these and the other English captives in Ceylon, E. Reimers, 'Raja Singh and his British Captives' *Journal of Ceylon Branch of the Royal Asiatic Society* 30 (1925), 13-36.

⁷²⁹ BL Sloane MS 1039, fol. 133r.

with a work of Dampier's in his appraisal of the fruit and timber yielded by the local trees as well as referring to Tachard's account of a voyage to Siam and an apparently unpublished description by Henry Smith.⁷³⁰

This process of comparison and 'improvement' is also evident in the use of the *Relation*. Royal Society had some other contacts with personal experience of Ceylon, whose accounts they used to supplement the information in Knox's *Relation*. Paul Herman, a Professor of Botany in Leiden and employee of the VOC in Ceylon, is first mentioned in the records in 1680⁷³¹ as preparing a catalogue of the plants of the island, which was received on its eventual publication in 1698.⁷³² Herman exchanged specimens with Hans Sloane,⁷³³ and his draft illustrations for a second edition eventually came into the hands of James Petiver.⁷³⁴ In 1683 he sent his *Vocabularium Selanense* to Thomas Hyde, the Oxford orientalist and friend of Robert Boyle's, who compared his transliterations of Sinhalese words with Knox's versions.⁷³⁵ The Society was also in contact with a physician named Strachan, who had lived on the island for seventeen years and who published articles in the *Philosophical Transactions* concerning the use and transportation of elephants in Ceylon, the religions, plants and wildlife of the island, in several cases drawing on Knox's work.⁷³⁶

⁷³⁰ BL IOR O.C. 8188, Condore, 8 July 1703 reproduced in Yule, *Diary of William Hedges*, ii, cccxxix-cccxxxvii. Again, this Henry Smith may be the same man who claimed to be the author of the *Dictionary English and Malayo, Malayo and English*.

⁷³¹ Hooke Folio, fol. 469, 16 December 1680.

⁷³² Hermann, *Paradisus Batavus* is Mentioned in RS JB, x, 24 August 1698.

⁷³³ JB, x, 7 May 1701.

⁷³⁴ *Ibid*, x, 25 Feb 1701.

⁷³⁵ Paulusz, i, 400. For the comparison between Knox's and Hermann's vocabularies, Thomas Hyde to Thomas Bowrey, 7 February 1700, BL African and Asian Studies Dept, 763 Mss Eur. E. 192. 2 (a), Item 5, fol. 1. The vocabulary of Sinhala in this volume (MSS Eur 192 (b) J. 766, item 8) is likely to be a copy with translations of the Latin into English of Hermann's *Vocabularium Selanense seu Insulae Qeylon in India Orientali*. The original version of this manuscript was in the British Museum under the shelfmark Reg. 16. B. XX. (according to Don Martino de Zilva Wiokremasinghe, *Catalogue of the Sinhalese manuscripts in the British Museum* (London: Longmans & Co, 1900)). I have been so far unable to determine its current location.

⁷³⁶ D. Strachan, 'An Account of the Taking and Taming of Elephants in Zeylan, by Mr. Strachan, a Physician, Who Lived 17 Years There', 'Observations on the Planting and Culture of Tobacco in Zeylan, by Mr Strachan' and 'Observations made in the Island of Ceilan, by Mr Strachan on the way of catching fowl and Deer, of Serpents, of the antbear and of Cinnamon', 'Some Observations on Coral, Large Oysters, Rubies, the Growing of a Sort of Ficus Indica, the Gods of the Ceylanese, etc. Made in Ceilan, by Mr Strachan' all in *Philosophical Transactions*, 23 (1702/1703).

As noted above, Knox was carrying the interleaved version of his own text with him and making annotations on at least one of his subsequent journeys.⁷³⁷ Whether only during the first voyage to Tonkin via Cape Verde and Java or also during the second to Madagascar and St Helena is not clear.⁷³⁸ However, there is evidence that Knox referred back to the text on both voyages, directed by the process of questioning by members of the Royal Society discussed above and the practical instructions of the East India Company. In both cases, Knox's expertise on Ceylon, along with the written text, was used to make comparisons between the island and other prospective sites for colonial settlement, trade, or transplantation.

'Bio-prospecting' describes the process of examining and describing plants and identifying them, with the aim of either using them *in situ* or transporting them to other locations: whether botanical gardens in Europe or colonial plantations.⁷³⁹ The acquisition of plants that could yield drugs and food crops had a high potential monetary value and has been identified as a major factor in Iberian political power in the sixteenth century,⁷⁴⁰ as well as in European colonial expansion in the New World.⁷⁴¹ There is some debate about how far European investigations of plants that could provide food and drugs in the East and West Indies were comparable. While both involved drawing exchanges with 'informants' – involving varying degrees of consent and cooperation⁷⁴² – some scholars have argued that, in contrast to the largely oral exchanges that took place in the West

⁷³⁷ c.f. Paulusz, *An Historical Relation*, ii, xv, referring to a letter dated 15 Oct 1713. The letter says that the interleaved copy was presented before the first journey.

⁷³⁸ A note in an unknown hand was added to Knox's preamble to the proposed second edition stating that Knox had the book on the second voyage, had lost it along with his ship during the crew's mutiny on St Helena, and recovered it at Portsmouth on the Isle of Wight. Transcribed in Paulusz, ii, pp. xiv-xvi, who notes that the date (1685) given in this note for the presentation of the interleaved copy is incorrect based on the letter to Strype noted above.

⁷³⁹ E. Spary 'Of Nutmegs and Botanists: the Colonial Cultivation of Botanical Identity', in Schiebinger and Swan, *Colonial Botany*.

⁷⁴⁰ F. Guerra, 'Drugs from the Indies and the political economy of the sixteenth century', *Analecta Médico-Histórica* 1 (1966), 29-54.

⁷⁴¹ C. Mukerji 'Dominion, Demonstration and Domination: Religious Doctrine, Territorial Politics and French Plant Collection', M. T. Bravo 'Mission Garden, Natural History and Global Expansion, 1720-1820', and L. Schiebinger, 'Prospecting for drugs: European naturalists in the West Indies', all in Schiebinger and Swan, *Colonial Botany*; Schiebinger, *Plants and Empire*, pp. 73-4, discusses the European concern over the drain of money to the East and West Indies as the new cures became increasingly popular. See also Chapter 2.

⁷⁴² Schiebinger, *Plants and Empire*, Grove, *Green Imperialism*.

Indies, the European contribution consisted largely of compiling or rearranging South Asian knowledge that had been previously systemized and recorded.⁷⁴³ I suggested in Chapter 2 that European reports about nature in the East should be regarded as complexes of Asian and European ideas, mediated through the specific experiences of those involved in gathering and transmitting the information and their intended audiences. In the same way, Knox's reports about plants useful for food, drugs and other purposes are best viewed in the light of both his experiences in Ceylon and his relationships with European scholars.

Knox's *Relation* contains no direct reference to written medical texts or specialists,⁷⁴⁴ although a ritual that would have been performed by a priest as part of a cure is twice mentioned⁷⁴⁵.

Furthermore, there is no reference to any influence of systems of medicine that may have resulted from the influence of the presence in Kandy of Muslim traders, or to any imported medicines.

Probably because its author lived mostly in rural areas rather than in the city or court, the *Relation* concentrates its short section on medicinal plants on household medicine using simples. Knox states that 'the woods and trees are their *Apothecaries* Shops, where with Herbs, Leaves they make all their Physic and Plaisters, with which they sometimes will do notable cures.' Rather than listing these medicines, 'of which there are hundreds', Knox simply notes the cure of a broken arm with unspecified herbs and his own cure of a sore throat by chewing the bark of the 'Amaranga tree'.⁷⁴⁶

⁷⁴³ See, for example, the preface of Draakenstein's *Hortus Malabaricus* for the acknowledgements of the contribution of Itty Achuden's work and the book *Manhaningattnam*. However, as Manilal also notes, no manuscript in Malayalam or Sanskrit that corresponds with the description given has so far been discovered. K. S. Manilal, "The implications of HM" p. 1-5 in Manilal, *History and Botany of the Hortus Malabaricus*.

⁷⁴⁴ This does not, of course, imply that the information of Knox's informants could not be ultimately traced back to Sinhalese Buddhist variations on Ayurvēdic medicine with its extensive pharmacopoeia or to the knowledge of the village-level medical professionals (*vedarāla*).

⁷⁴⁵ Knox refers in the interleaved version to the dedication of food to demons, noting that he himself became ill after eating a cock dedicated to these demons (fol. 184, inserted after Part III, Ch. XI, p. 144). See Gananath Obeyesekere 'The Ritual Drama of the Sanni Demons: Collective Representations of Disease in Ceylon', *Comparative Studies in Society and History*, 11 (1969), 174-216 for discussion of the Kōla Sanniya ritual and B. Kapferer, *A celebration of demons: Exorcism and the art of healing in Sri Lanka*, 2nd edn, (Oxford: Smithsonian Institution Press, 1991). And for a critique of these approaches D. Scott, *Formations of Ritual*, (Minneapolis: University of Minnesota Press, 1994).

⁷⁴⁶ Paulusz, op. cit., p. 75, note 1 identifies this as Kāmaranga, Lat: *Averrhoa carambola* (family *Oxalidaceae*). The identification was confirmed by the Director of the National Botanic Gardens of Sri Lanka.

In the interleaved version, Knox expounds on the preparation of the simple from this bark ‘as I was instructed by one of the C[o]untry men’. The survey of edible plants, whether wild or cultivated on a small scale for food, is similarly perfunctory: he notes the existence of two types of aloes, gives the Sinhalese names for four other vegetables, and notes that several European herbs have already been transplanted, from ‘which I perceive all other *European* plants would grow here’.⁷⁴⁷

Despite the lack of detailed descriptions of edible and medicinal herbs and plants in the *Relation*, a comparison of the original, the interleaved copy, and the truncated journal of Knox’s voyage to Tonqueen in 1681 (Appendix 2) demonstrate that Knox was involved in bio-prospecting for naturally occurring plants yielding drugs and food by comparing the plants growing in Cape Verde with those he was aware of in Ceylon. The plant in which the process of bio-prospecting and transplantation can be most clearly traced across these three texts is the ‘jack’, a name used both for the tree and its fruit. In the *Relation*, the following description is given: ‘There is another Fruit, which we call *Jacks*; the Inhabitants when they are young call them *Polos*, before they be full ripe *Cose*; and when ripe, *Warracha* or *Vellas*; But with this difference, the *Warracha* is hard, but the *Vella* as soft as pap, both looking alike to the eye no difference; but they are distinct Trees’.⁷⁴⁸ The fruit is described here as a food-stuff: ‘they are a great help to the People, and a great part of their food’, being compared to a turnip or cabbage, with the thick white juice being used to catch birds.

In his account of the ‘I[s]le of May’ (Maio, Cape Verde), Knox also describes the type of jack yielding ‘warracola’, this time revealing a medicinal use for the fruit, although omitting the description of the tree itself. He notes: ‘The leafe resembles a Cabbage both in thickness & colour; onely not so large. It is ful[l] of white thick milk, or juice, if you break the leaves which is soon

⁷⁴⁷ Knox, *Relation*, I, V, 19 (see Paulusz, ii, 74, note 3 for identification of the plants for which Knox gives the approximations of the Sinhalese names).

⁷⁴⁸ Knox, *Relation*, I, IV, 14. Paulusz identifies the ‘jack’ with *Artocarpus integrifolia*, from the Portuguese ‘jaca’, ‘warracha’ with Sinhalese ‘varāka’, and ‘vella’ with ‘vāla’ (Paulusz, op. cit., 50, note 2). According to the Director of the National Botanic Gardens of Sri Lanka, all in fact come from the same Jack tree, *Artocarpus heterophyllus*.

done, being very brittle. The Chingulais put to many medicinal uses: & here in this I[s]land of May they grow in great plenty, just above the sand on the sea shore.’ Knox argues that the plants were probably indigenous rather than having been transplanted, as the inhabitants – who he correctly assumed were mainly descended from slaves transported from around the Gulf of Guinea during the period of Portuguese rule – appeared to be unaware of many of their medical uses. He goes on to link the type of plants that are likely to prosper to the relative positions of the two islands, noting that ‘the difference of Longitude doth not much chang or alter the nature of the Climate as the Latitude doth. For notwithstanding Zeilon Lyeth Degr. log ½ to the Eastward of this Iland, yet here I saw several Plants growing wild, which grow in the same manner upon Zeilon.’ As well as describing two other plants, ‘Bintombracole’⁷⁴⁹ and ‘Endraatta’,⁷⁵⁰ growing on both Ceylon and May, he also discusses the neighbouring island of St Iago (Santiago) where he notes that plants common throughout the East Indies such as oranges, limes, coconut, grapes, plantains, and water-melons grow, as well as briefly discussing the effect of the soil type on the native flora.⁷⁵¹

In the interleaved copy of the *Relation*, Knox describes the jack tree in much greater detail. As well as its value as a foodstuff, he notes the strength of its roots and the hardness of its timber, which he compares to that of the English oak and notes is used as a building material for houses in Ceylon.⁷⁵²

Also in the interleaved copy, Knox mentions that the people of Ceylon are not familiar with grafting; perhaps implying that he himself had tried this technique. Finally, Knox notes a failed attempt to transplant the jack: ‘I brought one younge plant to the I[s]land of [Barbados] and it was planted in Jehew Halls plantation, but the head haveing been twice [broken] of[f] in my passage the[re]after it died, [else] I doubt not but it would have grown to the great benefitt of the

⁷⁴⁹ Identified by the Director of the National Botanic Gardens of Sri Lanka as *Ipomoea pes-caprae* (Linn.) Roth. (family *Convolvulaceae*).

⁷⁵⁰ Identified by the Director of the National Botanic Gardens of Sri Lanka as castor *Ricinis communis* (family *Euphorbiaceae*), one of the most poisonous plants in the world.

⁷⁵¹ BL MS Lansdowne 1197.

⁷⁵² Knox, *Relation* (interleaved), folios inserted after I, IV, 18 (Paulusz, 61-62).

[inhabitants] of the I[s]land which was my onely end'.⁷⁵³

Knox's discussions of the jack tree and its products across these three passages serve several functions. The survey of the Cape Verde islands was part of the East India Company's vision of establishing a chain of settlements in the Atlantic and Indian Oceans like St Helena, the Dutch factory at the Cape and the later French settlements in Madagascar and Mauritius.⁷⁵⁴ These bases were intended to function as plantations, supply ships trading to both the East and West Indies,⁷⁵⁵ and act as points of defence. Knox's account of Cape Verde is clearly geared towards this objective. He includes accounts of the fortifications, buildings, as well as possible products, such as cotton, which he notes the inhabitants produce by spinning it with a stick, again comparing it to the method used in Ceylon. In addition, he gives a brief (and unflattering) account of the inhabitants.⁷⁵⁶

A similar example of a commission to inspect an island for its potential occurs in the Company's instructions to Knox to make an 'exact survey' of Tristan d'Acuna, giving an account of harbours, vegetation, animals etc and to give an opinion whether it would be 'advantageous for the Company hereafter to make settlement upon any of those Islands', which 'Capt. Gayer & other inform us would save the lives of many men'.⁷⁵⁷ Again, this commission was to be undertaken using an earlier text containing advice, in this case, the unpublished journal of a mate who had landed at the island the previous year.⁷⁵⁸ Like his description of Ceylon, Knox's account of his visits to Madagascar in

⁷⁵³ Knox, *Relation (interleaved)*, fols inserted after I, IV, 18 (Paulusz, p. 63-4). The location of 'Jehew Halls' is not clear.

⁷⁵⁴ Grove, *Green Imperialism*.

⁷⁵⁵ The East India Company's relationship with the colonies in the West Indies was ambiguous: ships from the Americas supplied them with silver, sugar and were a useful source of slaves for St Helena (SHA Council Books, ii, fol. 146 and fol. 167). However the Company officially regarded English ships trading in slaves from Madagascar to these colonies as infringing their monopoly and launched actions in parliament to prevent the trade after allegations in 1695 that these traders were supplying the pirates who attacked the Mogul fleet in the Red Sea. After a ban in 1698, the trade was resumed until 1716 but then prohibited again after the Company had been denied the right to engage in the slave trade to American themselves. See Virginia B. Platt, 'The East India Company and the Madagascar Slave Trade', *William and Mary Quarterly* 26 (1969), 548-577.

⁷⁵⁶ BL MS Lansdowne 1197.

⁷⁵⁷ 'Instructions to Captain Knox', London, 4 April 1684, BL IOR E/3/90 fols. 182-3. In his autobiography Knox notes that he reached the latitude of Tristan d'Acuna but was unable to land there due to bad weather and lack of time.

⁷⁵⁸ 'Instructions to Captain Knox', London, 4 April 1684, BL IOR E/3/90 fols. 182-3.

the draft second edition would have been intended for the use of other traders. By amassing and re-circulating such materials among their servants, the EIC built up a base of knowledge about the potential of various locations for trade or settlement.

This instance of ‘bio-prospecting’ on Cape Verde can thus be seen as part of an ongoing speculative survey of several possible bases for the East India Company. The search for food and drugs was coupled with an analysis of the defensive capabilities of the island, its potential for manufacturing cotton or extracting natural resources like ironstone, and for its capacity to supply a workforce (whether through independent trade or free or coerced labour). The race to identify, settle, and defend suitable island bases was run against the Dutch and French East India Companies, who were making similar surveys in this period,⁷⁵⁹ as well as competing for those islands that had already been settled.⁷⁶⁰

The Royal Society during this period was engaged in a number of investigations about the effects of longitude and latitude, as well as climate, altitude, and soil type on plant and animal life and even disease.⁷⁶¹ It therefore seems likely that Knox’s discussion in his later texts of plants that grew in distant places with similar latitudes and of grafting was developed through his contacts with these scholars and facilitated by instruments like the picture box, azimuth perspective, longitude clock,

⁷⁵⁹ For an account of the French Ambassador de la Hays’ survey of possible sites for the Compagnie des Indes in the Indian Ocean after returning from Ceylon (where he had attempted to ‘settle a trade’ but failed after offending the King – Knox gives an account of this and his later meeting with him in London). For an account of the voyage, du Bois, *Les voyages fait par le Sievr D B* (Paris, 1674). Abraham du Quesne, *A voyage to the East Indies in the years 1690 and 1691* (London: Printed for Daniel Dring, 1696) for the brief settlement by French Huguenot refugees of the island of Rodriguez, near Mauritius. The reference in Hooke’s diary (BL MS Sloane 4024, entry for 24 October 1689) to Diego Rodriguez after a conversation with Knox also describes it explicitly in terms of a potential settlement.

⁷⁶⁰ The Dutch and Portuguese fought battles over the island of St Helena from 1625, the Dutch formally claimed it in 1633, and recaptured it from the English, who had claimed it in 1659, between January and May 1673. See S. B. Royle, *The Company’s Island: St Helena and the Colonial Endeavour* (London and New York: I. B. Tauris, 2007), 153-5. For the suggestion in 1715 of Governor Isaac Pyke of St Helena that the English claim Mauritius, recently abandoned by the Dutch, and transplant the population of St Helena there explicitly to keep the island from falling into the hands of the French inhabitants of Reunion Isle, see Philip Gosse, *St Helena 1502-1938* (London: Cassell and Co., 1938), pp. 137-138.

⁷⁶¹ See for example W. Cockburn, *An account of the nature, causes, symptoms and cure of the distempers that are incident to seafaring people* (London: Printed for Hugh Newman, 1696) for the classification of diseases according to meridian.

and pendulum watch that Hooke gave to him. Theories of the effects of different latitude on animal and vegetable life naturally had implications for the types of plants to look for in the process of bio-prospecting, as well as the types of crops that were likely to be transplanted effectively. For this reason, reports like Knox's were crucial to the role of scholars in advising the East India Company on their settlements. Thus, as I have argued throughout, the development of scientific theory regarding the natural world was inextricably linked to European expansion and proto-colonialism.⁷⁶² These processes, with their allied claims to both national supremacy and international scope also had religious connotations,⁷⁶³ which can also be identified in Knox's presentation of the jack, coconut, and plantain trees as 'the most wonderful things that God's hands hath wrought'.⁷⁶⁴

I noted previously that the *Relation* is a work of two parts: natural history and personal account. Although the text should be regarded as a composite work with considerable input from European scholars, this does not negate the presence in the text of Knox's personal outlook or the effects of ideas received during the nineteen years he spent in Ceylon or in his subsequent travels. Indeed, Knox's responses to the questions that scholars like Hooke put to him and his contribution to bio-prospecting on behalf of the East India Company should be examined with reference to his personal interactions with members of the societies he visited.⁷⁶⁵

Knox was in Ceylon for nineteen years, during which time he adopted the local language, dress, and way of life,⁷⁶⁶ as well as bringing up a child: in fact, it was his return to Europe rather than this level of assimilation that was unusual.⁷⁶⁷ Knox's identification of himself as a member of the society of

⁷⁶² Cañizares-Esguerra, *Nature, Empire, and Nation*; Guerra, 'Drugs from the Indies'.

⁷⁶³ Grove, *Green Imperialism*.

⁷⁶⁴ *Autobiography* 96 (635). See also *Relation* (interleaved), folios interleaved before 192, (Paulusz, 493-495). The emphasis on the utility of the tree to mankind seems to be a reaction to the praise heaped on the spice trees, the products of which Knox regarded as rather frivolous, by earlier Portuguese and Dutch writers.

⁷⁶⁵ Raj, *Circulation and the Construction of Knowledge*, p. 252, notes that these relationships are the missing element in many discussions of the interactions between European 'sedentary men of science' and the travellers who answered their inquiries.

⁷⁶⁶ Knox told the Dutch that he was able to escape because knowing the language and wearing Sinhalese clothing they were 'not regarded as Europeans', or were seen as Portuguese, who were sufficiently integrated not to wish to leave.

⁷⁶⁷ Knox, *Relation*, (interleaved) IV, VIII, 152, (396) and *Autobiography* 63-4 (596-597) for Knox's adoption of a

Kandy is evident in his language in the description of Cape Verde, in which at one stage he describes two plants, Allacola and Attangcola, 'which *wee* have on Zeilon' [emphasis added].⁷⁶⁸ This perspective also colours his account of his subsequent travels. For example, the inhabitants of Cape Verde are dismissed as lacking in 'ingenuity' from Knox's perspective as a resident of Kandy. Rather than inquiring into their own medicines and industries (or taking into account their enforced migration), he assesses them based on the knowledge of the particular plants he recognises from Ceylon and from the viewpoint of a transitory visitor rather than a resident. The customs of Madagascar similarly receive a less than complimentary treatment in Knox's writings.⁷⁶⁹

b. Transplantation and the transfer of techniques

As well as surveying potential bases for naturally-occurring foods and medicines, the East India Company was also involved in attempts to transplant both agricultural and manufacturing techniques from both the West and East Indies. These efforts were based on consultations with experts in the crop or technique, as well as on books and manuscripts in London and involved transporting both people and texts around their settlements, a process I will discuss more fully in Chapter 5. Consultations in London encompassed a range of people from merchants like Thomas Bowrey and scientists like Robert Boyle, to an unnamed man from Mauritius whom Knox was ordered to bring before the Court of Directors in 1690.⁷⁷⁰ They drew on evolving theories like those about the effects of latitude to select suitable crops for transplantation. For example the Directors noted in a 1683 letter to St Helena: 'We have discoursed with many persons about the growing of

female child, Lucea, who he taught to read and write English and to whom he bequeathed his land and possessions and later sent his picture. For the marriage and settlement in Kandy of his fellow captives, see I, VII.

⁷⁶⁸ BL Lansdowne MS 1197. This appears to be an unconscious deviation from his normal 'the Chingulais have...' but perhaps all the more revealing as such. Attang-cola is a reference to the intoxicant *Datura stramonium* (M. C. M. Iqbal, Personal communication, see also Iqbal, Raheem, and Tennakone, 'Fascinating Facets', p. 17 for Knox and Hooke's discussion of *Datura*. Footnote 26 notes Hooke's reference to the use of *Datura* in Ceylon).

⁷⁶⁹ See *Autobiography*, 9-23 (537-551). Knox's description of Madagascar is another element of his later work that warrants more attention.

⁷⁷⁰ BL IOR B/40 (Court Minutes 1690-1695) fol. 15, 12 September 1690 – 'It is ordered that Capt. Knox do bring into this Court the Negro that was brought home on his ship from the Mauritius to be examin'd touching his coming away from that island'. (There is no indication whether this instruction was followed, it is not mentioned in the next meeting).

wheat upon our island and Wee know that very good doth grow in many parts of the world with similar Latitude and therefore we would have our Governor continue to make trials of the Surrat Wheat and a Bushel of English Wheat herewith sent, untill you shall find by Experience which are the fittest places of the Island for the sowing and growth of it'.⁷⁷¹

Knox was involved with this transfer of expertise from the East and West Indies in several ways. He was instructed to procure indigo and cotton seeds and root ginger from Madagascar.⁷⁷² The indigo was to be planted under the supervision of a planter from the West Indies, as the Company had failed in their efforts to entice expert growers to relocate from Surat.⁷⁷³ The Company also instructed Knox when in Madagascar to 'secure likewise any other Plants Roots seeds or fruit that you think may grow at St Helena and deliver them to our Govt & Council, to be propagated for the benefit of our Island', adding, 'Be very curious and carefull in this as a matter of great publique concernment wherein you may oblige us & be a benefit to your Country'.⁷⁷⁴ As well as the journal of a Captain Bass, on the basis of which the Company urged that salt-works should be established on the island, Knox also carried a rule book from Barbados, which was to be consulted by the Governors for advice in managing the Company slaves.⁷⁷⁵

Knox was also intended to contribute to the Company's attempts at the transplantation of crops based on his own descriptions of agriculture in Ceylon in the *Relation*. The description of

⁷⁷¹ IOR E/3/90, fols. 87v-98v, London to St Helena, 1 August 1683, fol. 95v. Also noted in Royle, *The Company's Island*, p. 27. See also E/3/90 fol. 178v, London to St Helena, 5 April 1684, which qualifies the discussion of latitude, noting that the mountainous parts of the island are likely to be colder and more suited to European plants while the hotter parts could support crops transplanted from the West and East Indies.

⁷⁷² BL IOR E/3/90, fols. 182-3, 4 April 1684.

⁷⁷³ Royle, *The Company's Island*, 79-80. IOR Original Correspondence, 3144, (E/3/29, fol. 152-62) Sir George Oxenden and Council in Surat to EIC in London, 1 January 1666. Oxenden notes that they have sent indigo seeds to St Helena, but 'we cannot possibly gett a person here to direct them in the sowing & making indigo: those that plant it here being all natives & have families, who will not be persuaded to leave them & their Relations on any consideration, which we thought good to advise you of, that you might endeavor the procuring of a Person or two out of those plantations of Barbados etc.'

⁷⁷⁴ BL IOR E/3/90, fols. 182-3, 4 April 1684.

⁷⁷⁵ BL IOR E/3/90, fol. 175, London to St Helena, 5 April 1684/5. For discussion of slavery on St Helena see Royle, *The Company's Island*, pp. 84-103 and Chapter 5.

agricultural techniques in the original text is more extensive than that of medicinal plants and focuses in particular on rice cultivation. Rice production in seventeenth century Kandy was organised on a village level, with paddy lands worked communally and a portion of their produce set aside for the King's storehouses.⁷⁷⁶ Knox describes the creation of these paddy fields by the management of water. He notes and names five different types of rice requiring various amounts of time to ripen,⁷⁷⁷ and explains that the type to be sown will be selected depending on how long the necessary amount of water is likely to be available and the approach of the time of year when the fields are due to revert to grazing land for cattle.⁷⁷⁸ Finally, he notes that there is a type of rice that can be grown without always standing in water, which is grown on high lands that cannot be flooded with water. Knox goes on to describe the preparation of the fields using light ploughs drawn by oxen and the co-operation of the villagers in reaping the harvest, and the method of treading out of the grain using oxen.⁷⁷⁹ Again, the interleaved version of the text expands on this section, giving more detailed instructions and, in one section, a diagram of a tool used to channel water.⁷⁸⁰

On the basis of the passage relating to the rice that ripens without standing in water,⁷⁸¹ in addition to the oral advice of Knox and 'several others', the Directors formulated a plan to sow this type of rice on the high lands of St Helena. In 1684, they first sent to their agents in Surat to acquire 'three or four baggs of fresh Paddy, of that particular Kind...wee intending it for seed at St Helena'.⁷⁸² The letter goes on to give instructions to store the rice in a cool cabin during the journey and to transfer it between bags at least once a fortnight in order to 'preserve its prolific quality'. The letter to Surat

⁷⁷⁶ Wickremesekera, *Kandy at War*, pp. 50-53.

⁷⁷⁷ Chaudhuri, *Asia before Europe*, p. 238 notes that it is hard to assign a date to the original development of quick-ripening rice (which allows for a double crop in a year), but that it seems to have been introduced from the ancient kingdom of Champa to China in around 1012 and spread from there across South Asia.

⁷⁷⁸ Knox, *Relation*, I, III, 8 notes that during the designated rice season 'their fields are all in common', but that after this period, the various owners of the land let in their cattle, meaning that any rice not harvested would be destroyed. See Paulusz, ii, 34, note 1. for an identification of the types of rice.

⁷⁷⁹ Knox, *Relation*, I, III, 9-12.

⁷⁸⁰ Knox, (interleaved), folios inserted between 9-12 (37-46).

⁷⁸¹ It is not named in the original, Paulusz ii, 37, note 1 speculates that it may refer to Suvanda-āl. In the interleaved copy, Knox names two types; one with a red husk called 'Kere-All-wea' and the other with a white husk known as 'Meputt-all-wea', interleaves inserted after 9 (37).

⁷⁸² BL IOR E/3/90, fol. 170: London to Surat, 7 April 1684.

stresses the potential value of the crop, which is described as ‘no meane concerne to this Kingdom’.⁷⁸³ Knox and a former fellow captive in Ceylon were then instructed to oversee the sowing of the rice, the Directors in London informing their Council in St Helena: ‘there is a peculiar sort of Rice that groweth best on high and dry Lands, the seed and cultivation whereof he knoweth very well. He and Ralph Knight that is on board his ship having wrought many years upon it with their own hands in Ceylon’.⁷⁸⁴

Knox was also intended to demonstrate the uses of coconut trees, which instructions from London imply were growing on the island.⁷⁸⁵ He was intended to demonstrate how to draw the oil: a process described in the interleaved version of the *Relation* as well as the *Autobiography*.⁷⁸⁶ A final lesson drawn from the *Relation* relates to the production of iron. The Directors note that Knox believes that ironstone is plentiful in St Helena and that ‘in the Country where he was captive, every poor man...made his own Iron for the use of his family’. Knox therefore was instructed to demonstrate the technique on St Helena in the hope that the stone could eventually be transported to the Company settlements in Asia and manufactured there.⁷⁸⁷

Rice was clearly an important food-stuff on St Helena in the early period, and its transportation and storage seem to have been problematic: references occur in the early records to shortages and poor

⁷⁸³ BL IOR E/3/90, fol. 170: London to Surat, 7 April 1684.

⁷⁸⁴ BL IOR E/3/90; fol. 175. London to St Helena, 5 April 1684. The EIC display more concern for the conservation of timber here that Grove op. cit. generally credits them with the early period, noting that ‘we will never permit any to be made on your Island lest it should consume our wood’.

⁷⁸⁵ BL IOR E/3/90, fol. 170: London to Surat, 7 April 1684, fol. 175 instructs ‘cherish and increase your Coco-nut trees all that possibly you can, they being of much more use than you doe at present apprehend’. Whether coconut palms were in fact established is uncertain. Ashmole and Ashmole (p. 74 and 440) note that the fossil evidence from St Helena shows that palms were once important, they appear to have been extinct for sometime. The few surviving date palms were planted in the sixteenth-century by the Portuguese J. C. Meliss, J.C. *St Helena: a physical, historical and topographical history of the island* (London, 1875). R. O. Roberts, *The plants of St Helena Island* (unpublished MS notes compiled during the 1970’s and kept in the St Helena library) mentions four types of palm but not the *cocos nucifera*. Gosse, *St Helena*, p. 169, mentions that coconut trees sent from Bombay were planted by Isaac Pyke in 1733-4.

⁷⁸⁶ *Autobiography*, 100 (641).

⁷⁸⁷ London to St Helena, 5 April 1684, BL EIC Original Correspondence E/3/90; fol. 175.

quality of the stores.⁷⁸⁸ An earlier proposal to send two slaves experienced in cultivating rice paddies had already been dropped after advice that the crop was unsuitable for the high ground of St Helena.⁷⁸⁹ hence the specific type of rice that Knox was intended to supply. However, whether Knox ever put into practise the intended experiments in rice growing, the production of iron, or the growing of cotton, indigo, ginger, and other plants is unclear.⁷⁹⁰ In fact, Knox's most important contribution to the development to the island was probably in his role as a slave trader: he arrived at St Helena with at least two consignments of slaves from Madagascar. As will be discussed in more detail in the next chapter, slaves were often valued not only for their labour but for their expertise and were often transported along with crops they were skilled in growing.

The discussion of Knox's involvement with the attempted transplantation of rice is only the most traceable example among several indications that Knox was involved in transplantation around the settlements he visited.⁷⁹¹ Whether or not it was eventually carried out, Knox's commission was one of a long series of agricultural experiments on St Helena. Scholars in London continued to play an advisory role: Banks, Solander, Roxborough and Hooker all investigated the island's plant species.⁷⁹² Travel writing and natural histories like Knox's continued to form the basis of such experiments into the eighteenth century. For example, Joseph Banks' recommendations about the transplantation of tea to certain areas of India were based on the writings of James Cunningham about the types of tea growing at similar latitudes in China.⁷⁹³ Banks also owned a copy of Knox's

⁷⁸⁸ SHA, *Consultations*, ii, fol. 52 (48), 11 April 1684.

⁷⁸⁹ SHA, *Letter Book*, i, 23 January, 1679, see also Royle, *The Company's Island*, p. 87.

⁷⁹⁰ Knox does appear in the St Helena records, where he was made a temporary member of council. (SHA *Consultations*, ii, fol. 164, 7 May 1685) and entered a petition for support and a passage home after his men, who had been drinking punch and cursing Knox as an 'old Portuguese rogue', made off with the *Tonqueen Merchant* (SHA, *Consultations*, fol. 175, 8 June 1685).

⁷⁹¹ For example, the list of items brought to the Royal Society in 1683 include 'The root of a tea tree, which the Captain designing to bring home growing had planted, and kept in a pot of earth aboard the ship, but which, by the way was gnawed and killed by the rats' Birch, *History of the Royal Society*, ii, 226.

⁷⁹² Ashmole and Ashmole, *St Helena and Ascension Island*, p. 65-7.

⁷⁹³ Joseph Banks to William Devaynes 27 December 1788, British Library MS D993 (India Office private papers). Transcribed in N. Chambers ed. *The Letters of Sir Joseph Banks, A Selection, 1768-1820* (London, Imperial College Press, 2000). Letter 35, pp. 114-119.

Relation, which he annotated at the back with identifications of several of the plant Knox mentions.⁷⁹⁴

Conclusions

Investigating the production and circulation of Knox's *Relation* illuminates several points about the place of travel texts and natural histories in both the process of European expansion and the development of ideas about the effects of latitude on plants and people. The involvement of Strype and Hooke in the first and second editions shows how the process of questioning and comparison with and borrowing from other accounts was used to form composite 'natural histories' with a number of applications. The co-operation between the East India Company and the Royal Society in producing this text should be viewed as part of an ongoing collaboration between the two entities to collect and lay claim to the wealth promised by amassing useful knowledge about the world. Such claims were important in establishing the authority of both institutions, as well as participating in the competition with the French and Dutch to lay claim to the knowledge as well as the wealth of the East and West Indies on behalf of the nation. Other examples from the same period include the published works of Fryer and Dampier and Baron's manuscript as well as the unpublished letters, responses to questions and descriptive accounts that fill the archives of both organisations. By providing merchants and travellers with queries, guidelines on making observations, and instruments like those Hooke gave Knox, scholars were able to amass information that returned to aid the Company's agents in the form of advice about appropriate crops or medicinal plants likely to flourish at certain latitudes or under particular environmental conditions, as well as in the forms of guidebooks or 'natural histories', maps, and dictionaries.

Locating Knox's *Relation* within a number of interrelated published and unpublished manuscripts

⁷⁹⁴ British Library, copy at shelfmark 983 h 12. At the back of the book, Banks has added cross-references to the *Hortus Malabaricus* and a work of Paul Herman's and other names for some of the plants Knox lists. I am grateful to Katherine Frank for bringing this volume to my attention.

produced by collaboration between merchants and scholars in the late seventeenth century also allows a clearer picture to develop of how such texts were used to explore the possibilities for transferring non-European practises and techniques to European settlements like St Helena or identifying other possible areas for settlement such as the Cape Verde islands. For example, Knox's involvement in bio-prospecting based on the *Relation* is only recognisable if his unpublished second edition and journal of his voyage to Tonkin are also consulted. Similarly, it is necessary to trace the movement of ideas from the *Relation* into the letters of the East India Company to note the contribution of the work to the attempts at transplanting crops, agricultural techniques, and human experts around the globe. Many merchants like Knox moved across areas that are now often studied separately, such as the Indian and Atlantic Oceans, taking their ideas and prejudices as well as their papers and specimens with them. They also occupied roles such as author and slave trader that are often studied within quite different conceptual frameworks. Following their journeys across these spaces and roles can contribute to a greater awareness of how ideas and techniques were transferred between different areas of the world in the early modern period.

CHAPTER 5

'Improving' people and plants in the Company 'plantations': scholarship and slavery in St Helena and Bencoulen c. 1673-1720

Introduction

In the Museum for the History of Science in Oxford hangs a portrait of John Chardin, a French Huguenot merchant who became wealthy trading diamonds in Persia and India. Chardin immigrated to England in 1681 and quickly became a leading investor in the East India Company and a member of the Royal Society. He produced several volumes of descriptive accounts of Persia and India, assisted by the natural philosopher John Evelyn. Here, Chardin is pictured with his work in the background while he points to a map of Persia and the Arabian Gulf. Holding the map is a young man of African origin, whose iron collar suggests he is enslaved. The image illustrates the centrality of demarcating and describing territory to the process of European expansion. It also suggests the importance of transporting labour, whether enslaved or coerced, between these territories. This chapter focuses on the essential but overlooked and largely voiceless members of the East India Company settlements represented here by Chardin's unnamed companion. As the presence of this image in the Museum demonstrates, slavery was intimately connected with early modern scholarship as well as European expansion: something that has begun to receive attention in some institutions, notably the Natural History Museum in London.⁷⁹⁵

⁷⁹⁵ James Delbourgo, 'Gardens of life and death: Essay review', *British Journal for the History of Science*, 43 (2010), 113–118 discusses the NHM's series of events and online publications at the Natural History Museum, London, directed by Tracy-Ann Smith, written and edited by Katherine Hann, document research by Katherine Prior and Mabintu Mustapha. Viewable online at <http://www.nhm.ac.uk/nature-online/collections-at-the-museum/slavery/> (accessed 11 May 2010).



Portrait of Sir John Chardin and an unnamed slave, Museum for the History of Science, Oxford

The East India Company depended on slaves for the success of all their early settlements, but they were most important in the 'plantations' of the South Atlantic island of St Helena and Bencoulen (Bengkulu) on the West Coast of Sumatra. Here, I will show how slavery was conceptualised in the discourse of the early Company and natural philosophy of the period and argue that similar concepts of 'experimentation' and 'improvement' were applied to plants and people. The idea of experimentation outside the laboratory has recently received more attention from historians of science.⁷⁹⁶ Grove reminds us that tropical islands were once central to the reformulation of ideas about the relationship between man and the environment, as well as providing a space for 'mediated borrowing'.⁷⁹⁷ Stern highlights the importance the Company placed on the political and moral government of St Helena⁷⁹⁸ while Royle uses the island to flag up neglected aspects of the history of the East India Company; including gender and race relations.⁷⁹⁹ What emerges from these histories

⁷⁹⁶ Safier, *Measuring the New World*.

⁷⁹⁷ Richard Grove, 'Conserving Eden: The (European) East India Companies and Their Environmental Policies on St. Helena, Mauritius and in Western India, 1660 to 1854', *Comparative Studies in Society and History*, 35 (1993), 318-351 and *Green Imperialism*.

⁷⁹⁸ Stern, 'Politics and Ideology in the Early East India Company-State'.

⁷⁹⁹ Stephen Royle, *The Company's Island: St Helena, Company Colonies and the Colonial Endeavour* (London: L.B. Tauris & Co., 2007).

is an idea of islands as a site for experimentation: scientific, political, and social. In this chapter, I aim to develop this idea by focusing on the connections between botanical and social experimentation and examining how people, plants, and ideas were transferred between sites of enslavement like Madagascar, and Company colonies like St Helena and Bencoulen.

The Company's 'experiments' in transferring skills and people between territories were altered and in many cases subverted by those who were their subjects. Here, I explore how slaves themselves contributed to the creation and transfer of knowledge in and between settlements by looking at the work they performed. When examining the lives of slaves, the paucity of evidence makes it difficult to focus on the lives and networks of individuals as I have done in the previous chapters. The discussion of professions is therefore used instead to illustrate the participation of slaves in the transmission and creation of botanical, medical, and linguistic knowledge.

Focusing on slaves' movements and work is one way to shift the study of scholarly networks in the early modern period away from a centre-periphery model to examine movements and interactions of people, specimens, plants, medicines, and expertise across oceans and territories and to evolve a history of innovation and experimentation in the early modern period which includes the contribution of non-elite groups. Slaves' role in the creation and circulation of knowledge has been studied with reference to the Atlantic World and the empire of the Dutch East India Company (VOC).⁸⁰⁰ Slaves also played an important role in the creation of such knowledge in the diverse settlements of the early East India Company and the transfer of expertise was an important motivation for their transportation. While Europeans considered the botanical and medical knowledge of slaves invaluable, they also feared their skills with plants and poisons and while they

⁸⁰⁰ Markus Vink, "The World's Oldest Trade" and Ward, *Networks of Empire*. Carney, *Black Rice* demonstrates the contribution of African slaves to introducing cereal crops to America and technologies of water control. See also Susan Scott Parrish, "Diasporic African Sources of Enlightenment Knowledge", in *Science and Empire in the Atlantic World*, ed. by Delbrougo and Dew. See also Larson, *Ocean of Letters* for some discussion of the links between slavery and linguistic work in the French empire in the Indian Ocean.

relied on slave soldiers and sailors, they dreaded the prospect of rebellion. Slaves' work sometimes helped them resist their conditions; by obtaining pay, privileges, or freedom in return for their expertise, or by means of armed rebellions or covert poisonings. I will argue that these acts of resistance were also part of the creation and circulation of new types of knowledge during the early modern period.

'Island Edens' and dystopias: St Helena and Bencoulen

As several authors have noted, the image of Eden was prominent in the descriptions of non-European lands from the Classical period and was it was echoed by Columbus, Raleigh, and their successors.⁸⁰¹ The story of Eden and the Fall, however, contained both a promise of man's potential dominion and the warning of the loss of paradise as a result of human sin.⁸⁰² Island communities provided the setting for two great visions of society written at the beginning of the early modern period in England: Thomas More's *Utopia* (1515) and Bacon's *New Atlantis* (1614-7).⁸⁰³ Both present images that in some way represent the idea of a return to the garden of Eden through the creation of an ideal Christian society. For example, in the *New Atlantis*, the sick seamen are swiftly cured by the fruits of the island. Such ideas resonated among the natural philosophers of the seventeenth century. For example, Samuel Hartlib claimed in his *Chymical Addresses* (1655) that with the perfected alchemical powers of the new Adam, 'another garden will be found, whence shall be had herbs that shall preserve men not only from sickness, but from death itself'.⁸⁰⁴

On the other hand, both More and Bacon paint pictures of extremely authoritarian societies: every aspect of the lives of the inhabitants of both imaginary islands is strictly controlled and their access

⁸⁰¹ Grove, *Green Imperialism*, especially pp. 18-21.

⁸⁰² Drayton, *Nature's Government*, p. 3.

⁸⁰³ Thomas More, *Utopia* ed. by Edward Surtz and J. H. Hexter, *The Complete Works of Thomas More*, 4 (New Haven: Yale University Press, 1965); Francis Bacon, *Advancement of learning. Novum organum. New Atlantis* (Chicago: Encyclopedia Britannica, 1952); Royle, *The Company's Island*, pp. 37-9 also discusses St Helena as a 'paper utopia' and discusses the influence of radical literature and utopias on thought about St Helena.

⁸⁰⁴ Drayton, *Nature's Government*, p. 10.

to travel and information limited or denied.⁸⁰⁵ Furthermore, the *Utopia* is made possible only through the work of slaves, and even the introductory passages present a discussion of punishment.⁸⁰⁶ Alongside the idyllic images of the world outside Europe in early modern European thought ran an undercurrent of thought which portrayed these lands as demonic and their landscapes and inhabitants as wild and unnatural.⁸⁰⁷ For example, the experiences of some of the early settlers English in the American plantations led to swift reversals in the descriptions of the nature and inhabitants of the Americas.⁸⁰⁸

The early East India Company's settlements were envisaged as spaces for the creation of ideal societies: however, this could only be achieved by 'governing' and 'improving' their wildlife and inhabitants.⁸⁰⁹ The establishment of social order was seen by the Company as essential to the survival of the settlers in the unpredictable environment in which the bounty of God could suddenly turn to deadly fevers and devastated lands. If a new Eden was to be fashioned from fallen man and the unpredictably natural environment of the 'torrid zone', it must be done with a full understanding of the secret workings of nature and the minds of men in order to exploit them as fully as possible. Experimental botany – involving 'training' plants to adapt to a new environment by transplanting and grafting – thus led to profitable agricultural yields.⁸¹⁰ The same attitude is evident in the instructions regarding people in the Company's instructions: they were to be brought from around

⁸⁰⁵ Simon Wortham, 'Censorship and the institution of knowledge in Bacon's *New Atlantis*', in Bronwen Price ed., *Francis Bacon's New Atlantis: new interdisciplinary essays* (Manchester: Manchester University Press, 2002).

⁸⁰⁶ More, *Utopia*, p. 61-77 (punishment) and 185 (slavery).

⁸⁰⁷ Brown, *The Reaper's Garden*, p. 8 writes 'Europeans often thought of their colonies as fundamentally alien places, atavistic spaces of degeneracy and violence constituting a 'Torrid Zone' beyond the bounds of civilisation'.

⁸⁰⁸ Early idyllic images of Native Americans were published by Theodore du Bry based on the drawings by James white from Thomas Hariot, *A briefe and true report of the new found land of Virginia* (1588), but following bloody Powhatan uprisings in 1622 and 1644 that helped precipitate Bacon's Rebellion in 1675–76, descriptions became less favourable (Virginia Historical Society, 'Early Images of Virginia Indians', online exhibition <http://www.vahistorical.org/cole/overview.htm> accessed 17 May 2010). Grove, *Green Imperialism*, p. 34 argues that *The Tempest* 'had moved away from the a stereotyped concept of the island where a redemption of European political economy might be tried out and towards a more empirical perception and one more closely reflecting the hard reality of the early American and Carribean colonies'.

⁸⁰⁹ Drayton, *Nature's Government*, pp. xv-xvii.

⁸¹⁰ Drayton, *Nature's Government*, p. 50. As Drayton points out, maximising agricultural production was also a concern for organisations like the early Royal Society.

the world, experimented with, ‘perfected’, and profited from.

Since Bacon's 1603 call to 'populate, plant and make civil' Ireland and Donne's 1622 sermon on the plantations of Virginia, the process of taming land through agriculture had invested the colonial appropriation of land with a spiritual legitimacy.⁸¹¹ As well as producing food, hard physical labour was thought to bring the souls of men closer to God by returning them to the toil of Adam. The idea of the agricultural colony worked by free 'planters' and slave labour had been adopted from the models provided by the Portuguese sugar plantations that began off the coast of West Africa before transferring both the profitable crop and its enslaved cultivators to Brazil and elsewhere.⁸¹²

Although this fact has often been overlooked, the early East India Company saw the establishment of plantations as crucial to its success in the East. In this, they were following the model of the Portuguese, who invested the profits from sugar and silver in their Brazilian colony in their trade in Asia. Another important precedent was that of the Dutch in the Spice Islands, who had used a combination of imported enslaved and coerced indigenous labour to establish pepper plantations and enforce monopolies on nutmeg, mace, and cloves.⁸¹³

In 1635, the East India Company had received a major setback when the rival Courteen Association was chartered to ‘settle factories and plant colonies after the Dutch manner’ after the EIC’s perceived failure in such ‘planting’.⁸¹⁴ Madagascar was the first target for the Courteen Association, inspired by enthusiastic accounts of the island’s potential drawn from a 1635 voyage.⁸¹⁵ It was

⁸¹¹ John Donne, *A Sermon Preached to the Honourable Company of the Virginian Plantation*, 13 November 1622 (London: Printed for Thomas Jones, 1622); J. Spedding, ed. *The Life and Letters of Francis Bacon*, 7 vols (London: 1861-74), iii, p. 69, c.f. Drayton, *Nature's Government*, p. 55. Alison Games, *The Web of Empire: English Cosmopolitans in an Age of Expansion, 1560-1660* (New York: Oxford University Press, 2008).

⁸¹² Brown, *The Reaper's Garden*, p. 14.

⁸¹³ Cook, *Matters of Exchange*, pp. 180-191.

⁸¹⁴ William Foster, 'An English Settlement in Madagascar in 1645-6', *The English Historical Review*, XXVII, 106 (1912), 239-250; BL Add MS 14037 "A BOOKE of Consultations belonging to the Plantation of Madagascar all[ia]s the Island of St Lawrence". Games, *Web of Empire*.

⁸¹⁵ Walter Hammond, *Madagascar, the richest and most fruitful island in the World* (London: printed for Nicolas Bourne, 1643).

conceived of as a 'plantation' modelled on the examples of both Batavia and Barbados.⁸¹⁶ A colony in St Augustine Bay, on the southwest coast, was finally begun in 1644. However, like Portuguese, Dutch, and the early French attempts,⁸¹⁷ it was swiftly abandoned as relations between the settlers and local people descended into open warfare by 1646.⁸¹⁸ A second attempt in 1649 to settle Nosy Be or Assada off the northwest coast similarly failed. The Madagascar factory records show that a major objective was to engage in the transportation of slaves to the Middle East as well as to the East African coast, the Comoros Isles, and Brazil.⁸¹⁹ On regaining its monopoly in 1657, the EIC made an attempt to gain a foothold in Africa; this time on the West Coast. They acquired control of Fort Cormantine, in modern Ghana for a period of seven years, after which they were again excluded from the trade by the British authorities.⁸²⁰ Several further speculative plans for settlements on the coast of East Africa were produced but never attempted. These include Thomas Bowrey's detailed plan for a plantation there, which he intended to be staffed by slave labour and to produce drugs for Middle Eastern markets.⁸²¹

St Helena in the South Atlantic and Bencoulen and its subordinate factories in Sumatra were the only places in which the East India Company succeeded in establishing 'plantations' or settlements intended (though often failing in practice) to generate revenue through their agricultural products. In many ways, these two places symbolised the two extremes of contemporary European ideas about

⁸¹⁶ Games, *Web of Empire*, pp. 181.

⁸¹⁷ Larson, *Ocean of Letters*; Anuiruddha Ray, *The Merchant and the State: the French in India 1666-1739* (New Delhi, 2004).

⁸¹⁸ Foster, 'An English Settlement in Madagascar'; Mike Pearson Parker, 'Close Encounters of the Worst Kind: Malagasy Resistance and Colonial Disasters in Southern Madagascar', *World Archaeology*, 28 (1997), 393-417.

⁸¹⁹ BL Add MS 14037, 8-10, 12 May 1645.

⁸²⁰ 'Guinea' or 'Gana', also called 'Ghanah, Fuinoa and Geneoa', derived from the name Jenné given to the main city described by both Ibn Battuta and Leo Africanus. Gomes Eannes de Azurara, *The Chronicle of the Discovery and Conquest of Guinea*, trans. by Charles Raymond Beazley and Edgar Prestage (London: Hakluyt Society, 1896-9), "Introduction", p. xlix. Margaret Makepeace, "English Traders on the Guinea Coast 1657-1668: An Analysis of the East India Company Archive", *History in Africa*, 16 (1989) 237-284. Fort Cormantine was held by the Guinea Company from 1631, the EIC from 1659-1664, and the Royal Adventurers thereafter. Another site nearby was 'Callebar' (in modern Nigeria), also called the 'Bite (or 'Bight') of Guinea and 'Oude Calburgh' by the Dutch.

⁸²¹ Guildhall Library, MS 3041(ii). The description of Madagascar contained in Bowrey's papers (although not the projected plantation on the mainland) is discussed by Arne Bialuschewski, 'Thomas Bowrey's Madagascar Manuscript of 1708', *History in Africa*, 34 (2007), fols. 31-42.

the wider world. From the time of its discovery on 22 May 1502, the anniversary of Constantine's mother,⁸²² St Helena provided a place for European ships returning from the East Indies to gather provisions and rest their sick crews. After the Portuguese abandoned the island, it was taken over by the English East India Company in 1659 and, aside from a short period of Dutch occupation in January-May 1673, remained in the Company's possession until transferred to the Crown in 1836.⁸²³ Visitors from Cavendish and Linschoten onwards described St Helena as an 'earthly paradise', abounding with fruits, fish, and fowl.⁸²⁴ Bishop Godwin's allegorical meditation on the new discoveries made possible by the telescope describes the ascent of the imaginary traveller Gonsales from St Helena 'the onely paradise, I thinke, that the earth yeeldeth' to a lunar utopia peopled by Christian Martians who combined the civilisation of the Chinese with the innocence of Native Americans.⁸²⁵

An unpublished map of the island by the Dutch traveller and author Johan Nieuhoff depicts St Helena as overflowing with natural bounty: the rosy-cheeked figures in the foreground hold up their catches and bowls overflow with fruit. Meanwhile the hunt is depicted on the island behind, which is sprinkled with Dutch flags: an argument, perhaps, for the Dutch takeover that finally occurred in 1673, a year after Nieuhoff's death.⁸²⁶ Like the Oxford portrait, the set of compasses indicate the importance of measuring and demarcating territory. Even by the 1690's, idyllic descriptions of St Helena were still being produced – Dampier echoed Hartlib's vision of a new garden containing the cures for all ills: '[C]ommonly, the Seamen coming home are troubled more or less with Scorbutick Distempers [scurvy] and their only hopes are to get refreshment and health at this island, and their

⁸²² Gosse, *St Helena*.

⁸²³ Gosse, *St Helena*, pp. 422-3.

⁸²⁴ Grove, *Green Imperialism*, pp. 42-47 also makes distinctions between English, Dutch and French Huguenot conceptualisations of the tropical island in this period.

⁸²⁵ [Francis Godwin], *The man in the moone: or a discourse of a voyage thither by Domingo Gonsales the speedy messenger*, (London printed by John Norton, for Ioshua Kirton and Thomas Warren, 1638). For a modern edition, Francis Godwin, *The man in the moone*, ed. by William Poole (Peterborough, Ont.: Broadview Editions, 2009).

⁸²⁶ The undated map by Johan Nieuhof (1618-1672) is in the Bodel Nieuwenhui collection of Leiden University Library (shelf mark: 002-12-037). I am grateful to Professor Leonard Blussé for directing me to it.

hopes seldom fail them, if once they get footing here. For the island affords abundance of delicate herbs wherewith the sick are first bathed to supple their joints and the fresh food soon after cures them'.⁸²⁷



Johan Nieuhof, 'St Helena', Leiden University Library

Bencoulen, a settlement on the west coast of Sumatra, was begun in 1685 as a last minute diversion from Priaman after an embassy from Fort St George to Aceh were approached by the rulers of Bencoulen.⁸²⁸ The settlement and its subordinate factories were intended to produce pepper to be sold in Europe.⁸²⁹ Following the example of the Dutch, the EIC plantations were staffed by slave

⁸²⁷ William Dampier, *A New Voyage around the World* (London: printed for James Knapton, 1697), c.f. P. C. Teale, *St Helena, A History of the Development of the Island*, unpublished MA thesis, University of Natal, 1972. Gosse, *St Helena*, p. 36 quotes Thomas Herbert's account of 1626 as listing basil, parsley, mint, spinach, fennel, aniseed and mustard seed as anti-scorbutic.

⁸²⁸ John Bastin, *The British in West Sumatra* (Kuala Lumpur: University of Malaya Press, 1965).

⁸²⁹ Antony Farrington, 'Benkulu: an Anglo-Chinese Partnership', in Bowen, Lincoln, and Rigby eds, *The Worlds of the East India Company*, p. 112.

labour while agreements were made with local rulers specifying the amounts of pepper that were to be produced by Indonesian families and fixing prices.⁸³⁰ Despite the fortifications, which were also established using slave labour, the demands made by the English led to attacks by local people, aided by the Dutch, during the 1680 and 1690's and the factory was forced to retreat to Bencoulen in 1719 before returning in 1724.⁸³¹

In contrast to the healthiness and fecundity of St Helena, Bencoulen, which was suffering from high rates of malaria, symbolised for the European settlers the horrors of disease and degeneracy considered to lurk in the tropics. On hearing of the decision to settle at Bencoulen, the Directors complained 'our people were made very sickly, and many dyed at Bencolen and Indrapura, which makes us wish our President etc. at the Fort had more strictly pursued our Orders in settling at Pryaman, a place much more healthfull, thô not affording so much pepper of its own'.⁸³² These concerns were confirmed by the early consultations of the factory, which report in despair that the garrison had only five Englishmen and some Portuguese soldiers on duty, the others being sick and 'the sick neglected for want of people to tend them: all or most of the Cooleys & black workmen are sick & dead...the sick cryes for remedies, but no[ne are] to be found'.⁸³³ The complaints of the early factors soon entered into contemporary consciousness in England. One natural philosopher wrote of Bencoulen that 'grief and venery are the most dangerous passions...for here the Constant heat [and] the unconstancy of the air causeth such a dissipation of the spirits that men know themselves to be weak & are subject to faintings'.⁸³⁴ By the time Robert Knox arrived in 1690 with a consignment of slaves from Madagascar, he observed that Bencoulen had 'bin since my memory imputed to be the

⁸³⁰ Bastin, *The British in West Sumatra*.

⁸³¹ Bastin, *The British in West Sumatra*. For an example of Dutch hostility, IOR G/35/2, fols. 36(53v)-37(54) Samuel Potts and Thomas Stubbs at Indeapore to Benjamin Bloome (Bencoulen), 29 August 1686.

⁸³² IOR E/3/91, fol. 95, London to Surat and Bombay, 15 October 1686.

⁸³³ IOR G/35/1, fol. 10, York Fort to William Gyfford at Fort St George, 3 October 1685.

⁸³⁴ Anon, Royal Society, *Register Book*, Vol. 9, fol. 71 'A Memoriall to live under the Equinoctial and between the Tropicks; the Common Distemper incident to the Inhabitants of those Climates with ye Manner of Cure by the Natives and likewise by other European practitioners in Physick.' (no author or date, placed between documents dated 1701 and 1703).

most sickly Country in the known world'.⁸³⁵

Transplantation, transportation, and the transfer of techniques

As noted in Chapter 2, colonial botanical or 'acclimatisation' gardens were important to the project of early colonialism: in them, plants might be planted and monitored to test whether they could be produced on a larger scale. In a sense, the small island of St Helena functioned like an extended botanical garden in which crops and techniques were tested before being exported to other settlements. St Helena, as an enclosed space with no indigenous inhabitants, was also a place where people could be trained and experimented on. Plants, people, and techniques were often then re-exported to Bencoulen and elsewhere. However, these experiments were altered by the plants, people, and techniques that arrived unplanned on the tides of the Atlantic and Indian oceans.

Attempts to transfer both European and Asian crops and methods of agricultural production to St Helena began with the Portuguese introduction of the fruit trees that early travellers marvelled at as well as the European and herbs and species brought in 1502. The English fleet sent to 'settle, fortifie, and plant' the island in 1659 was instructed to stop at Cape Verde to pick up specimens of cassava, yam, potatoes, beans, and chick peas as well as orange and lemon trees for transplantation.⁸³⁶ This began a long tradition of experiments with the introduction of crops: some, like many New Zealand flax and coffee,⁸³⁷ enjoyed a greater or less degree of success while others like rice and cinchona (the source of quinine),⁸³⁸ never became established. Many proved disastrous to the island's indigenous and endemic wildlife.⁸³⁹ Both sugar and tobacco, which the English hoped

⁸³⁵ Bodleian MS Rawl Q. c. 15., fols. 39-40 (Robert Knox, *An Historical Relation of Ceylon* ed. by J.H.O. Paulusz, ii, pp. 568-569).

⁸³⁶ William Foster, 'The Acquisition of St. Helena', *The English Historical Review*, 34 (1919), p. 285. Royle, *The Company's Island*, p. 170-171 gives a list of the produce recommended for St Helena from 1659-1698.

⁸³⁷ Royle, *The Company's Island*, pp. 28-29. Both were briefly profitable but flax, like many other introduced species, soon became considered detrimental to the survival of indigenous and endemic plants.

⁸³⁸ Yams were introduced at around the time of original settlement and became an important foodstuff, cinchona was introduced in 1867-8 but did not thrive. See Philip Ashmole and Myrtle Ashmole, *St Helena and Ascension Island: a natural history* (Oswestry: A. Nelson, 2000), p. 156-7.

⁸³⁹ Philip and Myrtle Ashmole, *St Helena and Ascension Islands* (Shropshire: Anthony Nelson, 2000).

to emulate the Portuguese by producing in their own settlements, were marked failures in St Helena but seem to have had some success in Bencoulen.⁸⁴⁰ Coffee trees were planted in St Helena and later Bencoulen, with some success although the crop never became established in either settlement.⁸⁴¹ Several attempts to introduce rice, indigo, and cotton to St Helena also failed,⁸⁴² but yams thrived and provided the main foodstuff for much of the population. Transplantation was also carried out by seamen, settlers and slaves who arrived at the island without orders from London. For example in 1700, the consultations mention a tree brought from the Cape of Good Hope by a ship's captain that had succeeded in establishing itself in an area where no other vegetation could survive, thus protecting against further soil erosion.⁸⁴³ As will be discussed further below, a crop of yams that grow readily on the island was introduced from Madagascar by a slave named Maria.

To people their plantations, the Company employed techniques ranging from persuasion via material incentives to coercion, with varying degrees of success. Despite bills posted in London describing the joys of life in St Helena, voluntary settlers were few in the early years of the colony, and the population was only fifty free men, twenty free women and six slaves in 1666.⁸⁴⁴ The Company therefore resorted to offering incentives to tempt seamen to stay on the island⁸⁴⁵ and, according to Ovington, tricking young women into migrating in search of wealth husbands.⁸⁴⁶ Because of its reputation for sickness, Bencoulen was still less popular as a destination for settlers and although incentives were offered for people to move there from St Helena,⁸⁴⁷ it was more

⁸⁴⁰ For the sale of tobacco in Bencoulen see Chapter 3. The introduction of tobacco was attempted in St Helena and SHA, *Consultations*, Vol. 5, fol. 62, 19 April 1697 reports 'green tobacco growing on the Company's common', but the crop never took off. Incidentally, however, a walk on Lot's Wife in 2007 with botanists from Kew Gardens revealed that a few plants still survive. For sugarcanes in Bencoulen, Collet MS D1153/2, fol. 62- 64, 1 July 1713, in which he claims 'this place produces the best Sugar Canes in India'.

⁸⁴¹ SHA, *Letters sent, 1706-1714*, fol. 30-32, 7 March 1710; IOR G/35/7, fol. 112, Collet to London, 10 September 1713 mentions raising coffee plants and a letter of 10 February 1718 notes that a few coffee trees planted in Collet's time show promise.

⁸⁴² Stern, 'Politics and Ideology in the Early East India Company-State', p. 4.

⁸⁴³ SHA, *Consultations*, Vol. 6, fol. 20.

⁸⁴⁴ Royle, *The Company's Island*, pp. 45-6 and Table 3.1, Appendix 3.

⁸⁴⁵ Royle, *The Company's Island*, pp. 48-9.

⁸⁴⁶ John Ovington, *A Voyage to Surat in the Year 1689* (Delhi: Asian Educational Services, 1994), pp. 59-60.

⁸⁴⁷ Royle, *The Company's Island*, pp. 52-4.

common for them to be sent there as punishment from either St Helena or one of the factories in India. Like the introduction of plants, however, the arrival and departure of people in St Helena and Bencoulen was often beyond the control of the Directors in London: people stayed to recuperate or to escape from tyrannical captains, and left by stowing away aboard departing ships and even seizing craft and leaving.⁸⁴⁸

Ovington wrote disapprovingly of St Helena, that 'the minds of the Inhabitants are generally as Uncultivated as the neglected Soil, their Intellects as ordinary as their Qualities, but what is worse, the pravity of their Manners compares them with the rankest Soil, producing nothing but noxious Herbs, untractable to all the Arts of Husbandry and Improvement.'⁸⁴⁹ The instructions regarding the treatment of people sent to the plantations often have a very similar tone to the commands relating to plants: with careful planting and tending, it was hoped both could be 'improved'. In 1668, the Court requested their representatives at Fort St George to 'procure young Gentues or Aracans and their wives to be sent as our servants to remain on our Island of St Helena Wee being very desirous to make trial of them, supposing that they may bee more usefull and ingenious than those people which come from Guinea'.⁸⁵⁰ Similarly, in 1682, the Directors in London wrote to their Council in St Helena 'it must be your care to see the Seeds Plants & Negroes so used and employed that we may be careful that we may at length reap some Benefit of all our Care and Cost'.⁸⁵¹ Here, as elsewhere, plants and people are discussed without distinction. That a similar attitude was common among the other European trading companies might be demonstrated by a passage translated from a set of instructions sent by the VOC quarters to Batavia in 1631, which advises, 'since it's found that

⁸⁴⁸ For example, SHA, *Consultations*, Vol. 5, fols. 95-97 and 106, 23 February 1698 for a boy left off a pirate ship; SHA, *Consultations*, Vol. fol. 25 Consultation, 22 June 1693 for the seizure of the ship of the 'interloper' Thomas Pitt (later Governor of Fort St George) and escape towards Virginia of several inhabitants; G/35/2, fols. 37-8 (20), 4 March 1687, for the desertion to the Dutch of an English soldier.

⁸⁴⁹ Ovington, *A Voyage to Surat*, p. 63.

⁸⁵⁰ London to Madras, 27 November 1668, c.f. Yule *Diary of William Hedges*, ii, p. ccliv. 'Gentues' refers to Hindus and 'Aracans' to people from modern Burma. These people were not intended to be slaves, however, the letter continues: 'In the procuring of these 8 persons we require that noe violence should be used or any act to give discontent to the natives, but that they may be such as will willingly embrace our service'.

⁸⁵¹ IOR E/3/90, fols. 89-98, 1 August 1683.

the Bandanees are of such a Malignant Nature, and that it's past hope to win them, tho' there Children have been bro[ugh]t up at school since their infancy: Therefore, we judge best that the Ill natured Bandanes be exported and other slaves planted there, who in time may learn to cultivate the Fruits of the country.⁸⁵²

Plants and people with skills in growing them were often transported together. Examples include a request sent to the Bombay factory to supply St Helena with slaves skilled in sugar plantations and the manufacture of saltpetre⁸⁵³ and the recruitment of French Huguenot refugee vintners who were transported to St Helena along with their vines, the leader of this group, Stephen Poirier, eventually becoming the Governor of the island in 1697.⁸⁵⁴ In 1704, the Bencoulen factors wrote to London to request their own supply of vines and 'French refugee vineroons'.⁸⁵⁵ The West Indian planter Nathaniel Cox was sent with his sugar canes first to St Helena and then to Bencoulen.⁸⁵⁶

The comparisons that were being made between plants and people at this point were not solely allegorical. In this period, when the ideas about human life were being revitalised by dissection, the recent discovery of the circulation of the blood, and the gradual challenging of the Galenic humoral theory, there were some interesting speculations going around to replace the old ideas. Comparisons were being made between the animal and vegetable worlds: for example, discussions were going on at the Royal Society about the circulation of the blood and whether the 'veins' observed in leaves had a similar purpose.⁸⁵⁷ Microscopical observation of cells in both the sap of plants and in blood also contributed to the idea of some connection between their functions. The idea that people were

⁸⁵² BL Add MS fol. 10r (31), item 75 in 'Points and articles in form of instructions determin'd and agreed on by the 17 at Zeland in Middleborough whereby Henry Brewer, Gov Genll for the Netherlands East India Privileged Company on his arrival at Batavia &c. & the council there and Else where shall regulate themselves'.

⁸⁵³ London to Bombay, 5 March 1685. BL IOR E/3/90, fol. 158. See also Royle, *The Company's Island*, 24-5.

⁸⁵⁴ Gosse, *St Helena*, p. 96.

⁸⁵⁵ IOR G/35/7, fol. 4, York Fort, Bencoulen to London, 12 February 1704.

⁸⁵⁶ IOR E/3/91, fol. 179r, London to St Helena, 3 August 1687

⁸⁵⁷ Nehemiah Grew, *The Anatomy of Plants, With an Idea of a Philosophical History, and several other lectures read before the Royal Society of London*, (London: Printed by W. Rawlins, for the author, 1682).

conditioned by the environmental conditions under which they lived was a well-established idea.⁸⁵⁸ The division of the world's peoples into the progeny of Noah had not given way to a concrete idea of 'race' by this period.⁸⁵⁹ Nevertheless, debate was arising about how the effects of the environment were connected to the physical differences observable between people from different parts of the world. For example, in one meeting of the Royal Society, Dr Tyson argued that climate alters the glands 'so that they might incorporate from the mass of Blood a differing humor from white, to be circulated in those particular vessels & that the climate might by this means give a difference hue to the inhabitants'.⁸⁶⁰

So, if transplanting plants had an effect on their survival and qualities, what impact did moving to a different part of the world have on people? If people were adapted to a certain climate, it was believed that a sudden alteration in climate could have serious consequences for their physical and mental health. For example, the Governor of St Helena Isaac Pyke wrote to the Company explaining the pressing need for constant supplies of arrack: 'the difference between hot and cold is very great in this Place and the alteration always on a sudden so that the most Temperate People require more strong liquor here than in some other parts...'⁸⁶¹ With reference to slaves, Pyke noted 'this climate being different from that of other Nativities subjects them to many other Diseases so that of old Blacks one in ten usually dies every year and of those new Blacks, 2 in 15'⁸⁶².

Thought about the environment and the physical health of the inhabitants of the Company's

⁸⁵⁸ The idea was expressed most clearly, though not formulated, by Jean Bodin in his *Methodus ad facilem historiarum cognitionem* (Paris: Iuvenis [i.e. Lejeune], 1566). See Marian J. Tooley, 'Bodin and the Mediaeval Theory of Climate', *Speculum*, 28 (1953), 64-83.

⁸⁵⁹ Ivan Hannaford, *Race: The History of an Idea in the West* (Washington: Woodrow Wilson Center Press, 1996), p. 187 notes that the emergence of the idea of race may be connected with the project of classifying the nature world into classes, genera, and species beginning with thinkers like Descartes, Hobbes, and Locke in the late seventeenth century. The term 'race' in its modern sense was not common until Charles Montesquieu, *De l'esprit des lois* (Geneva: Chez Barillot, & fils, 1748). For an explanation and attack on the 'pre-Adamite' idea, Morgan Godwyn, *The Negro's & Indians Advocate, Suing for their Admission into the Church* (London: Printed for the author by JD, 1680), p. 18-19.

⁸⁶⁰ Royal Society, *Register Book*, Vol. 10, 9 December 1696.

⁸⁶¹ SHA, *Letters Sent 1717-1720*, fol. 39-41, Isaac Pyke to London, 6 January 1718.

⁸⁶² SHA, *Letters Sent 1717-1720*, fols. 137-143, Isaac Pyke to London, 3 November 1718.

'plantations' was closely connected to their moral conduct.⁸⁶³ For example, Robert Knox continued his reflection on the unhealthiness of Bencoulen by noting that sickness is caused by 'a contagious Aire which proceedeth from no other Cause but the will of the Almighty Creator who turneth a fruitfull land into Barrennesse for the wick[ed]ness of them who dwell therein'.⁸⁶⁴ In St Helena, the rapid degradation of much of the land as a result of deforestation and overgrazing quickly raised concerns about the fragility of the island,⁸⁶⁵ which was linked to the lax morals of the islanders. Speaking at a trial for adultery in 1698, Governor Poirier reflected on the Biblical example of the destruction of Sodom and Gomorrah before stating his belief that the same sin had brought on a recent disaster in Jamaica (probably in reference to the earthquake of 1692).⁸⁶⁶ His warning that a similar fate could befall St Helena was repeated in warnings issued after a spell of droughts in 1717 that the island was not yet safe from the vengeance of divine displeasure.⁸⁶⁷

The Council of St Helena therefore not only required the inhabitants to 'plant and improve' their lands⁸⁶⁸, it also took it upon itself to police their morality. The consultation books are filled with the reported details of investigations into and punishments of their moral transgressions including breaking the Sabbath,⁸⁶⁹ gambling,⁸⁷⁰ drunkenness and swearing,⁸⁷¹ and treasonous comments⁸⁷² as well as adultery⁸⁷³ and the birth of illegitimate children.⁸⁷⁴ However, the moral policing of the island was contested by those who were subject to it. An interesting example occurred in summer 1715,

⁸⁶³ For discussion of the Iberian precedents Cañizares-Esguerra. *Nature, Empire, and Nature*.

⁸⁶⁴ Knox, *Autobiography*, fols. 39-40 (pp. 568-569).

⁸⁶⁵ Grove, *Green Imperialism*; Drayton, *Nature's Government*, p. 235-8 for an important qualification of Grove's arguments about the radical nature of early environmentalism.

⁸⁶⁶ SHA, *Consultations*, Vol. 3, fol. 129, Court of Justice, Session House 07 October 1689.

⁸⁶⁷ SHA, *Letters received 1717-1725*, fol. 42, London to St Helena by the *Princess Amelia*, 21 March 1717.

⁸⁶⁸ SHA, *Letters from England, 1673-1683*, fol. 23v, 20 February 1677; SHA, *Consultations*, Vol. 1 fol. 238, 10 April 1682.

⁸⁶⁹ SHA, *Consultations*, Vol. 4, fol. 256, 16 December 1695; Vol. 5, fol. 191, 23-31 January 1699.

⁸⁷⁰ SHA, *Consultations*, Vol. 1, fol. 125, 5 July 1680 Vol. 3, fol. 5, 23 July 1688.

⁸⁷¹ SHA, *Consultations*, Vol. 2, fol. 117, 01 December 1684 and 151, 9 February 1685; Vol. 4, fols. 213-214, 12 August 1695.

⁸⁷² SHA, *Consultations*, Vol. 3, fol. 71, 29 November 1688.

⁸⁷³ SHA, *Consultations*, Vol. 1, fol. 300, 20 November 1682; Vol. 1 fol. 311, 18 December 1682.

⁸⁷⁴ SHA, *Consultations*, Vol. 1, fol. 374, 30 July 1683; Vol. 5, fol. 242, 4 July 1699. The receipt of a proclamation from William and Mary 'for the suppressing of all vice and debauchery' is reported in Vol. 4, fol. 142, 26 July 1694.

when the Council reported that a ‘scandalous libel had been affixed to the minister's door in the night time by way of mockery to us’. The piece of satire presents the Council (rather than the Company) as a sovereign entity and accuses it of corruption, the starvation of dissidents, and claiming a ‘divine right to absolute power’. The man supposed to have authored it had distributed a similar satire in London targeting the centre for experimental learning, Gresham College.⁸⁷⁵

Just as the idyllic landscape of St Helena could be marred, it was believed that Bencoulen could be improved by the establishment of a colony that was healthy in body and soul. Knox continued his discussion of the causes of ill health by identifying 'several contingent causes' including the dampness of houses and stale provisions. He made efforts to improve the diets of the soldiers, which had previously consisted of rice left to stand for several days in water.⁸⁷⁶ The Directors and regional Governors of the East India Company also made several attempts to improve the health of Bencoulen's inhabitants including the dispatch of an 'engine' designed to remove minerals (considered dangerous) from both sea and spring water⁸⁷⁷ and strict instructions to the factors to follow the example of local inhabitants and bathe frequently in cold water.⁸⁷⁸

Thus, the Company was concerned to 'cultivate' and 'improve' all its servants, a process that was considered vital to the physical survival of their settlements. However, slaves were the subject of the most intense scrutiny, speculation, and experimentation as their condition meant firstly that, at least theoretically, more control could be exercised over them than over free employees and secondly, that the Company was more concerned with the possibility of their resistance. The next sections will explore how the Company aimed to 'cultivate' slaves by training them in Christianity, languages, and professions and how slaves resisted their condition, sometimes using the same skills

⁸⁷⁵ SHA, *Consultations*, Vol. 11, fol. 494, 21 June 1715; *Letters Sent 1714-1715*, 58a, 07 July 1715.

⁸⁷⁶ Knox, *Autobiography*, fol. 41-43 (Paulusz, pp. 571-573).

⁸⁷⁷ IOR G/35/2, fols. 74-85v, Yale and Council at Fort St George (FSG) to Bloome at Bencoulen, 8 September 1687.

⁸⁷⁸ IOR G/35/2, fol. 95, Commission from London to Capt. John Harding, 3 August 1687.

that made them useful.

Slave numbers and origins

Table 1 shows officially sanctioned movements of consignments of slaves numbering over fifty from c.1680-1710. It is based on a survey of selected records of the major factories, a task which, given the vastness, incompleteness and diffusion of these records, can only be imperfectly performed. It excludes private and secret commerce in slaves and the majority of orders to transport slave where the number is given as 'several' or the traders are simply ordered to acquire as many as slaves as possible. Therefore the real number of slaves transported during this period by the EIC and its members is likely to be far higher. However, it provides a sketch of slave origins and the importance of transfers between factories. As the table shows, the majority of the Company's slaves taken to all destinations came from Madagascar. However, slaves were also frequently transferred between different settlements: partly because of the belief that having a mixture of nationalities would reduce dissent and partly to transfer particular skills. Although the figures are low compared with the Atlantic trade, we should keep in mind that there were very few Europeans in the East India Company settlements in the period. For example, just 24 Company employees, 16 Freemen, and five unmarried women were recorded in Madras in 1679.⁸⁷⁹ Slave therefore formed a significant part of all the Company's settlements and, in St Helena, made up around half of the population throughout the period.

Date (transfer first recorded)	Slaves transferred		Number	Reference
	From	To		
9 February 1684	Madras	Barbados	80	SHA, <i>Consultations</i> , Vol. 2, f. 24.
4 April 1684	Madagascar	St Helena	180	IOR E/3/90, fols. 182-3

⁸⁷⁹ TNSA, *Public Consultations*, Vol. III, pp. 135-6 and 887-889, 30 December 1679.

Date (transfer first recorded)	Slaves transferred	Number	Reference	
21 June 1686	Madras	St Helena and Bencoulen	100	IOR G/19/4, fol. 33
11 October 1686	Madras	Aceh and Quedah ⁸⁸⁰	200	G/19/4, fol. 68
3 August 1687	Madagascar	Bencoulen	100	IOR E/3/91, fols. 175r-175v
8 September 1687	Madras	Bencoulen	100	IOR G/35/2, fol. 85
1 August 1701	Madagascar	Surat	100	MSA, <i>Surat 'Inwards' Letter Book</i> , Vol. 39, fols. 303-305.
10 January 1702	Madagascar	Madras	200	TNSA, <i>Public Consultations</i> , Vol. XXX, pp. 134-138
1 January 1705	Nais	Bencoulen	112	IOR G/35/9, fol. 10
Total			1172	

Official-sanctioned slave transfers ≥ 50 where numbers are given, c. 1680-1710

Slaves had been employed on St Helena since the Portuguese period: an account of 1625 describes about 150 slaves and the same number of free inhabitants.⁸⁸¹ East India Company ships were dispatched specifically to bring slaves to St Helena from Madagascar, Angola and various places around the Gulf of Guinea.⁸⁸² Slaves were also transferred from the factories in India, some of whom were Africans who had already been transported⁸⁸³ while others had been sold into slavery

⁸⁸⁰ A state on the west side of the Malay peninsula.

⁸⁸¹ 'Island of St Helena, The Battle for Chapel Valley', 1975. Unpublished pamphlet consulted in the library at Plantation House, St Helena.

⁸⁸² Royle, *The Company's Island*, p. 85.

⁸⁸³ The arrival of these ships is noted throughout the records of this period, sometimes with a more detailed account of the number of slaves purchased for the island. See also Royle, *The Company's Island*. pp. 85-6 and Makepeace, 'English Traders on the Guinea Coast'. An example of a slave who had traveled across several Company plantations occurs in SHA, *Consultations* Vol. 5, fol. 47, 5 March 1697. Harding, a planter, complained that Capt. Robert Laycock of the *America* would not give him 'a Coffrey slave' ('Coffrey' is from the Arabic *kaffir* 'unbeliever', usually implying African origins) who his brother-in-law in Bombay had put on board for him. Ten slaves from Bombay – described as 'negroes' – are also mentioned in SHA, *Consultations*, Vol. 2, fol. 332, 6 May 1687. For an example of a commission to acquire slaves from Madagascar for transportation to St Helena, BL IOR E/3/90, fols. 182-3 – 'Instructions to Captain Knox' London, 4 April 1685.

locally.⁸⁸⁴ Beginning in 1706, when the Council noted that they were ‘a new thing’, traders arrived from Portuguese Brazil heading for Angola to acquire slaves, some of whom were left on the island by the returning ships. A rumoured slave rebellion in 1707 and a trial the following year refer to the ‘Portuguese blacks’.⁸⁸⁵ The Company also purchased slaves from the Royal African Company⁸⁸⁶ and, from 1715, issued licenses to private ships to trade in slaves from Madagascar in return for leaving nine slaves at St Helena for every £500 worth of goods exported from Britain.⁸⁸⁷ The EIC aimed to guard the island from competition from the West Indies. They obtained an official ban on the transportation of slaves from Madagascar to the American plantations between 1698 and 1716. The trade was again banned in 1721, this second time after a failed bid by the Directors for the East India Company to obtain a monopoly on supplying slaves from Madagascar to the West Indies.⁸⁸⁸ However, this ban was circumvented by both the East India Company and their competitors, who continued to ship slaves from Madagascar to the Americas throughout the period. The first detailed census of the ‘Company’ slaves, in 1716, records 18 slaves from ‘Guinea’ out a total of 108, the rest coming from Madagascar.⁸⁸⁹ The total numbers of slaves above the age of fifteen enslaved to planters on the island is given as 200 in 1687⁸⁹⁰ and as 127 (90 men and 37 women) in 1699.⁸⁹¹ Slaves were sold by the Company to planters⁸⁹² and also acquired through private deals with passing seamen. For example, in 1684, two inhabitants confessed to having asked the ‘interloper’ Captain Alley to bring them slaves.⁸⁹³

⁸⁸⁴ Stern, 'Politics and Ideology in the Early East India Company-State', p. 5 notes that the Madras factory was under standing orders to send ten slaves yearly to St Helena.

⁸⁸⁵ SHA, *Consultations*, Vol. 9, fol. 135, Court of Justice, 1 March 1708 (Vogel’s trial) and fols. 7-13 Consultations, 6-10 January 1707. Two slaves, Mingo and Tobey are said to speak Portuguese to one another, one claims to have previously fought with a sword. Another slave, Meg, is also called on to translate.

⁸⁸⁶ BL IOR, E/3/91 fols. 179r-186r, c.f. Royle, *The Company's Island*, p. 86.

⁸⁸⁷ Stern, 'Politics and Ideology in the Early East India Company-State', p. 5.

⁸⁸⁸ Platt, 'The East India Company and the Madagascar Slave Trade', pp. 548-577.

⁸⁸⁹ SHA, *Consultations*, Vol. 12, fol. 200-204, 24 January 1716. ‘Guinea’ includes parts of modern Nigeria and Cameroon as well as Equatorial Guinea.

⁸⁹⁰ SHA, *Consultations*, Vol. 2, fol. 395, 12 December 1687.

⁸⁹¹ SHA, *Consultations*, Vol. 5, fol. 187, 22 January 1699.

⁸⁹² For an order to transport slaves from Madras to St Helena to sell to the free inhabitants FSG *Public Consultations*, 15 February 1688, p. 30.

⁸⁹³ SHA, *Consultations*, Vol. 2, fol. 69, 14 July 1684.

Madagascar was also the main origin of the slaves who were taken to Bencoulen. Although in 1695, the names and occupations of slaves were ordered to be registered, these documents do not survive among the consultations and the first census that is preserved dates from 1748.⁸⁹⁴ Here, 237

Company slaves are listed (82 men, 85 women, 32 boys and 36 girls, compared with 30 European employees): most of the men and almost all the women were from Madagascar, with fifteen men and two men from 'Malabar' (South India, probably referring here to the Coromandel Coast), nineteen men and two women from Nais, an island off Sumatra, and one male Malay slave.⁸⁹⁵ A similar distribution is probable in the earlier period: in 1685 the slaves were described as 'caffreys' and 'gentues', that is, black Africans and Indian Hindus. The former were valued at 100 and the later at 60 dollars for an adult male, probably because of the common perception that Africans were able to perform the most hard physical labour.⁸⁹⁶ In 1687, 100 Indian slaves were sent from Fort St George, which at this time was profiting from a famine in the region by buying slaves who were selling themselves or being sold by family members.⁸⁹⁷ In 1704, the factory acquired 112 slaves from Nais, who were put to work on the fortification and were said to 'take to handicrafts'. At the same time, they requested 200 more Madagascan slaves to work in the pepper plantations.⁸⁹⁸

Slave professions

Education and Training

As argued above, the early East India Company were concerned to 'improve' all the inhabitants of their settlements and in particular their slaves: the process that was believed to be confer moral benefits as well as the more obvious tangible advantages to the settlements. One of the most

⁸⁹⁴ This was after the 1724 resettlement of Bencoulen following the expulsion of 1719 and therefore the population at this point represented a later wave of migration to that which peopled the earlier settlement.

⁸⁹⁵ IOR G/35/9, fols. 177-180, 20 January 1748. Nais is an island near Sumatra, 'Malabar' was used in this period for the Southern Indian peninsula in general.

⁸⁹⁶ IOR G/35/3, fols. 53-4, 5 August 1685.

⁸⁹⁷ IOR G/35/2, fols. 74-85v, Elihu Yale and Council at FSG to Benjamin Bloome at Bencoulen 8 November 1687. For the purchase of slaves during the famine near Madras, IOR G/19/4, fol. 33, 21 June 1686.

⁸⁹⁸ IOR G/35/7 (not foliated), Summary of Bencoulen to London, 1 January 1705.

obvious ways in which such 'improvement' took place was in religious instruction. As the 1680 tract of Morgan Godwin argued, failure to instruct slaves in Christianity demonstrated 'the Crime of such degenerate English, who with that air, have imbibed the Barbarity of the Countries they live in' and laid them open to the 'infection and poison of Malicious Censures'.⁸⁹⁹ In attempting to convert slaves, the English followed the Portuguese, whose missions included training slaves as priests, teachers and even rulers.⁹⁰⁰ The minister appointed to St Helena in 1673 was commissioned to teach children, including slaves, to read and write English as well as instructing them in Christianity.⁹⁰¹ The Company's original intention, expressed in a 1670 letter to St Helena from the Court Directors in England, which Robert Boyle copied into his commonplace book, instructed that any slaves who publicly accepted Christianity were to be freed after seven years.⁹⁰²

From an early stage, the Directors in London urged that slaves acquire skills in masonry, carpentry, agriculture, and as blacksmiths and gardeners.⁹⁰³ The Company's urgings that slaves be literate and trained in particular crafts show that slaves were not intended only, or even mainly, for domestic or menial labour.⁹⁰⁴ The Court of Directors wrote to the factory at St Helena: 'it is found by Experience a vain thing in such Forreign Plantations ever to expect to be fully supplied with all sorts of necessary workemen, until you have brought up Blacks to thorow understanding and use of all working Occupation as they have done long since in Barbadoes'.⁹⁰⁵ In general, slaves were bought

⁸⁹⁹ Godwin, *The Negro's & Indians Advocate*, Dedication to William, Archbishop of Canterbury

⁹⁰⁰ Joseph E Harris, *The African Presence in Asia: Consequences of the East African Slave Trade* (Evanston: Northwestern University Press, 1971), 81, note 9 notes the example of Yusuf son of Sultan Hassan of Mombasa who was educated in Portuguese Goa then installed on his father's throne. Gosse, *St Helena*, p. 69 notes the report of the Dominican friar Father Fernandez Navarette who visited the island in 1673 that there 'some blacks of Madraspastapan [presumably Madraspatam (Madras)], for whom I was concern'd, because they had bin Catholics at home, and were Hereticks there'.

⁹⁰¹ SHA, *Letters Received 1673-1683*, fol. 9, 19 December 1673.

⁹⁰² Robert Boyle, *Papers*, (online at http://www.bbk.ac.uk/Boyle/boyle_papers/boylepapers_index.htm, accessed 17 May 2010), Vol. 4, fol. 144. 'Clause in the Compa^s: letter written to St: Hellena Dated 9th: Dec^r: 1670'. Sent on Ship Vnicorne'. No letter with this date appears to be preserved on St Helena or in the British Library, but the instruction is repeated in SHA, *Letters Received 1673-1683*, fol. 5, 19 December 1673, London.

⁹⁰³ IOR G/35/2, fol. 28 (49r) London to Priaman, 21 October 1686: the Priaman factors are urged to train Madagascan slaves as 'ships' carpenters, smiths, & [in] other handicrafts, as the Dutch do to their great advantage at Batavia'.

⁹⁰⁴ Godwin, *The Negro and Indian's Advocate*, p. 13, notes that slaves were commonly taught to read and write, were appointed as overseers to other slaves, and 'show so much discretion in managing business'.

⁹⁰⁵ BL IOR E/3/90, fols. 175-180, 5 April 1685.

in their teens because they were thought to be more amenable to training.⁹⁰⁶

Slaves who had acquired particular skills in one settlement were often transported again to other parts of the world where their expertise was in demand. For example, in 1685 the Council requested that English-speaking slaves with experience in sugar or saltpeter works be sent from Bengal to St Helena.⁹⁰⁷ When the factories in Sumatra were in their infancy, English-speaking slaves trained in bearing arms or in crafts such as carpentry and making lime were sent from St Helena to Sumatra to act as overseers for slaves acquired directly from Madagascar.⁹⁰⁸

Soldiers

Slaves militias were often seen by the East India Company as an alternative to the dangerous proposition of arming local populations who might turn against them and slaves were often among the first to be sent to new factories. A letter sent with a consignment of African slaves to Bencoulen (diverted from Priaman) ordered that some be employed in keeping guard armed with 'lances, darts and swords'. The Court of Directors expressed the hope that the presence of these slaves would provide 'some kind of balance in case of need ag[ains]t an enemy, they being as much strangers to the Sumatrans as they are to Us.'⁹⁰⁹ A mixture of races procured by transporting soldiers from different parts of the world was deemed crucial to the security of the Company: in Josiah Child put it in an urgent appeal to the Sumatra factories to send soldiers from Macassar and Java 'that have no mixture of the Portugall caste blood in them' to strengthen the garrison at Fort St George, which he said had 'too many of the Portugall or mesier cast[e]'.⁹¹⁰ The Indian slaves sent by Yale from Fort St George to Bencoulen were also intended to serve as soldiers.⁹¹¹

⁹⁰⁶ SHA, *Letters from England, 1717-1725*, 21 March 1717, fol. 36

⁹⁰⁷ BL IOR E/3/90, 05 March 1685, fol. 158, London to Bengal.

⁹⁰⁸ BL IOR G/35/2, fols. 98-99r, London to Bencoulen, 31 August 1687.

⁹⁰⁹ IOR E/3/91, fol. 1-4v, 21 October 1685.

⁹¹⁰ IOR G/35/2, fol. 133v, Sir Josiah Child to Pryaman (diverted to Bencoulen) Sent 26 June 1686 recd. 17 September 1688. 'Portugall' and 'Mesier' refer to mixed-race people with some Portuguese heritage.

⁹¹¹ IOR G/35/2, fols. 74-85v, Elihu Yale and Council at FSG to Benjamin Bloome at Bencoulen 8 November 1687.

In 1688 Fort James (Indrapore, Sumatra) wrote to Bencoulen and London demanding 200 to 400 Madagascan slaves. Otherwise, they wrote, 'yo[u] had better withdraw the factory for unless we are able to force the Mallays neither men nor prows are to be had'.⁹¹² One hundred slaves sent to the new factory in Bencoulen in 1687 were to be trained as soldiers, sailors, or in related work in the garrison.⁹¹³ The Company wrote to St Helena requesting some more experienced slaves who spoke good English or Portuguese to join the company of soldiers.⁹¹⁴ In a 1697 letter, Court warned the Fort St George factory against moving many slaves from Bencoulen to work on the fortification at Fort St David (in Cuddalore on the Coromandel Coast), 'because it must be our care to keep York Fort so well manned as to preserve it from any attempt of the perfidious Malays'.⁹¹⁵ In a letter to Sir John Goldsborough of 1693, the Governor of York Fort in Bencoulen noted that he had made soldiers of several of the younger 'coffreys' (African slaves).⁹¹⁶ This policy was taken on by the Indian factories and Court wrote approvingly to Fort St David in 1694: 'you doe wisely advise to the raising of a Company of Cofferies which would be the truest People and the stoutest Blacks you could trust to in that Place, having no affinity or Relation to the Black People of these countreys nor speaking any of their languages'.⁹¹⁷ However, concern about training and arming slaves is also evident in the Company records. For example, in a letter to Priaman, the Court of Directors urged their factors to limit the types of weapons that the slaves had access to: 'wee think it not convenient that for your defense, you should enure [inure] any of your Madagascar blacks to firearms, yett while we think if you had 50 of our old Peons from fort St George as musketeers & Pike men they might doe good service, and having been our old servants would be faithfull, and a good ballance

⁹¹² IOR G/35/2, fol. 137, Hamon Gibbon in Indrapore to London, 20 September 1688. Whether the factory ever actually received this many is doubtful, the same letter reports that the previous ship had brought only eighteen slaves because of conflicts in Madagascar.

⁹¹³ IOR G/35/2, fol. 85, Elihu Yale at Madras to Benjamin Bloome at Bencoulen, 8 September 1687.

⁹¹⁴ IOR G/35/2, fol. 95, Commission from London to Capt. John Harding, 3 August 1687.

⁹¹⁵ FSG, *Public Despatches from Court*, Vol. 11, fols. 101-119.

⁹¹⁶ FSG, *Letters to Fort St George*, Vol. 5, 107-122 and 127-8, Bencoulen to Madras 02 November 1693. Seven more 'coffrey' soldiers are reported in IOR G/35/3, fol. 216, 18 January 1696.

⁹¹⁷ c.f. Yule, *Diary of William Hedges*, ii, p. ccclvi, 6 March 1694.

against the Sumatrans, Madagascar blacks, and mutinous Englishmen...'.⁹¹⁸ Despite such warnings, slaves were clearly important to the defence of the early settlements: by 1734, the garrison of St Helena consisted of 75 slaves 'belonging to the garrison' and 102 'belonging to the planters' with military training as well as 134 white men and a 'planter militia' of 31.⁹¹⁹

Sailors

Slaves being transferred between different factories would have been expected to work during the voyages: for example, a muster of the ship *Beaufort* included fifty slaves being transported to St Helena.⁹²⁰ In 1693, the Fort St George factory wrote that the *Madapollam*, had been sent on a voyage to acquire pepper on the West Coast with '10 of the Company's Coffrees to supply the place of lascars'.⁹²¹ In the case of the ship *Pryaman*, sent to Indrapore in Sumatra after stopping to acquire slaves at Madagascar, the slaves became part of the crew: on their arrival, the factors let them remain on the ship to assist those of the crew still alive. Shortly afterwards, these slaves ran away, perhaps in the ship's longboat.⁹²² In 1688, eight slaves were sent to Tonkin to assist with fortifications on the factory if necessary, otherwise to 'continue as Marriners for the Ship'.⁹²³ Slaves were also involved in the construction, repair, and loading of ships: in 1685, the Company instructed Fort St George to train their slaves in carpentry in preparation to establish a shipyard.⁹²⁴ Priaman was also intended to serve as a shipyard staffed by slave labour.⁹²⁵

Interpreters

⁹¹⁸ IOR G/35/2, fols. 24 (47v), London to Priaman, 21 October 1685.

⁹¹⁹ Gosse, *St Helena*, p. 171.

⁹²⁰ IOR G/19/5, Consultation, FSG, 20 February 1688.

⁹²¹ FSG, *Letters from FSG* (TNSA), Vol. 4, fols. 102-108, FSG to John Goldsborough in Bengal, 10 November 1693. For discussion of the term 'lascars' see Amitav Ghosh, 'Of Fanás and Forecastles: The Indian Ocean and Some Lost Languages of the Age of Sail', *Economic and Political Weekly*, 43 (2008), p. 56.

⁹²² IOR G/35/2, 68v, Hamon Gibbon at Indrapoore to Bencoulen, 19 July 1687.

⁹²³ IOR G/19/5, fols. 20r-21v, Consultation, FSG, 22 March 1688.

⁹²⁴ IOR E/3/91, fol. 35, London to FSG, 16 March 1685.

⁹²⁵ The British were not unique in using slaves in ship building. Shihan de Silva Jayasuriya, and Jean-Pierre Angenot, *Uncovering the History of Africans in Asia* (Leiden and Boston: Brill, 2008), p. 27, note references to African slaves building and repairing vessels in China.

In 1698, the Court of Directors instructed Fort St George to send to Bencoulen ‘5 or 6 little Native black boys which speak English (of which we understand that there are many at the FORT) that they may in time learne the MALAY language and there become usefull as Interlopers [Interpreters]’.⁹²⁶ As well as learning new languages, slaves sometimes served as interpreters on return voyages to their own communities: one example refers to a man from Johanna (modern Anjouan also known as Ndzuwani in the Comorros) returning with an English expedition against the French⁹²⁷ and another to the capture of ‘Francisco, a black designed Linguaster for Soccatra’ on a voyage to that island.⁹²⁸ A slave named Chinéâ and known as ‘Jambee’, was frequently sent as a messenger between the English factories in Taiwan and Amoy and was highly prized for his knowledge of Chinese.⁹²⁹ Slaves often acquired several different languages as a result of forced relocations. Portuguese was a lingua franca across the Indian Ocean in this period and slaves who spoke it were therefore useful interpreters.

‘Black Doctors’

The imagined traveller of Godwin's lunar fable writes that he was left to recuperate on St Helena with a black slave, Diego, to tend to him.⁹³⁰ References to enslaved ‘black doctors’ occur in reports from the American colonies of this period,⁹³¹ and consulting the medical knowledge of slaves was also common in the settlements of the East India Company. In 1663, the Court wrote to the Council at Fort St George to ask them to purchase ‘two Gentue (Hindu) barbers such as are most expert among them in letting blood and send them on our ships to St Helena’.⁹³² In 1687, a group of

⁹²⁶ Yule, *Diary of William Hedges*, II, cccliv. Yule notes that ‘the last word, the copyist's error for interpreters, must have come naturally to his pen, after the constant writing on the subject of the pernicious violators of the Company's privileges!’ Yule does not give an exact reference for this extract but dates it to the mid-1690's.

⁹²⁷ MSA, *Secretariat Outwards*, 1694-96, V, fols. 211-12. See also Emma Christopher, *Slaves ship sailors and their captive cargoes, 1730-1807* (New York, 2006).

⁹²⁸ Bodleian MS Rawl. C. 450: the log-book of the *Nathaniel* on a voyage to the East Indies and back via Cape of Good Hope, Mocha, etc. 1714-16.

⁹²⁹ Chang Hsiu-Jung and others, *English Factory in Taiwan*, pp. 662 and 707-8.

⁹³⁰ Godwin, *Man in the Moone*.

⁹³¹ Scott Parrish, ‘Diasporic Sources of African Enlightenment’.

⁹³² Court to Fort St George, 20 February 1663 c.f. Yule, *Diary of William Hedges*, ii, pp. cccliv. Yule speculates that this command was not carried out.

English-speaking slaves were sent from the island to Bencoulen, where they were to be employed tending to sick soldiers.⁹³³ Slaves and 'coolies' were also employed within the hospitals of the Indian factories.⁹³⁴ That medicine was also practiced within the slave community in St Helena is evident from a set of rules recorded in 1708 collected out of the instructions of the Company in London and from the planters with the consent of the Governor and Council. These state 'That no Negroe whatsoever shall prescribe or Administer any Physick or Medicine whatsoever to any Negro or Negroes without the Consent of his or their Mistress...under the penalty of severe correction'.⁹³⁵ Nevertheless, a rather different attitude resurfaces in a 1709 exchange between a ship captain who complained that lodging his sick crew members with the inhabitants in the usual way was too expensive and requested that slaves be sent to tend them. The Governor and Council agreed.⁹³⁶

Agriculturalists and gardeners

The importance to the early East India Company of gardens to grow food and experiment with crops from different parts of the world was discussed in Chapter 2. In settlements intended to follow the American plantation model, the introduction and care of new types of crop was especially important. 'Two blacks skilful in planting' were sent to St Helena in 1663 and in a report on the progress of the plantations, Henry Gargen mocked the white planters' lack of skill in contrast with that of their African counterparts.⁹³⁷ Bencoulen was intended to supplement the unreliable supply of pepper from inland by running a pepper plantation staffed by slave labour, as well as the paddy fields needed to feed the settlement.⁹³⁸ In Bencoulen, slaves were also responsible for running miniature plantations to feed the garrison and themselves.⁹³⁹ Therefore, gardening was an important

⁹³³ IOR E/3/91, 177v, 3 August 1687.

⁹³⁴ Chakrabarti, 'Neither of meate nor drinke, but what the Doctor alloweth', pp. 4-5.

⁹³⁵ SHA, *Godwin's Abstracts*, 'Laws and Orders Constituted for the Negroe Slaves', fols. 71-76. Transcribed in Gosse, *St Helena*, pp. 383-6. As Scott Parrish, 'Diasporic African Sources of Enlightenment Knowledge' notes, similar laws were passed in Virginia.

⁹³⁶ SHA, *Letters Sent, 1707-1714*, XXIV, fol. 24, Captain ApRice to St Helena Council, 4 August 1709.

⁹³⁷ Royle, *The Company's island*, p. 85.

⁹³⁸ *Letters from FSG (TNSA)*, VII, fols. 39-49, 26 October 1697 re. 'employment of Coffries in the pepper plantations' in Bencoulen.

⁹³⁹ IOR G/35/3, fols. 171-2, 14 November 1695.

profession and slaves who became proficient were sometimes singled out for preferment: In the Bencoulen consultations of 1695, two slaves listed as gardeners are ordered to receive four dollars per month and a suit of a cloth called perpetuanos.⁹⁴⁰ In the experimental gardens of St Helena, gardening was also a crucial skill: one green-fingered slave of the Governor was described as worth three times the price of other slaves.⁹⁴¹

As noted above, people were often transferred deliberately along with the plants they were skilled in growing. For example, when the Company wanted to introduce cotton and indigo to St Helena, the seeds were brought from Madagascar along with slaves experienced in cultivating these crops.⁹⁴²

Slaves were not merely passive subjects in these exchanges: they also took part in botanical experimentation and the transplantation of crops. For example, a type of yams were introduced to St Helena by a slave called Maria who had wrapped them in her clothes for the journey from Madagascar, planting them by a spring on arriving at the island.⁹⁴³ The Governor, Isaac Pyke, copied Maria's method of wrapping the plants when he sent them on to Sumatra. In another example, Dampier notes that a type of rice cultivation had been introduced into Aceh by the slaves brought from the Coromandel coast by English and Dutch traders and had since become widely practised.⁹⁴⁴ The knowledge of plants could allow slaves some measure of control over their environment, sometimes fed into other occupations, particularly medicine, and may have helped maroonage communities survive.

Builders, blacksmiths, and carpenters

After losing several of their slaves to smallpox in 1748, the Bencoulen factory complained that without them: 'it is impractical to carry out the works on hand, which is Absolutely Necessary to be

⁹⁴⁰ IOR G/35/3, fols. 38-41, 18 July 1695. Perpetuanos: a light and glossy twilled stuff of wool (Hobson-Jobson, 699).

⁹⁴¹ SHA *Letters Sent 1717-1718*, fol. 171, 3 November 1718.

⁹⁴² See Chapter 4.

⁹⁴³ SHA, *Letters sent 1716-1717*, 57-57a, 1 July 1717.

⁹⁴⁴ Dampier, *A New Voyage around the World*, p. 107.

Accomplished, and...our Fortification[s] and Buildings will of course run to decay...for the greater part of the Slaves we lost were deemed the ablest and most skilled in Fabrick as well as other Imploys'.⁹⁴⁵ As this example shows, the construction of the Company's forts, factories and warehouses was largely carried out by slave labour. Some were skilled craftsmen, training in stone masonry, carpentry, and smithing. There seems to have been some hierarchy and system of 'apprenticeships' within these professions: the Bencoulen consultations mention the chief bricklayers and smith receiving (minimal) wages as encouragement, 'being the most ingenious and industrious fellows among them'.⁹⁴⁶ The St Helena consultations refer to one young slave apprenticed to the Smith and another 'working with free Jack, to learn stone laying'.⁹⁴⁷ One slave, 'Old Will', who is said to have learnt carpentry in London, had instructed another slave called Jack Grewer.⁹⁴⁸ Similarly to the method of transferring people with agricultural knowledge, slaves with particular skills in construction work were sent from St Helena to Bencoulen to transfer their knowledge between the settlements. For example, in 1687, the supplies sent to Bencoulen included 'ten tonns of Chalke to burn into Lime, which the Blacks the Governor will send will know how to doe & have been employed in the same work at St Helena'.⁹⁴⁹

Female slaves' occupations

Generally, equal numbers of men and women were enslaved by the EIC: for example, the Bencoulen census of 1748 records 87 women and 82 men.⁹⁵⁰ The list of occupations of the slaves of St Helena implies that most followed traditionally female professions like washerwomen, cooks, midwives, and workers in the dairy.⁹⁵¹ In the 1723 survey of the St Helena slaves' occupations, only

⁹⁴⁵ IOR G/35/9, fol. 212 Fort Malborough to Court, 30 November 1748.

⁹⁴⁶ IOR G/35/3, fols. 38-41, Consultation, 18 July 1695.

⁹⁴⁷ SHA, *Consultations*, Vol. 16, fols. 205-6, 24 January 1716.

⁹⁴⁸ SHA, *Letters sent 1717-1720*, fols. 50-51, St Helena to London, 6 January 1718. Godwin, *The Negroes and Indians advocate*, p. 101 mentions slaves being baptised and trained in England before being sent elsewhere.

⁹⁴⁹ IOR G/35/2, fols. 98-99r, London to Bencoulen, 31 August 1687.

⁹⁵⁰ IOR G/35/9, fols. 177-180, 20 January 1748.

⁹⁵¹ Royle, *The Company's Island*, p. 88. SHA *Letter Book*, II, fol. 142 London to St Helena, 31 May 1721. Vink, "The World's Oldest Trade" notes that female slaves followed similar professions in the VOC. See also Indrani Chatterjee, *Gender and Slavery in Colonial India* (Delhi: Oxford University Press, 1999); Lionel Caplan, 'Power and Status in South Asian Slavery', in *Asian and African Systems of Slavery*, ed. by James L. Watson (Oxford: Blackwell, 1980),

five women are listed as involved in construction work. In contrast, all the women of working age in the Bencoulen census are listed as 'cooleys'.⁹⁵² Enslaved women's involvement in medicine might have focused on reproductive issues, as indicated by a curious story from 1650's Madras about a 'Gentue negro' from St Thomé brought in to perform an abortion for one of the factor's wives.⁹⁵³ The St Helena consultations mention the exploitation of slave women as prostitutes on the island⁹⁵⁴ and one member of the Bencoulen Council was dismissed for keeping a house of slave women (presumably as a brothel).⁹⁵⁵ Women were also involved in resistance to slavery. One particularly dramatic story of slave resistance involves a female escapee who destroyed the prison of St Helena by breaking out of it.⁹⁵⁶

Rebellions, Escape, and Resistance

Unlike parts of the Atlantic world, the East India Company never encountered a large-scale organised slave rebellion. However, in 1695, the slaves of St Helena laid a detailed plan in which each slave was to kill their owners, seize stocks of ammunition, use them to besiege the main fort, and take over the island before escaping on the next ship.⁹⁵⁷ One of the ringleaders apparently boasted 'I can handle a gun as well as anyone: for I was used to carry one when I was a little boy'. This may reflect previous experience in European militia or the militarisation of areas involved in slave trade. The confessions given at the trials of those involved and demonstrate sustained and extensive planning and coordination between slaves. There is also some indication that slaves borrowed from the examples of other colonies: an overheard conversation about slave rebellions elsewhere was said to have been one inspiration for the uprising of 1695.⁹⁵⁸ The plan was revealed

pp. 169–94.

⁹⁵² As Carney, *Black Rice*, 49–55 notes, in West Africa, the cultivation of crops and transplantation was done by women.

⁹⁵³ IOR G/19/1, fols. 16–17, 5 May 1655.

⁹⁵⁴ SHA, *Consultations*, XXI, fol. 376, 17 December 1734.

⁹⁵⁵ IOR G/35/7, fols. 23–4, William Griffith to London, 30 August 1705; fol. 26, Henry Barre to London, 4 February 1706; fol. 44, 31 May 1707, Thomas Joyner to London (in which he defends the practise as 'accustomary'); fols. 47–8, James Cunningham at Batavia to London, 26 July 1707.

⁹⁵⁶ SHA, *Letters Sent, 1714–1715*, fol. 13a, 12 September 1714.

⁹⁵⁷ SHA, *Consultations*, Vol 4, fol. 237, 2 December 1695.

⁹⁵⁸ IOR G/32/2 [not foliated], 2 December 1695.

and those involved were punished with extreme public violence and restrictions on slaves' movements followed.⁹⁵⁹

Also in 1695, thirty slaves armed themselves with muskets and clubs and escaped from their enclosure in Bencoulen in the early hours of the morning: probably a response to the re-appointment of an overseer who had killed a female slave. After killing two of the pursuing soldiers, the escapees vanished into the woods of the interior. The Bencoulen factory responded by placing more restrictions on the movements and interactions of the remaining slaves.⁹⁶⁰ However, in contrast to the freedom of the government of St Helena to meter out extreme violence, knowing that slaves were trapped by their island location, the punishments of slaves who defected were tempered by the factory's concern about those with military training joining their enemies in Sumatra.⁹⁶¹

Smaller groups or individual slaves also resisted their condition by going into hiding – there are several references to escaped slaves living in the woodland that still covered much of St Helena in the late seventeenth century. Inhabitants sometimes sheltered them: one man was sentenced to a public lashing when caught doing so.⁹⁶² In one case, two escaped slaves resisted attempts to recapture them by establishing themselves in a high hill on the island which they were able to defend by rolling stones down on anyone who attempted to reach them.⁹⁶³ In Bencoulen, individual slaves also escaped. In one case an African slave called Chubdar escaped after murdering an Indian slave after a conflict over stolen sugar canes and reports suggest that he had continued to live nearby, returning to the African slaves' enclosure at night, where he was secretly fed.⁹⁶⁴ In Bencoulen, escaped slaves might, as the Company feared, have occasionally been able to find

⁹⁵⁹ SHA, *Consultations*, Vol 4, fol. 259, 16 December 1695.

⁹⁶⁰ IOR G/35/3, fols. 80-81, 22 August 1695.

⁹⁶¹ IOR G/35/4, (not foliated), 10 October 1699.

⁹⁶² SHA, *Consultations*, Vol. 1, fol. 36, 27 January 1679.

⁹⁶³ SHA, *Letters Sent*, fol. 137-143, 03 November 1718.

⁹⁶⁴ IOR G/35/4 (not foliated), 20 October 1699, 'Chubdar the Coffry Slave that murdered the Mallabar Slave being nott yet returned, nor wee able to find him tho have sent out several times upon advice that he lies not above 2 or 3 miles from the Fort and comes to the Coffry pagar and receives sustinance from the Slaves there.'

employment elsewhere. However, local rulers profited from the Company's slave trade and were rewarded for returning escapees were also returned by the Company's Malay allies.⁹⁶⁵ Maroonage communities may have existed and it is not clear what happened to the slaves when the English were expelled from the settlement in 1719. However, life could not have been easy for them: at least one of the slaves returned after the 1695 escape died from an illness contracted during her absence.⁹⁶⁶

Like the knowledge of arms, skill onboard ships occasionally enabled slaves to resist their condition. During the plans for the rebellion of 1695 in St Helena, a slave referred to as 'Jacob...that runn away from Captain Nynn's ship' was designated 'Captain' for the planned escape on the first ship that arrived at the island.⁹⁶⁷ In 1718, some slaves who had been working on St Helena seized a boat and left the island, aiming for their home in Madagascar. Although the voyage was probably tragically unsuccessful, it was carefully planned: preparations included packing eight gallons of water, yams, and extra oars and sails.⁹⁶⁸

Accounts of planned uprisings on St Helena refer to conversations between slaves conducted in either Portuguese or shared 'country' languages.⁹⁶⁹ Despite their usefulness as interpreters, the Company were aware of the dangers of slaves possessing a private means of communication and attempted to ensure that English was the only language slaves shared. For example, one directive to Fort St David about a garrison of African slaves reads: 'as you can buy them from the Portugueez

⁹⁶⁵ IOR G/35/2, fol. 22, 10 December 1686 for an agreement made with a local ruler, Raja Kalippa, that he would receive customs on slaves bought and sold; G/35/2, fol. 295, 9 June 1692 for payment for the capture and return of a slave.

⁹⁶⁶ IOR G/35/3, fols. 171-2, Consultation of 14 November 1695 records 'one of the Rt Honble Compys Coffry female slaves dyed being one of those that last runn away by which means she got her sickness.' Two more deaths of female slaves were recorded in the preceding consultations.

⁹⁶⁷ SHA, *Consultations*, Vol. 4, fol. 340.

⁹⁶⁸ SHA, *Consultations*, Vol. 15, fols. 286-288, 10 June 1718. Similar acts of 'marine maroonage' are discussed by Richard B. Allen, 'A Serious and Alarming Daily Evil: *Marronage* and its Legacy in Mauritius and the Colonial Plantation World', in Gwyn Campbell, Edward Alpers and Michael Salmon, *Slavery and resistance in Africa and Asia* (London: Routledge, 2005), pp. 20-37.

⁹⁶⁹ SHA, *Consultations*, Vol 9, fols. 7-13, 6-10 January 1707.

you may add six or eight, but we would have them bought as they come raw from Mosambeek or Mumbas before they can speak the Portugueez language...and the more Native languages they are off, we think it may be the better...'.⁹⁷⁰

Another means of resistance among slaves involved the use of poison or magic. African slaves were generally considered skilled in plant-based medicine and European travel tales warned of their skills in poisons⁹⁷¹. Evidence of a covert international trade in poisons among slaves emerges in the St Helena records of the trial of a slave, Sattoe, for the attempted murder of his master in 1679. Sattoe had obtained a 'red and white poison from Bantam' from another slave, 'Ruface'.⁹⁷² Reports of attempted poisonings in 1687 and 1689 mention poison made from a 'weed growing on the island' as well as a mixture of blood, ground glass, and 'earth from dead people's graves'.⁹⁷³ Like the use of the poison from Bantam, the use of the grave dirt had transnational as well as local implications: it was used in slave oaths in the Americas and probably represented a combination of the various beliefs about death and the power of corpses derived from discussions between the slaves from Madagascar, around the Gulf of Guinea and elsewhere who were brought together in St Helena.⁹⁷⁴ Despite the dismissive attitude of some of the more educated Company officials like Isaac Pyke,⁹⁷⁵ most of the European inhabitants of the St Helena believed firmly in black magic⁹⁷⁶ and therefore its use by slaves was of equal concern to poisonings or open rebellions. In 1693, a slave named Jamy

⁹⁷⁰ Court to Fort St David, 6 March 1694/5 c.f. Yule, *Diary of William Hedges*, ii, p. ccclvi. 'Mumbas' is presumably Mombasa (Kenya), site of the notorious Portuguese Fort Jesus (Mosambeek is obviously Mozambique).

⁹⁷¹ Ovington, *Voyage to Surat*, p. 54; Scott-Parish, 'Diasporic African Sources of Enlightenment Knowledge'.

⁹⁷² SHA, *Consultations*, Vol. 1, fol. 67, 3 November 1679.

⁹⁷³ SHA, *Consultations*, Vol. 2, fol. 389, 24 November 1687 and Vol. 3, fol. 140, 23 December 1689. See also Royle, *The Company's Island*, p. 97.

⁹⁷⁴ Vincent Brown, 'Spiritual Terror and Sacred Authority in Jamaican Slave Society', *Slavery & Abolition*, 24 (2003), 24-53, p. 36 notes the use of glass, blood and grave dirt as well as other materials in 'Obeah' rituals in Jamaica.

⁹⁷⁵ Gosse, *St Helena*, p. 173 notes that in 1734 a Mr Bates complained that his slave was trying to poison him by witchcraft by burying a phial under his chair and produced a copy of Hamilton's *Voyages* for evidence. Pyke responded by commanding that 'if he troubles us or his neighbours with any more of these idle fancies we will dose him with hellebore and furnish him with a dark room and some clean straw' (a contemporary method of dealing with madmen).

⁹⁷⁶ SHA, *Consultations*, Vol. 1, fol. 277, 25 November 1682, for the accusations of witchcraft made against Anne Powell and Vol. 4 fol. 262, 23 December 1695 for the claim that Priscilla Grandy turned into a dog or cat at night (both women were cleared of witchcraft because of a lack of evidence, but in neither case was it suggested that witchcraft did not exist).

was tried by jury, and convicted of witchcraft and burnt at the stake.⁹⁷⁷

Rebellions have been used in much of the literature on slavery to illustrate new bonds that formed between slaves of different ethnic, religious and caste backgrounds. Some solidarity is evident in the accounts of rebellions and resistance. However, it is also clear that the EIC's plan of diversity was effective to some extent: in both the 1695 St Helena uprising and another failed insurrection in Sumatra, the plans were made and revealed by slaves of different origins.⁹⁷⁸

Punishment

The final and most desperate way for slaves to resist their condition was through suicide. One particularly cruel reaction to this form of resistance occurs in the description of the response to the reaction to some slaves from Calabar (Calabar, Bight of Biafra) to their enslavement. The passage is worth quoting in full as it provides an example of how investigations into the beliefs of slaves could be used as a tool of control. Governor Isaac Pyke notes in a 1714 letter:

‘Severall have attempted to hang themselves, so that the overseers have been obliged to beat them severly to deter them from it, but one of the lustiest men among them did notwithstanding hang himself in the Night on one of the Figg Trees in the Garden. We then order'd a Gallows to be made and set on a mountain in view of the publick Road where he was hung up by the feet and still hangs which scares them from going that way if they can avoid it, and they have a notion that as long as he is tyed by his feet he cannot get to his own Country, which wee hope has been a means to hinder others from destroying themselves in the same way’.⁹⁷⁹

⁹⁷⁷ SHA, *Consultations*, Vol. 5, fol. 156, 13 November 1698 (which concerns a claim for compensation for the slave in question, the Consultations for 1693 omit the trial).

⁹⁷⁸ SHA, *Consultations*, Vol 4, fol. 238, 2 December 1695 and IOR G/35/5, Bencoulen to FSG, 14 April 1701, which notes 'tho wee are sensible ye Coast slaves are much inferior to Cofferies in respect to their Strength and Labour, yet are much cheaper & that there should be a mixture is very convenient to prevent any Combination: they having (as wee are informed) once in Mr Betts his time designed to have cutt off the Garrison but were discovered by one of the Coast slaves and thereby frustrated...!'

⁹⁷⁹ SHA, *Letters sent 1714-1715*, fol. 5-5a, 29 July 1714, St Helena to Bencoulen, sent on the *Rochester*. Note that

Such punishments were no aberration⁹⁸⁰ and cannot be explained by the random cruelty of an official driven mad by life on a small island. Rather, as well as a device to prevent rebellions and dissent, they were part of the process of scientific examination with nature and its products to extract information and work. Isaac Pyke was a correspondent of the Royal Society and an avid observer and experimentalist.⁹⁸¹ This experiment in using the beliefs of the slaves to control them appears to have been made in the same spirit as his observation and use of Maria's method of storing and planting of the yams. After this experience with these slaves from Callebar, whom he also depicted as cannibals, Pyke wrote to the Council to request that no more slaves be sent from that area, dismissing them as 'a race of people not to be Esteemed, they being so little use to the rest of mankind.'⁹⁸²

'Free blacks' and 'gentlemen of colour'

We do not know whether the Company's early directives to free Christian slaves were ever enforced, probably as in the American colonies, the idea was quickly abandoned. Significantly, although he had a copy of the original letter, Governor Godwin did not copy it into his rule book of 1708.⁹⁸³ However, slaves were freed by their owners, sometimes in their wills.⁹⁸⁴ Slaves were also occasionally able to earn money, and in 1695, the Bencoulen factors assumed that eventually the Company slaves would purchase their own freedom.⁹⁸⁵ Slaves were also occasionally freed for particular services: most notably the slave Oliver who was freed for his part in re-capturing the

suicide was considered a crime: in this period white people on the island who were found to have 'murdered themselves' were buried at crossroads with stakes through their hearts (e.g. SHA, *Consultations*, Vol. 4, fol. 273, 2 March 1696).

⁹⁸⁰ For more examples of punishments of slaves on St Helena see Royle, *The Company's Island*, pp. 93-7 Very similar practises are recorded in the Carribean, see Brown, 'Spiritual Terror in Jamaican Slave Society'.

⁹⁸¹ Isaac Pyke, 'The Method of Making the Best Mortar at Madras', *Philosophical Transactions*, 37 (1731/1732), 231-235; notes on other experiments made by Pyke are in his contributions to Senate House MS 56 and his journal in the British Library (Mss Eur D 5).

⁹⁸² SHA, *Letters Sent 1714-1715*, fol. 24-24a, 8 December 1714.

⁹⁸³ SHA, *Godwin's Abstracts*, 1708, 'Laws and Orders Constituted for the Negroe Slaves', fols. 71-76.

⁹⁸⁴ BL Collet MS D. 1153/2 fol. 44 in a letter to Nathaniel Hodges (2 Nov 1712) mentions freeing slaves as a personal good deed. For examples of slaves freed in wills in Madras see Yule, *Diary of William Hedges*, p. cccliv.

⁹⁸⁵ IOR G/35/3, fols. 53-4, 5 August 1695.

island of St Helena from the Dutch in 1673 and became a free planter.⁹⁸⁶

The number of free black people mentioned in the St Helena records gradually increases and in 1721 they are referred to as 'many', with eighteen recorded in the census of 1722.⁹⁸⁷ In a meeting of 1723, apprehension was expressed about the possibility of interaction between free and enslaved black people. The former were said to be 'tampering with' or 'corrupting' the slaves after a report was received that a planter had sold a slave named Abigail to a free black man, Tom Collier.⁹⁸⁸ The Company consequently ordered that any freed slaves should be immediately transported to the Indies.⁹⁸⁹ Freed slaves could also be returned to a state of slavery: the family of Oliver are an example of this process. Oliver's son Jack was imprisoned and then enslaved, despite a lack of evidence to support the accusations against him.⁹⁹⁰ His two daughters were also punished for bearing illegitimate children: Mercy (or Marcy) Oliver receiving public lashing and Martha being deported to Bencoulen, However, Martha apparently retained her freedom when arriving in Bencoulen: the records report that 'a free Black woman with two small children (one but 14 daies old) came ashore here, who was sent from St Helena for several misdemeanours'.⁹⁹¹ It was probably Martha who wrote to Will Oliver, another member of the family, from Bencoulen in 1701.⁹⁹²

The father of Martha Oliver's child, born in 1697, was the white planter Gabriel Powell.⁹⁹³ The birth of mixed-race children posed a problem for the Company because of the blurring of the boundaries of race and free and enslaved involved. Another black woman called Elizabeth Lansdowne was whipped for having a bastard child by the late surgeon David Law in 1701.⁹⁹⁴ Later approaches

⁹⁸⁶ Royle, *The Company's Island*, p. 100.

⁹⁸⁷ Royle, *The Company's Island*, pp. 176-7.

⁹⁸⁸ SHA, *Consultations*, Vol. 18, fol. 142-5, 3 November 1723.

⁹⁸⁹ SHA, *Letters Received 1717-1725*, fol. 217, London to St Helena, 12 February 1724.

⁹⁹⁰ SHA, *Consultations*, Vol. 3, fol. 175, 12 March 1690; Vol. 5, fol. 57, 5 April 1697 (Marcy Oliver is lashed for bearing an illegitimate child); Vol. 5, fol. 242, 4 July 1699 (Martha Oliver is sent to Bencoulen); Vol. 9, fol. 111, 27 January 1708.

⁹⁹¹ IOR G/35/4 [no folio numbers], Consultation, 28 November 1699.

⁹⁹² SHA, *Consultations*, Vol. 6, fol. 116v, 18 November 1701.

⁹⁹³ SHA, *Consultations*, Vol. 4, fol. 57, 5 April 1697.

⁹⁹⁴ SHA *Consultations* Vol. 6, fol. 106, 16 October 1701. It is not clear whether Elizabeth Lansdowne was free or

appear to have shifted the punishment onto the father of the child. After the birth of a child of a black slave and white soldier in 1716, the soldier had his face blackened and was forced to 'ride the wooden horse' as punishment.⁹⁹⁵ As was the case in other colonies, including Virginia,⁹⁹⁶ the children of enslaved women were normally regarded as unfree, regardless of the condition of their fathers. In some cases, the father of the children was able to purchase their freedom and that of their mothers. For example, in Tryamong, a Portuguese soldier was permitted to purchase the freedom of a Company slave by whom he had two small children.⁹⁹⁷ In one extraordinary case of 1713, described in a letter from Joseph Collet, the Governor of Bencoulen, a high-caste Indian man was voluntarily enslaved so that he could marry a Company slave.⁹⁹⁸

Despite efforts to prevent racial mixing and the blurring of boundaries between their free and enslaved subjects, the Company failed to prevent liaisons between people of different races. An account of Bencoulen in 1812 by the surgeon Benjamin Heyne notes that people of mixed race had become integral to the functioning of the settlement: 'Gentlemen of colour, from yellow to jet black – the descendants of Jews and Christians of all nations, by Malay or Bengal women: some of them...are covenanted servants of the Honourable Company; others are monthly writers at our office in Marlborough and the outer stations. All are gentlemen of considerable circumstance'. Heyne describes about 300 domestic slaves living among the inhabitants of the town and notes that they tended to be treated more humanely by both Indians and people of mixed race than by Europeans.⁹⁹⁹ In St Helena, racial mixing among the inhabitants meant that the Directors and Council eventually had to abandon all attempts to legislate difference, and that by the 1930's, the

enslaved.

⁹⁹⁵ SHA *Consultations*, Vol 16, fol. 138-9, 6 November 1716.

⁹⁹⁶ Derek Hughes ed., *Versions of Blackness: key texts on slavery from the seventeenth century* (Cambridge: Cambridge University Press, 2007).

⁹⁹⁷ IOR G/35/4, fol. 197, 6 January 1696.

⁹⁹⁸ Collet MS D1153/2, fol. 71-2, Collet to Rev. Giles Dent, 1 March 1713.

⁹⁹⁹ Transcribed in Antony Reid, *Witness to Sumatra: a Traveller's Anthology* (Oxford: Oxford University Press, 1995), p. 128.

islanders were being described as a 'race'.¹⁰⁰⁰ Slavery was eventually abolished on St Helena in 1832, the children of slave parents having been free from 1818 onwards. The island later became a centre for the campaign to end slavery, housing the Liberated African Depot, where liberated slaves were cared for until they were ready to move on (significantly, however, they tended to be sent as labourers to British colonies rather than being returned home).¹⁰⁰¹

Conclusions

The English East India Company's involvement in the Indian Ocean slave trade neither rivalled that of the Portuguese, Dutch, or French, nor approached the numbers involved in the Atlantic trade. Nevertheless, the Company slaves made up a significant proportion of the population of the early East India Company settlements. Furthermore, as the repeated demands for more slaves from the Sumatra and St Helena factories show, they were considered essential to the success of the factories. Slaves were trained in crafts and agriculture and often relied on for their linguistic and medical skills. Therefore, transporting slaves was one way for the East India Company to transfer skills like making lime, growing indigo, or the knowledge of languages or medicines between settlements. The movement of slaves should therefore be considered central to the 'circulation' Raj describes as crucial to the making of knowledge in the early modern period.¹⁰⁰²

The Company considered 'cultivating' the slaves through education and training in professions as equally important to the success of the early plantations as tending the plants that were introduced. However, like the plants that ended up on the island, the introduction of ideas and people was not a simple stream of ideas flowing between England, St Helena, and Bencoulen, but instead followed multi-directional currents – people moved in all directions from Africa, Asia, and the Americas as well as Europe, and like the informal introductions of plants, ideas about the moral, environmental,

¹⁰⁰⁰ Gosse, *St Helena* uses this term.

¹⁰⁰¹ See Gosse, *St Helena*, pp. 310-312.

¹⁰⁰² Raj, *Relocating modern science*.

physical, and spiritual 'government' of the settlements came from a range of places and peoples. Those who inhabited the settlements cannot therefore be considered the passive subjects of a controlled experiment: they also took part in medical, agricultural and social experimentation as they moved between several different locations, occupying different roles, learning new skills, and forging new social ties and practises. An ongoing struggle for control over the physical, moral, and spiritual condition of the settlements is evident in both slaves' resistance to their condition and the response of Company officials. For example, Isaac Pyke's punishments inflicted on the dead slave from Calabar may be counterpoised to the use by slaves of the earth from graves in poisons and viewed as a contest for the spiritual control of the island.

The EIC records demonstrate that transportation was not merely undertaken in order to supply labour where it was lacking, but to create racial and linguistic diversity in the early Company settlements. The use of slaves from elsewhere was in part intended to avoid hostility caused by enslaving people close to the factories but also had the benefit of providing the Company with a population of non-natives in each location who could be used to promote their interests, whether by military force or the expansion of agriculture and settlement. The transportation of slaves by the Company in this period provided a template for later colonial tactics of transporting workforces around the world. The inability of the East India Company to secure a consistent supply of slaves could have contributed to the later use of convicts in similar roles to those discussed here as performed by slaves. The areas in which slavery was used certainly overlap with regions in which other forms of coerced labour later developed. For example, Bengkulu (Bencoulen) was the first site of a penal colony for Indian convicts from 1787.¹⁰⁰³

¹⁰⁰³ Heyne, *Statistical Tracts*, p. 388-9 notes the work of convict prisoners and debt bondsmen in Bencoulen. Clare Anderson, 'Convict Passages in the Indian Ocean, c. 1790-1860' in Christopher, Pybus and Rediker, *Many Middle Passages*, 129-149; 129. Settlements followed in the Andaman Islands, Penang, Malacca and Singapore. Matthew P. Guterl, "After Slavery: Asian Labour, the American South, and the Age of Emancipation", *Journal of World History*, 14 (2003), 209-241 discusses similarities between the conditions of African slave labourers in Cuba and Chinese 'coolies' who replaced them. Kerry Ward, *Networks of Empire* (Cambridge: Cambridge University Press, 2009) compares slavery and other forms of coerced labour.

CONCLUSION

I have selected 1720 as a rather arbitrary ending date. It was around this time that one of the greatest scientific experiments in combining the learning of East and West was begun: Jai Singh II of Amber (c.1686-1743), a Hindu ruler of Jaipur in Rajasthan, begun the construction of large observatories, or Jantar Mantar, in Jaipur, Delhi, Benares, Mathura, and Ujjain.¹⁰⁰⁴ Jai Singh's pursuit of the latest scientific knowledge led him to gather around himself Muslim astronomers, Hindu pundits, and Jesuit scholars.¹⁰⁰⁵ Like his contemporaries in Europe, he sent observers to distant islands to make observations and despatched a delegation to Lisbon to acquire the latest scientific information. Like the Royal Society and their circle, Jai Singh and his circle gathered copies of earlier works of scholarship including the star catalogues of Uleg Beg.¹⁰⁰⁶ He also commissioned Sanskrit translations of the work of Ptolemy and Euclid, from earlier Arabic versions and of other works directly from Latin and Portuguese.

¹⁰⁰⁴ The order in which the observatories were constructed is uncertain, but Jai Singh's *Zig Muhammad Shahi* implies that the structure at Delhi was built first and the others were built later to check the measurements. Historians vary in their estimates of the date of the Delhi observatory, but it is likely to be between 1710 and 1724, while the Jaipur observatory, the largest, was complete in 1734. Andreas Volwahren, *Cosmic Architecture in India: the Astronomical Monuments of Maharaja Jai Singh II* (Munich: Prestel-Verlag, 2001), p. 65.

¹⁰⁰⁵ Virendra Nath Sharma, 'Sawai Jai Singh's Hindu Astronomers', *Indian Journal of History of Science*, 23 (1993). I am gratefully to Professor Deepak Kumar for suggesting that Jai Singh's observatories would be a good note on which to end.

¹⁰⁰⁶ Uleg or Ulugh Beg was the grandson of the conqueror Timur, who planned an observatory in Samarkand. Jai Singh had access to the building plans, which he discusses in his *Zig Muhammad Shahi*. In London, members of the Royal Society were also discussing the works of Uleg Beg (*Minutes of Council*, Vol. 1, May 1664, fols. 4-5) and a translation of his catalogue of fixed stars and commentary was made by Thomas Hyde ('Ulugh Beighi Tabulae, Stellarum Fixarum' in *Syntagma Dissertationum*).



A view of the Samrat Yantra at Jaipur: The instrument enables celestial measurements to be taken relating to the equator and the world's axis. The large semi-circle forms a plan parallel to the equator, while the triangular structure points to the celestial plane, forming a line parallel to the world's axis.

Nevertheless, in several senses, the history of Jai Singh's observatories appears to be a story of failures to connect. Although works like the *Samrāt Siddhānta* of Jai Singh's principal pundit Jagannātha show engagement with the works of the ancient and medieval world, there are some significant and surprising omissions. For example, none of the work produced around Jai Singh mentions the telescope, although Jesuits had apparently made observations with one in Jaipur during the 1730's.¹⁰⁰⁷ It also neglects to engage with the contemporary work of Newton and Kepler. The grand scale of the instruments in the observatories was perhaps a conscious, but in scientific terms mistaken, attempt to improve on the small European and Arabian equipment Jai Singh was presented with, as well as reflecting Indian cosmological principles.¹⁰⁰⁸

In turn, the scientific academies of northern Europe remained unaware of the work of Jai Singh for

¹⁰⁰⁷ Simon Schaffer, 'The Asiatic Enlightenments of British Astronomy', in Schaffer, Roberts, Raj and Delbourgo eds. *The Brokered World*, pp. 49-107.

¹⁰⁰⁸ A reassessment of the purpose of the observatories in terms of cosmic conceptions of kingship is given by Volwahren, *Cosmic Architecture in India*.

several decades. An article was eventually published by Robert Barker in *Philosophical Transactions* in 1777 with drawings of the instruments at the Jaipur observatory. However, by this time, the Orientalist myth of a dreamy or stagnant modern India forgetful of a great civilisation of the past was already so powerful that Barker accepted without question when he was told that the buildings were ancient monuments rather than contemporary architecture, adding 'arts appear to have declined equally with science in the East'.¹⁰⁰⁹ The correct attribution to Jai Singh was eventually made over twenty years later, by William Hunter in the fifth volume of the *Asiatick Researches*. Hunter translates sections of the *Zid Muhammad* relating to the observatories, gives a detailed commentary on the remaining instruments in each observatory, and notes the accuracy of many of the measurements given by Jai Singh. Despite his generally positive assessment of Jai Singh's science, however, he attributes this to his wisdom in having recognised the superiority of Western science, a sentiment he also attributes to his contemporary, Tafazzul Khan, the translator of Newton's work.¹⁰¹⁰

In many ways, the story of Jai Singh's observatories provides an apt ending. Many of the attempts at cross-cultural communication discussed here reveal similar series of stories of what seem like slimly missed opportunities for full scholarly exchanges. Barons' attempts to mediate between the cultures he spanned often ended in violent confusion; Despite Petiver's ambitions, the collections that the surgeons sent from Madras never resulted in an English and Tamil language rival to the *Hortus Malabaricus*; the planned second editions of the *Dictionary English-Malayo, Malayo-English* and the *Historical Relation of Ceylon* never reached the press; and the chair in Malay at Oxford was never established. Finally, the long-running project to transplant crops to St Helena failed to yield a profit and continues to this day to wreck environmental devastation on the island. In

¹⁰⁰⁹ Robert Barker, 'An account of the Bramins Observatory at Benares', *Philosophical Transactions* 67 (1777), p. 601. See also John Lloyd Williams, 'Further Particulars Respecting the Observatory at Benares', *Philosophical Transactions*, (1793).

¹⁰¹⁰ William Hunter, 'Some Accounts of the Astronomical Labours of Jai Singh', *Asiatick Researches*, 5 (1799), 177-213. For discussion of Tafazzul Khan's translation Schaffer, 'Asiatic Enlightenment'.

many ways, these projects floundered because of the fragility of the networks on which they were based and of the turbulent and conflictual situations in which they were created. Often, these sets of scholarly relationships ended in death, degenerated into rivalries, while merchants' collections were lost or destroyed in the violent expulsion of the factors from yet another settlement where they had upset locals with their drunken rudeness or worse.

There are several other such projects that could have been discussed here, including the translations of Hindu scripture by John Marshall, scrawled over and neglected by its later owners¹⁰¹¹ and Jezreel Jones' 'discovery of Africa', commissioned by the Royal Society,¹⁰¹² which apparently resulted in little more than a treatise on the ways to dress meat.¹⁰¹³ While such projects often seem anomalous, closer attention to the manuscript materials surrounding them can allow us to build up a clearer picture of both local and international scholarly exchanges and their connections to the emergence of colonialism. The links that can be traced between scholarship and colonial expansion were of course not confined to the relationships of the East India Company but existed within a global web of informers, collectors, and compilers of information. Such information, whether in the form of travel texts, natural histories, dictionaries, maps, ethnographic drawings, or books of dried plants, was then re-circulated, translated, reinterpreted, and used for the ends of several competing powers. Information was also circulated through the movements of people, both free and enslaved.

I argued in the introduction that this period should be regarded neither as merely the last phase in an era of adventuring and trade, nor a simply a precursor to colonialism that followed. Of course, the period cannot and should not be entirely divorced from either: in some senses it was the culmination

¹⁰¹¹ MS Eur. C 461. The manuscript is covered in scrawls and notes by Thomas Holt and Joseph Mullan and the letter that accompanied it expresses concern that it 'may not be worth the sending'.

¹⁰¹² Royal Society, *Minutes of Council*, meeting of 19 July 1699.

¹⁰¹³ Jezreel Jones, 'Account of the Moorish way of dressing their meat (with other remarks) in west Barbary, from Cape Spartel to Cape de Geer', *Philosophical Transactions*, 21 (1699), 248–58. Jones later produced more scholarly work, including *De lingua Shilhensi* (Amsterdam, 1715), a treatise on the Shilha language spoken by the Berber peoples of southern Morocco.

of a period that began when an Indian navigator guided the first Portuguese ships across the Indian Ocean from Malindi to Calicut at the dawn of the fifteenth century, while in others, it was a time in which the foundations were laid, not only for colonialism, but also for modernity. To argue for the specificity of this period then is not to deny its connections to either the past or the future, but to highlight the characteristics of a period in which trends of thought emerged that can be considered 'early modern'. These trends can perhaps be summarised as: *openness* to information and ideas from a wide range of sources and people; *collaborative work*, including composite works like dictionaries or herbaria produced by organised bodies of scholars and networks of collectors linked by ties of exchange and patronage; *collecting or prospecting* for plants, words, and ethnographic objects; *classification*, the development of systems to mediate between similarity and diversity by grouping languages, plants, and people into broad families while species names proliferated; and *circulation*, the processes of copying, translating, stealing information from friends, rivals, and strangers and distributing it for corrections and incorporation, and incorporating it into new works to be circulated once more. As argued in Chapter 1, these intellectual trends were a global phenomenon rather than being confined to Europe. They were tied to the large-scale processes of growth in global population and connectivity that took place in the period. They were created in the process of encounters that resulted from these developments rather than being created in a 'metropole' and exported (a view that unfortunately still appears to require combating).¹⁰¹⁴ And their influence extended beyond the sphere of European colonialism into the larger project of modernity.

As monuments of Hindu kingship and contemporary science, Jai Singh's observatories provide a demonstration of the extraordinary degree of openness in this period, in which people from around the world combined diverse forms of knowledge in new configurations. The reason that texts like those of Knox, Baron, and Bowrey continue even today to be regarded as sources of information

¹⁰¹⁴ The latest exponent of the diffusionist model is Niall Ferguson, *Empire: How Britain made the Modern World* (London: Penguin, 2003).

about the parts of the world they describe, is because they are the result of a high degree of engagement between different cultures that was perhaps freer than the exchanges of information that took place in the colonial period. The claim for greater openness in the earlier period does not imply fairness or equality in exchanges, as Drayton notes, 'the promise that universal exchange might lead to cosmopolitan utopia was flawed in its earliest age'.¹⁰¹⁵ Confusion, anxiety, and anomie, as well as greed, not only clouded but often shaped the exchanges that took place in the period.¹⁰¹⁶ Nevertheless, it was a period in which ideas moved across social, cultural, and ethnic boundaries. The concept of openness may be linked to that of adaptability: this was a time when people moved in all directions, moulding and reshaping their identities. As Raj puts it, perhaps consciously mirroring the rhetoric of the time, the very nature of the men who made knowledge in this period was mutable.¹⁰¹⁷ As an illustration, we might counterpoise the tale of Samuel Baron, a Eurasian who fashioned an entirely 'English' identity, to the construction of an 'Asian' identity by the Frenchman who called himself George Psalmanazar.

Jai Singh's project of gathering around himself scholars of different religious and scholarly traditions illustrates the principle of collaborative work, which follows from the idea of openness. The scale and diversity of the new information gathered meant that to process, analyse, and assess the validity of such information, scholars needed to collaborate. Venues for collaborative scholarship included learned societies like the *Académie des Sciences* and the Royal Society, religious organisations like the Jesuits, and the multi-ethnic courts of rulers like the Mughal Emperors from Akbar onwards and of King Narai of Siam and Rajasingha II of Kandy. Less formal collaborations also took place in hospitals, markets, aboard ships, in book shops, coffee houses, and places of worship. The cooperation between the Madras surgeons and their Tamil and Telugu-

¹⁰¹⁵ Drayton, *Nature's Government*, p. 271-2.

¹⁰¹⁶ Sanjay Subrahmanyam, 'Between a Rock and a Hard Place' in *The Brokered World*, 429-443 and Stephen Greenblatt ed. *Cultural Mobility: A Manifesto* (Cambridge: Cambridge University Press, 2010).

¹⁰¹⁷ Raj, *Relocating Modern Science*, p. 226.

speaking counterparts to form the books of plants with their medicinal virtues sent to Petiver appears to have grown out of the quotidian cooperation of the doctors in their search for the most effective ways of treating patients. Deliberate attempts to smooth out contradictions and present work as the result of direct experience could sometime serve to obscure the multiple levels of collaboration through which they were created. For example, the informants of the Madras surgeons slip from view as their contributions are integrated into Petiver's project to map the world's flora and fauna, and the multiple informants who supplied the materials that made up the *Dictionary English-Malayo, Malayo-English* are hidden behind its claim to be the sole product of Bowrey's remembered conversations during a voyage home.

International networks connected sites of collaboration, following the routes through which trade goods were distributed. The types of information that were inquired after often crossed disciplinary boundaries: 'bioprospecting', 'ethnoprospeting', and linguistic prospecting were often undertaken simultaneously: for example, Petiver collected the names of plants as much as the specimens or drawings of the plants themselves, Bowrey collected plants as well as words for Thomas Hyde, and Baron collected and copied maps, drawings, and objects. These networks also provided the means through which materials could be re-circulated, checked, corrected, and re-used: for example, Robert Hooke received Tavernier's account of Tonkin from one set of contacts and sent it out to Baron to be amended, added to, and sent back again.

The overlaps between the types of materials that were collected may be explained by the common strategy of dealing with the collections that were amassed. This was the early modern project of classification, advocated by Bacon and others. It was becoming increasingly apparent in this period that to comprehend the diversity of the natural and human world required both large designations and minute distinctions, and therefore both plants and languages began to be classed into 'families',

then branches, then individual species or languages, and finally sub-species and dialects. The idea of classification can perhaps be held up against that of openness to suggest how this mutability of human nature, a product of openness to new ideas, eventually came to be restricted by more rigid concepts of race and nation. Just as the system of 'tribes' of plants based on their humoral qualities began in this period to give way to binomial classification, the idea of the characteristics of humankind could be broadly explained by the climates in which they lived gradually began to give way to more fixed ideas of particular races with inherent characteristics.

I have noted throughout that the experiments in cultural métissage led not only to peaceful exchanges of ideas, but also to violent conflict. In many cases, therefore, these encounters were considered dangerous. While first Japan and then China reacted by closing down access to their territory to outsiders and restricting the movements of their own people, the response of the European colonising nations was perhaps a more internalised form of closing down. In other words, the construction of a colonial separateness, the sense that Ranajit Guha calls 'not at home in empire'.¹⁰¹⁸ This is not to say that exchanges of knowledge ended after this period: Europeans continued to enter the service of Asian rulers and Asians held influential positions within the East India Company; Asian, European and African physicians continued to borrow from one another's pharmacopoeia; the exchange of words continued as communication because globalised, and linguistic projects emerged as collaborations between people around the world, including institutions begun under auspices of the Company like Fort William College. However, attitudes like those expressed upon concerning Jai Singh's observatories – the claims that their virtues must derived either from a forgotten past or from acceptant of the ideas of Western science – gathered force as strategies to justify colonial rule by denigrating the intellectual capacities of the ruled. As argued in Chapter 1, however, colonial expressions of contempt for other forms of knowledge were imposed over a far more complex reality in which new cultures continued to be built on emerging

¹⁰¹⁸ Ranajit Guha, 'Not at home in empire', *Critical Inquiry*, 23 (1997), 482-493.

hybrid forms of knowledge.

The exchanges of information that went on outside the official purview of colonialism between and beyond the Company's settlements were some of the most important and lasting. I have tried to explore some of these in Chapter 5 by discussing the movements of slaves and the techniques they transferred during their transportation, whether by carrying food crops like the yams brought to St Helena from Madagascar, or by the knowledge of magical forms of resistance. Although the colonial archive is essential for writing the history of those who remain largely unnamed despite their ever-presence in its records, particularly slaves and women, it is also inadequate.¹⁰¹⁹ Perhaps for this reason, the best expression of the reality of the creation and circulation of knowledge in and between Company settlements so far emerges not from a work of history, but from Amitav Ghosh's masterful fictionalisation of the lives of the lascars, slaves, coolies, and members of the Company, Americans and Africans as well as Europeans, Asians, and Eurasians.¹⁰²⁰

The 'culture' of the early East India Company settlements is a difficult concept to define: especially as I have argued for the uniqueness of the experiences of the members of each of the settlements based on their local knowledge networks. It is through the concepts of openness, collaborative work, collecting or prospecting, classification, and circulation that I have suggested might be regarded as definitive of scholarship in the early modern period that I believe the culture of the settlements might also be characterized. The knowledge – whether botanical, medical, cartographic, ethnographic, or linguistic – created on the basis of such underlying cultural practices was by its very nature not invented by elites. Instead, it emerged from the multicultural interactions and conflicts that took place in and between the settlements of the Company.

¹⁰¹⁹ Durba Ghosh, 'Decoding the nameless: gender, subjectivity, and historical methodologies in reading the archives of colonial India', in Kathleen Wilson ed., *A New Imperial History*.

¹⁰²⁰ Amitav Ghosh, *Sea of Poppies* (London: John Murrey, 2008).

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Goa State Archives

Leiden University Library

Maharashtra State Archives (MSA)

National Archives of India (NAI)

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APPENDICES

Note on archival transcription

Below and in the transcriptions of manuscript material throughout I have followed the principle of retaining the original spelling and punctuation while adapting the manuscript for printing.¹⁰²¹ Line endings have not been retained, though the end of a paragraph is marked by leaving a blank line. I have silently expanded such common abbreviations as 'wch' for 'which' and placed the missing letters of less common abbreviations in square brackets or footnotes. Superscript letters have been lowered. 'P' has been silently expanded to 'th', the long 's' has been modernised as has the usage of 'u' and 'v' and 'i' and 'j'. Marks over vowels to indicate double letters have been removed and the letters indicated inserted and 'ff' has been changed to 'F'.

APPENDIX 1

Samuel Baron's account of the trade of India, written from Fort St George in 1695

Add 34123 – 'Copybook of Henry Vansittart, Governor of Bombay, 1756, fols. 40-42

Samuel Baron's account of the trade of India, written from Fort St George in 1695

As well to satisfie your Curiosity as my own Inclination to Oblige you¹⁰²² I have undertaken to write this small Treatise of the present Constitution and frame of the Trade of India, as far as it relates to the English nation and falls under the knowledge and within the Capacity of a Person which considering either his years of experience,¹⁰²³ can only pretend to give a Cursory and imperfect

¹⁰²¹ Michael Hunter, 'How to Edit a Seventeenth Century Manuscript', *The Seventeenth Century*, 10 (1995), 277-310.

¹⁰²² It is not clear who Baron was dedicating this text to. The book is a compilation of advice from various previous members of the Company. A similar example, used up until the twentieth century, remains in the library of Plantation House in St Helena.

¹⁰²³ Baron would have been around fifty years old at this stage.

account thereof.

I Begin with Bombay, which, as it belongs immediately to the Crown of England, and is the Residence of our General, commands the first of our Observations. It is without question a most Excellent Harbour, able to contain a Fleet of ships and a fit magazin of all warlike stores, but as there is little merchandizing at Court, So that Place seems to be appointed as mistress and Directress only to give the necessary orders, both to dispose of their Ships during their stay in India and Dispatch them again for Europe.

Surat The most ancient Presidency and Emporium of the northern parts of India¹⁰²⁴ is a City Extraordinary well situated for trade, not improperly term'd the Mogulls Chamber and seaport to Agra, Lahor, Brampore, Amadabad, and other Inland marts.¹⁰²⁵ it can both takeoff and furnish a Cargo for any part in India whatsoever. The goods yearly sent to Europe are Bastaes¹⁰²⁶ of all sorts as well brown and Blew as white, cotton yarn and wool, atlases¹⁰²⁷ & cuttanees¹⁰²⁸ but no great quantity, nicoeeses, Brawles,¹⁰²⁹ Cambays,¹⁰³⁰ Guinnea stuffs¹⁰³¹. Culgas,¹⁰³² Indigo, Druggs of several sorts, Rangoes,¹⁰³³ Agats &c. besides Diamonds that come overland from Vizagapatam and Golconda, and Pearls that are brought from the Gulph of Persia and Straits of Mannar. The moors drive a great trade from hence to Persia, Bussora, Aden, Mocho, and Judda, where they Dispose of those Goods which from thence are carried through out the Grand Seniors¹⁰³⁴ Dominions and many times by the way of Alexandria, Aleppo and Smyra transported into Europe. I cannot commend ther

¹⁰²⁴ EIC representatives first reached in Surat in 1607 and Thomas Roe was granted permission for the factory there in 1617.

¹⁰²⁵ Lahore (in modern Pakistan), Agra (Uttar Pradesh), Brahmapur (Orissa), and Ahmedabad (Gujarat), all important centres of trade in the Mughal Empire.

¹⁰²⁶ A plain muslin cloth (Noah Webster, *An American Dictionary of the English Language* (New York: N. and J. White, 1839)).

¹⁰²⁷ Satin (*Hobson-Jobson*, p. 39).

¹⁰²⁸ Some kind of piece-goods, apparently either of silk or mixed silk and cotton (*Hobson-Jobson*, p. 289).

¹⁰²⁹ Blue and white striped cloth from Gujarat. Anthony Farrington, *The English Factory in Japan, 1613–1623*, 2 vols. (London: The British Library, 1991), p. 1593.

¹⁰³⁰ Cotton cloth from Gujarat.

¹⁰³¹ Presumably a reference to cheap material used to clothe slaves.

¹⁰³² A type of cloth. *Hobson-Jobson*, p. 13.

¹⁰³³ A chintz in which the colours run when washed, Farrington, *The English Factory in Japan*, p. 1605.

¹⁰³⁴ An anglicised version of 'grand seigneur', used in seventeenth century French texts to refer to the Sultan of Turkey or Ottoman Emperor.

Custom house on Behaviour towards strangers being very severe and strict in their Scrutiny, even beyond what common civility might demand, and many times Modesty allow of. Especially when they have any Pique against the nation to which the Party so belongs. Besides they are so Dilatory in their dispatching and Clearing of Goods and abusive whilst under their custody that without good care and Assiduity a marcht.¹⁰³⁵ might run the hazard of receiving a considerable damage thereby. I lately heard that the English President hath prevaild with the Customer to agree that all the Goods belonging to our nation shall be carried to a particular Godown or warehouse to which each shall have a key, and there be cleared by an Officer which will in a great measure prevent the aforemention'd inconveniencys.

The Custom paid in Surat is $3\frac{3}{4}$ p cent on all Goods imported without Distinction and not excepting Jewells, Gold, & Silver, provided they be foreign and not the Mogulls Coin. I have only to add to my observations on the Trade of Surat that a marcht. ought to be very cautious and inform himself well of the time allow'd, or Discount for Prompt payment which according to the quality of the Goods may be from 1, 2, or 3 to 8, 9, or 10 per cent, and without which he must be much in the Dark and exposed to the subtilty and knavery of the Banians.¹⁰³⁶

The trade to Persia is likely to prove very considerable because Factorys being well settled in Isphaun and Syrass will open and Encourage a free correspondence to and from Gombroone,¹⁰³⁷ especially for sugars, whereby on Settlement on both Coasts and Bengall in particular will be gainers thereby, and the abuses committed by armenians¹⁰³⁸ in some measure prevented. A Ready instance of the probability of a good Voyage is apparent enough by the gentlemen of both Madrass and Bengall employing their ships and stocks with so great application that way. Carwar Since the taking of Vizapore is inconsiderable, that Country being almost destroyed by the frequent incursions

¹⁰³⁵ Merchant.

¹⁰³⁶ Hindu merchants.

¹⁰³⁷ Esfahan and Shiraz are in Persia. Gombroon refers to a port on the Persian Gulf (modern Iran) now known as *Bandar-e-Abbās*. The EIC had established a factory there in 1623 and it became important to the Company's trade with Persia.

¹⁰³⁸ Armenian merchants had been important in the trade between Persia, India, and the West since the sixteenth century and were often used as brokers by the EIC in their trade with Persia. Here, Baron is echoing the common complaint about the knavery of brokers or go-betweens.

of the Mogulls and Sevagee's forces.¹⁰³⁹

The Factories down the Malabar Coast Vizt Telicherry, Calicut and Anjengo thrive very well and the latter especially which its hoped may produce very large quantities of Pepper and at the cheapest rates the Candys being 556lbs and Costs usually 28½ spa[nish] dollars reckoning all Charges.

The presidency of Fort St George (including Bengall)¹⁰⁴⁰ is at present the most considerable to the English nation of all their settlements in India, whether we respect it in reference to the trade to and from Europe, or the Commerce from one part of India to the other. The usual cargo from China is Tutanggue, Sugar, Sugar Candy, China Root, Quick silver, China ware, Copper Gold, Allom, some few Silks and Toys.¹⁰⁴¹ Their price in Madras this year Vizt Tutanague 24 to 25 pag[oda]s per Candy,¹⁰⁴² Copper 60 to 62 P[agodas] p[er] Candy, China root 12 to 18 P[agodas] p[er] C[andy] last year worth 30 to 40. D[itt]o, Sugar 12½ to 13 Pag[odas] p[er] Candy; Sugar Candy 21 to 22 P[agodas] p[er] Candy, allom Nankeen¹⁰⁴³ 10 P[agodas] p[er] to 12; d[itt]o Amoy 8 to 10 Pag[oda]s per Candy Quick silver 60 to 65 P[agodas] p[er] pecull.¹⁰⁴⁴ The Coast and Bay are so well provided with China goods, that I believe upon the arrival of the next ships they will hardly yield so much as much by 10 p[er] cent for which I subscribe the following Reasons Vizt. That Bengall is Glutted with metalls of all sorts, that the late Troubles and Famine on the Coast of Gingerlee¹⁰⁴⁵ discourage sending any down there and that the continuing devastations committed daily by the Moors and Morattas¹⁰⁴⁶ hinder their free passage into the Inland Countrys on this

¹⁰³⁹ A reference to the Maratha leader Śivājī (1630-80). By this point, Śivājī was dead and his son Śambhaji had been executed by Aurangzeb in 1688, but the Maratha struggle was continuing under Śambhaji's younger brother Rajaram, who had taken shelter in Jinji fort, not far from Madras. See Richards, *The Mughal Empire*, pp. 225-7.

¹⁰⁴⁰ Fort St George was officially in command over the Bengal factories from 1684 until 1698.

¹⁰⁴¹ Tutanggue (or Tutanague) refers to zinc, 'China root' is *Smilax L. China*.

¹⁰⁴² Pagodas were a unit of measurement (as well as referring to a coin).

¹⁰⁴³ 'Nanjing' or 'Nanking' is in Southern China. 'Allom' refers to the metal alum or alumen.

¹⁰⁴⁴ A measurement of weight.

¹⁰⁴⁵ The Telinga coast north of Masulipatam. From the Portuguese *Gergelin*.

¹⁰⁴⁶ Another reference to the conflict between the Marathas and the Mughal Empire. See Richards, *The Mughal Empire*, pp. 225-6.

side. The usual freight from China Vizt sugar allom, Sugarcandy, Gallinal,¹⁰⁴⁷ China Root,¹⁰⁴⁸ Cubebs,¹⁰⁴⁹ anniseeds &c. are accounted Gruff Goods,¹⁰⁵⁰ and pay 24 p% tutangue and copper 20 p[deleted: %] Raw and wrought silk, Quicksilver, Vermillion, musk and Camphir, are fine goods and pay 15 p% and Gold 7 or 8p%.

The Scarcity of Grain hath increased the Trade to Bengal but the plentiful season of Rain will (its hoped) put a stop thereto for surely there can be no advantage more uncomfortable than that which arrises from the poverty and misery of the Poor tho it may be as well Charity as Interest to deal with them sometimes.

The usual Freight and price of Bengall Goods vizt fine Piece goods, which are nutmegs Tanjebbs, Cossaes, Doreas, Taffiteas, Jemewars, Soosees, Sanoes &c¹⁰⁵¹ pay 4 & 4½ p% freight and seldom gain above 10 p % ^clear of^ Charges, many times so that Gurrahs, sailcloth, and Cambays¹⁰⁵² &c pay 8p%. This year sail cloth sold for Pag[oda]s 13 p[er] Corge Gurrahs¹⁰⁵³ of 36 Coved¹⁰⁵⁴ Pagodas 15 ½ to 16. Taffities of 18 cov 32 to 35 p[er] coz Ditto of 20 coveds 37 to 38, soosees of 50 coveds from 50 to 55 (the last year worth 60)¹⁰⁵⁵ but no man can proportion these which rise and fall according to fancy and use, but the most Rational & probable method is Judging by the foregoing rate as a medium. Sugar pays ¾ Pagoda freight per bale, Butter & oyl P[agodas] 1 and sometimes 1 ¼ p[er] Jarr. The Camp¹⁰⁵⁶ in our neighbourhood and Countrys alters the price of goods very much. But should there be brought up any large quantity of Goods of sugar this year, upon the arrival of the expected ships from China the market would be glutted as to occasion the

¹⁰⁴⁷ The aromatic root of certain East Indian plants of the genera *Alpinia* and *Kaempferia*, formerly much used in medicine and cookery (Oxford English Dictionary).

¹⁰⁴⁸ *Smilax L. China*. See Chapter 2.

¹⁰⁴⁹ The fruit of the *Piper Cubeba*, a climbing shrub of the Malay region, *Hobson-Jobson*, p. 277.

¹⁰⁵⁰ A term applied to bulky goods. *Hobson-Jobson*, p. 397.

¹⁰⁵¹ Various types of cloth. See *Hobson-Jobson*, p. 706-7 and Temple, *Diary of Streyntsham Master*, ii, p. 460.

¹⁰⁵² A reference to the cotton produced in Khambhat (Cambay) in Gujarat. Corge is twenty (*Hobson-Jobson*, p. 255, Temple, *Diary of Streyntsham Master*, i, 58).

¹⁰⁵³ This is probably the H. *gārhā*: 'unbleached fabrics which under names varying in different localities, constitute a large proportion of the clothing of the poor' (*Hobson-Jobson*, p. 707).

¹⁰⁵⁴ 'Covid', a variable measure of length around an ell or cubit (Temple, *Diary of Streyntsham Master*, i, 272).

¹⁰⁵⁵ This sentence is giving the variations (due to quality and market fluctuations) in the prices for lengths of different cloths.

¹⁰⁵⁶ i.e. the Mughal or Maratha armies.

sending a vessel or two to Persia in septemb[er] which indeed often proves a happy necessity; for being the first that can arrive, by two months, they have a double advantage in the sale of their goods there and the Returns thither. Because the sugars in Bengall coming from the Country so late as November prevents an early dispatch and Cannot in any wise disappoint those that go immediately from Madrass.

Freight of goods from Madrass to Persia vizt Tissanda or fine Bengal sugar & Sugar Candy 18 p cent. China & Java sugars 20 p% and all Bussora or Course Bengall sugars 23p% Romalls,¹⁰⁵⁷ Cosseas &c. fine goods 7 to 10 p% Pegu Stick laque¹⁰⁵⁸ yields a great price but cannot be permitted on Freight being extremely bulkey. The Returns vizt Gold (being either Chequeen,¹⁰⁵⁹ Go[ld] bars, or Ibraines) pay freight p cent, Syrash wine,¹⁰⁶⁰ abassees p[er] Chest, Fruit, & Abassees¹⁰⁶¹ & matt bagg each that 38 md Tabrees each md Tabrees¹⁰⁶² being 6 $\frac{3}{4}$ ll and where it exceeds allow pro rato. The General Custom is to pay thes and freight in China.

Our correspondence with Acheen is in a manner broke off for since the scarcity of rice first and now of slaves,¹⁰⁶³ the Dearness of cotton and the manufactures of this country (that place being supplied from Surat at much cheaper Rates than can be afforded from hence). its accidental that any vessel go's from this coast thither; Except when having had large quantities of opium¹⁰⁶⁴ from Bengall & worth but 12 or 13 pago p[er] md. it may be adventured, tho it is a uncertain Comodity – the great Gains or disapointment depending upon the Java fleets arrival and the Quantity they

¹⁰⁵⁷ A towel or handkerchief.

¹⁰⁵⁸ Laque or lac is a resin used in varnish.

¹⁰⁵⁹ From the Venetian *zecchino*, *cecchino*, or *sequin*, a gold coin long current on the shores of India (*Hobson-Jobson*, p. 194).

¹⁰⁶⁰ i.e. wine from Shiraz.

¹⁰⁶¹ *Abāsī*, a Persian coin named after Shah Abās (Temple, *Diary of Streyنشam Master*, ii, p. 229).

¹⁰⁶² md is an abbreviation for 'maund', an anglicised version of a weight common in Asia (*Hobson-Jobson*, p. 564). See the same entry for Maunds *Tabrees* as a weight used in Persia.

¹⁰⁶³ Baron refers to the shortage of rice which brought on the famine of 1686. This had provided plentiful slaves, and Dutch records note that the English shipped 665 from Madras to Aceh (Vink, 'The World's Oldest Trade'). However, the abundant harvest the next year had stemmed the trade. The Council also noted that English participation 'brought upon us great complaints and troubles from the Country Government for the loss of their children & servants sperited and stolen from them' and that the Emperor Aurangzeb had ordered them to cease their participation in the trade (IOR G/19/5, fol. 43, 14 May 1688). Arasaratnam, 'Slave Trade in the Indian Ocean', P. 206 notes a 1678 proclamation by Maratha leader Shivaji prohibiting Europeans from transporting slaves.

¹⁰⁶⁴ The word is circled in pencil.

shall have occasion to buy up to carry with them to their Respective Ports.

From Fort St David and this place have gone two or three small vessels to Queda carrying blew Commisseees, Morces,¹⁰⁶⁵ & Long Cloth and some of each sort white with a small parcel of opium, tho I believe they'll make but a poor voyage, considering that the staple commodity of that Port, Tin, is hardly worth 28 P[agoda]s p[er] Candy, and for Dammer, Rattans¹⁰⁶⁶ &c. notwithstanding the profit is great, yet in Respect of the small value and bulkiness of the s[ai]d Goods, are hardly worth the bringing.

The Trade to Pegu is not very great. The Chief design of sending ships thither being to repair them, tho' the goods they carry many times turn to account, but on the Returns if the merchant can save himself he fares very Well. Thin Bettalaes commonly call'd Pegu betteelaes¹⁰⁶⁷ are the proper commoditys for that Country, as are likewise madrass paintings,¹⁰⁶⁸ the price differing according to the fineness and goodness of their several sorts, of the Bettelaes we commonly proportion three, the first 20 to 22 pagodas per corge the second or middle 13 & 14 and the ordinary Course sort 8 to 10 Pagodas p[er] Corge. Of the paintings are various sorts and fineness. The ordinary clouts are double Chequerd Cambays and popleys being either Red or mixt Red, black, or Blew, and cost from 18 to 20 P[agoda]s p[er] Corge. The better sorts are good Chay on colours on fine Long cloth, Morces, or Percollaes, and we proportion them at 1 & 1 ¹/₃ more than the value of their Respective Cloth when brown, and Cleard from the Choultry,¹⁰⁶⁹ according to the Notes receiv'd from thence. Freight paid out and home is generally 5 p% and return this year yielded Vizt. Tyn 27 p[agoda]s p[er] Candy, Elephants teeth small 45 P[agoda]s per Candy, from 30 to 20 teeth to the Candy 50 P[agoda]s of 16 to 20 teeth, 60 P[agoda]s, from 16 to 20 teeth 65 P[agoda]s and under that number 70 to 75 P[agoda]s per Candy. Hartoll¹⁰⁷⁰ or arsenick 32 Pagodas Gants of the best sort 13 D[itt]o Ordinary 7

¹⁰⁶⁵ *Mūrī*, blue cotton cloth (Temple, *Diary of Streynsham Master*; i, p 133).

¹⁰⁶⁶ Dammer is a resin (*Hobson-Jobson*, p. 295).

¹⁰⁶⁷ Beteela, a kind of muslin, from the Portuguese, *beatilha*, meaning veil (Yule, *Vestiges of Old Madras*, i, 528, n. 1).

¹⁰⁶⁸ Chintz, on which the coloured design was imprinted by wood blocks or by hand. Yule, *Vestiges of Old Madras*, i, p. 15, n. 6.

¹⁰⁶⁹ Customs' house. An institution borrowed by the English from the Mughal administration.

¹⁰⁷⁰ Hartoll or HURTAUL, s. Hind. from Skt. *hari-talaka*, *hartāl*, *haritāl*, yellow arsenic, orpiment. (*Hobson-Jobson*, p. 430).

and Lead 6. Tho Gants as being the Country money is prohibited Exportation under strict penaltys, therefore very seldom in any Quantities brought away. How be it this year there was found a Contrivance to Run and Conveigh so much as never was known before to come in one season.

I have little occasion to speak of the trade on the West Coast of Sumatra where you are far better acquainted than I can pretend to therefore shall only offer that prosperous Voyage may be made thither both from surat and hence as well by the manufacture of both places sold there, as the returns in Pepper, Gold, Benjamin, Camphir &c.

Sam[ue]l Baron.

APPENDIX 2

***Materia medica* in Samuel Browne's volumes of plants sent from Madras**

The tables below give those plants sent to James Petiver by Samuel Browne that can be identified by the cross-references to the *Hortus Malabaricus* that both Petiver and Browne include in their discussions of many of the plants. K.S. Manilal's modern edition of the *HM* gives the scientific names, meaning that a bibliographic (rather than scientific) identification can be made on the basis of this comparison. The numbering of the specimens follows that given by Browne in the volumes in the Sloane Herbarium and in the articles by Browne and Petiver in *Philosophical Transaction*. The purpose is to illustrate the potential of this resource for studies of medical history and to demonstrate the similarities and difference in the medical applications reported in Kerala and Tamil Nadu in the seventeenth century. Naturally, this attempt is limited by the possibility of errors in any of the stages of transmitting information and none of the medicinal uses given here should be relied on without further and more substantial evidence. In the tables, 'Malabar' refers to Tamil and 'Gentue' to Telugu. In many cases, the original Tamil label is also present and would provide a better guide to the names of the plants than the transliterated versions that are reproduced here.

Book 1: Plants gathered at 'Hinguer pollum'¹⁰⁷¹, about twenty miles from Fort St George, 26-28 February [1696], 'Plain clay ground, somewhat stony, not fit for Tillage, a meer Wilderness'

Specimen	HM	Scientific name	'Malabar' name (Gentue' name)	Medical uses (Browne)	Medical uses (HM)
5	Vol. 9, Tab 40	Melilotus indica: FABREAE	Yelanaiureve	Provokes urine if the decoction of the roasted herb is taken with a little powder of borax.	The fruit reduced to powder helps in the weakness of limbs.
15	Vol. 10, Tab. 43	Sphaeranthus indicus ASTERACEAE	Coata-corundee	The powder of this is used three or four other ingredients for small pox and is part of a different compound for fever.	The whole plant is used to treat heart burn. The powder made when the plant is roasted with oil is used to treat scabies and skin complaints. The root roasted helps stomach pains and with milk is given for haemorrhage.
20	Vol. 9, Tab. 18	Aeschynomene indica FABACEAE	Neruchadday (Neerpundo)	None	A bath is prepared with this, which soothes wounds.
41	Vol. 9. Tab 29	Catharanthus pusillus APOCYNACAEA	Pee Tandale Cotti	None	Used as a decoction for fever, especially chronic tertian fever (malaria). Root given in decoction removes phlegm, suppresses gas and crushed with wine is an anti-colic. Placed on the eyes, restores memory.
43	Vol 9, Tab 26,	Corytlaria juncea FABRICA EA	Janapachidde	Use as an inhalation in fever.	None.

¹⁰⁷¹ I have not yet been able to identify this or any of the other places Browne mentions gathering specimens, although 'Trippetee' where the plants in Book 7 were gathered, may refer to Tirupati.

46	Vol. 10, Tab 34.	Hemidesmus indicus ASCLEPIADACEAE	Nan-na-ree-chedde (Segunda-pala)	Boiled with long pepper ¹⁰⁷² for con- tinual fevers.	Powder of the root, given alone, is against fever; mixed with sugar is given against quartrian fever; ¹⁰⁷³ with wine, or used as a bath, cure empyemate and internal abscess; with onion and Anatonia is an anti-haemor- rhage decoction.
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¹⁰⁷² 'Long pepper' (from the Sanskrit *pippali*) is mentioned in European medicine from Pliny onwards. It is derived from two shrubby plants, *Piper officinarum*, C.D.C., a native of the Archipelago, and *Piper longum*, L., indigenous to Sri Lanka, parts of India, Timor, and the Philippines. Long pepper is the fruit - spike gathered and dried when not quite ripe (*Hobson-Jobson*, pp. 697-8).

¹⁰⁷³ A fever that manifests itself every four days.

Book 2: Plants gathered at 'Pearmeedor', about 16 or 17 miles from Fort St George, 27-28 April 1696 'the country here is full of trees and bushes, the ground clay, dry and sandy'

Specimen	HM	Scientific name	'Malabar' name ('Gentue' name)	Medical uses (Browne)	Medical uses (HM)
50	Vol. 9, Tabs. 3&4	Acacia caesia FABACEAE	Bupaulemaraum ('Gentue', Ad-deweepaula)	None.	None, but used as shampoo.
55	Vol. 6, Tab. 9 & 10	Cassia glauca FABACEAE	[Caut-Mandaree]	None	Treatment of gonorrhoea, 'diabetes of joints', juice of the bark in a compound helps 'knotty gout'.
59	Vol. 10, Tab. 5	Helixanthera wallichera LORE-ANTHACEAE	Causha or Causha-chedde	The root, bark and leaves boiled and drunk cure pains in the bones proceeding from cold.	A bath is prepared from the leaves the bark prepared into a smear in rice water is thought to reduce the swelling of the legs (using magic).
64	Vol. 4, Tab. 41	Zizyphus mauritiana RHAMNACEAE	Caut. Yellendae	The tender top leaves and flowers of either, or all three mashed and mixed with sour milk, cures gripes and bloody flux ¹⁰⁷⁴ , and is good in all loosenesses, as also for gonorrhoea; the fruit is also binding.	The treatment of gonorrhoea, the drawing off of the stomach and clearing noxious fluids. Also promotes sleep, clears delirium and eases arthritic pains.
65	Vol. 10, Tab 88	Ocimum basilicum LAMIACEAE	Oatepemarutte	One of two similar plants, the other called Rettepemarett. The juice is steamed and pressed from the plant and used for asthma, wind, and cold pains.	The whole plant, except the root, is useful either as a drink or as a bath, both for the whole or cephalic disease (pertaining to head), also for mania. Boiled in water, it gives a mouth-wash, which removes eruptions in the mouth of children.
71	Vol. 5, Tab. 50	Caesaria tormentosa FLACOURTIACIAE	Davadarree	The decoction of the leaves kills worm. The bark cures fevers, colic, and pains occasioned by wind. A decoction of the wood purifies the blood, corrects chol-	None

¹⁰⁷⁴ 'Gripes' refers to pains in the bowels and 'bloody flux' is dysentery.

74	Vol. 6, Tab. 3.	Pongamia pinnata FABACEAE	Punga-Maraum	er, ¹⁰⁷⁵ and expels wind. A milky liquid taken from the roots is used to cure ulcers and fistulas. The oil of the fruit expels wind. The fruit hung about children's necks cures the whooping or chincough.	The leaves expel gas and arthritic pains; fumigation of the leaves drives out fever, the juice taken without delay cures the stings of poisonous serpents.
78	Vol. 10, Tab. 47.	Phyla nodiflora VERBENACEAE	Poordele	The whole plant bruised with a little long pepper and the quantity of a nutmeg, taken night and morning, cures coughs in old people and children. Taken with butter for 'fluxes and gripes'.	Useful against the sting of the cobra; the juice with pepper heals the 'sacred disease'. ¹⁰⁷⁶
80	Vol. 8, Tab 28	Ardidia solanacea MYRINACEAE	Mura-cootan	Fried in butter and used by women for period pain and heavy periods and to reduce swollen bellies.	The juice of the leaves, given with the milky juice of 'Indian nut', ¹⁰⁷⁷ checks lumbago.
83	Vol. 5, Tab. 46	Drewia glabra TILIACEAE	Poon-nasai	Given in butter and honey against impotency, 'it being a strong provoker to venery'.	Possible medicinal use in gout. Juice given with honey is used for blisters in the mouth. 'The root crushed and cooked in the milk of Coqui Indici (coconut) helps in the accursed disease (Cobrella) if smeared with it.'
84	Vol. 1, Tab. 55	Tephrosia purpurea FABACEAE	Coolauvalle	The decoction helps indigestion	The roots are cooling and good for the liver and heart. Also good for fever, melancholy, promoting appetite. The root with oil helps gout and the leaves fried can help cure burns.
87	Vol. 10, Tab. 10	Asparagus racemose LILIACEAE	Tanne mutanea-tunga	Very good in 'hectic fevers' ¹⁰⁷⁸ and consumptions.	

¹⁰⁷⁵ Bile viewed as a malady or disease; bilious disorder, biliousness. Associated with the qualities of heat and anger, irascibility, and melancholy.

¹⁰⁷⁶ Hippocrates' term for epilepsy.

¹⁰⁷⁷ Coconut.

¹⁰⁷⁸ A fever characterized by a daily spike in temperature.

90	Vol. 4, Tab. 37	Calophyllum ino- phyllum CLUSI- ACEAE	Caut-Mogula- Maraum	None (Browne's label was lost)	Eases pains in the bowels, given in decoction to cure pains in the joints and obstructions of certain intestines. The juice 'removes fouls blemishes of the face and whole body if they are smeared with it'.
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Book 3: Plants gathered at plants gathered at 'Chaberamback and Aumerapead', 14-16 miles from Fort St George, 22 and 27 March 1696.

Specimen	HM	Scientific name	'Malabar' name	Medical uses (Browne)	Medical uses (HM)
93	Vol. 5, Tab. 36	Canthium coromandelicum	Tetum-cootan	Decoction of the root, bark, leaves, flowers, and fruit cures 'coughs, ulcers of the lungs, consumptions, and hectic fevers'. Boiling it with butter has the same effect.	None
96	Vol. 4, Tab. 10	Terminalia bellirica COMBRETACEAE	Tauneekea	The root, bark and leaves boiled in water and drunk 'purges phlegm'. Used in several other diseases.	An antidote to poison from the tree Katou-Tsjerou ¹⁰⁷⁹ or Rambibo and a cure for colic pain. Oil pressed from the fruit strengthens hair and powder made from the kernal cures endemic cachexia (morbid state of the bodily system).
101	Vol. 7, Tab 11	Cissus latifolia VITACEAE	Perremaurulla	The root ground and drunk in water cures buboes: the leaves bruised and applied help the same. Bulkley reports a use to reduce swelling.	The juice pressed out and oiled with oil helps digest thick fluids. Cooked with jaggery, it is effective in treating fevers and pleurisy. 'Water dripped from the truck' alleviates cough, purifies blood, and cures ulcers of the lungs. The root crushed and boiled in water removes odontalgia (toothache) and bad-smelling gums. The crushed barks promotes the covering of ulcers with flesh.
104	Vol. 3, Tab. 37	Aegle marmelos RUTACEAE	Mooelle-cruettoo	An oil of the fruit is given for dead palsy and lameness.	A decoction is prepared from the bark and small roots of the tree with common water, which cures hypochondria, melancholy, palpitation of the heart. The powdered bark cures headaches and giddiness and the de-

¹⁰⁷⁹ *Holigarna arnottiana*, ANACARDIACEAE, see *HM*, Vol 4, Tab 9.

105	Vol. 5, Tab. 2.	Vitex pinnata VER- BENACEAE	Punnunga Narree	The powder of the bark of the root and tree cures the colic and gripes, if taken in hot water.	coction of the leaves cures asthma. Good for diarrhoea, dysentery and 'straining at stools', the leaves with pepper and the seeds of <i>Cod-da-Pala</i> ¹⁰⁸⁰ cooked in infusions of rice are an antidote to the stings of serpents, scorpions, and of other venomous animals. The bark crushed and cooked dissolves blood clots. The juice of the leaves cooked in water is good for endemic disease, drunk in butter milk is good for dysentery. The fruits are also good for the same complaint. Good for fever in decoction and cooked with jaggery. ¹⁰⁸¹
106	Vol. 1, Tab. 38	Phyllanthus emblica EUPHORBIACEAE	Nelle maraum	Used to with sugar 'to purge choler...it is also good in fluxes'.	The leaves boiled and applied to the head stop headache and their juice is an outstanding sternutatory (causes sneezing) for clearing the head. The juice pressed from the pills heals endemic cachexia, and anti-spasmodic pills are made from the root.
107	Vol. 4, Tab. 12	Ataliantia mono- phylla RUTACEAE	Corutree	An oil of the fruit is given for dead palsy and lameness.	A decoction is prepared from the bark and small roots of the tree with common water, which cures hypochondria, melancholy, palpitation of the heart and 'lymphthy'. The powdered bark cures headaches and giddiness and the decoction of the
108	Vol. 3, Tab 37	Aegle marmelos RUTACEAE	Ville-Vittree Malab	'A decoction of the leaves is a counterpoison of the root, purifies the blood and corrects choler, as the natives phrase it: the fruit decocted is a panacea in all fluxes and fevers.'	

¹⁰⁸⁰ *Corypha umbraculifera* ACANTHACEAE, see *HM*, Vol. 3, Tab 12.

¹⁰⁸¹ A sugar made from the palm *Caryota urens*.

113	Vol. 11, Tab. 51	Hewitta malabarica CONVOLVU- LACEAE	Shevada ['Gentue', Tagada]	The root is boiled with milk 'a dram of this is a very gentle but brisk purge, and does not gripe in the least; mixed with other things it serves them for many distempers.'	leaves cures asthma. The leaves, crushed with Codi-avanancu ¹⁰⁸² and fresh butter, ripens and open abscesses. The root levigated with rice-water resists erisypales (an inflammatory disease). Used for arthritic pain and helps child bearing women when the body is washed in the decoction. The root crushed and mixed with water heals blisters in the mouth, crushed in water for cold fevers, and 'burning of the liver', with salt expels worms. Oil extracted from the root helps 'burning' of the liver and headache, 'dried-out cholera', bad breath and mouth ulcers.
114	Vol. 2, Tab. 10	Uvaria narum AN- NONACEAE I	Ashoga-maraum	The root and leaves boiled in water, and the sick bathed with it, cures cold pains and rheumatisms.	The root given in decotion arrests flatulence and puts a stop to lumbago in children, taken this way with sugar and honey drives out cough. Decotion of flowers with sugar is profitably used in the place of melted sugar for a mild purge.
117	Vol. 1, Tab. 32	Bauhina variegata FABACEAE	Aateener chedee	No use in medicine but the bark is made into ropes.	'The juice of the leaves mixed with the seed of mustard resists asthma by its emetick power. A bath is prepared from the same or small bags are made from these and heated with the addition of black salt, supplies a remarkable remedy in gout.'
121	Vol. 9, Tab 42	Justicia gendarussa ACATHACEAE	Nuchulee	'The root, leaves, flowers and fruit being ground expels wind and eases all pains, even those of the gout, as I have experienced'. being hot, cures cold pains, the whole plant is bitter.	

¹⁰⁸² Codi-avanacu, *Sebastiana chamaelea*, EUPHORBIAEAE, see *HM*, Vol. 2, Tab 34.

122	Vol. 5, Tab. 11	Embelia tsjariam-cottam	Pulichee-maraum	The root, leaves and bark are pectoral, cure coughs, consumptions, and hectic fevers.	From the leaves and bark of the tree boiled in water, a mouthwash is made, useful in curing flaccid and inflamed gums.
125	Vol. 1, Tab 20	Mimusops elengi SAPOTACEAE	Mogula-maraum	A decoction of the leaves cures the toothache. The fruit ground with water and put into the eye, cures the pain of the head from a cold cause. The root cures the itch outwardly applied.	The root crushed with vinegar helps swelling in the face and blisters in the mouth. A decoction of the bark is good for quinsy (abscess/ severe inflammation behind the tonsils) and also for toothache, water distilled from flowers and drunk is good for melancholy.
128	Vol. 1, Tab. 35	Bauhinia tomentosa FABACEAE	Cheru-Mandaree	None	The crushed root is good for struma (inflammation of the thyroid gland) and parotis (mumps, inflammation of the parotid glands). A decoction of the bark of the root is good for phlegm, worms of the stomach, inflammation of the liver, and haemorrhage. The crushed bark reduces swelling, helps wounds heal and cuts.
131	Vol. 1, tab. 52	Morinda citrifolia RUBIACEAE	Noona chedde	The powder of the bark expels wind, and gives a red dye.	The juice pressed out and cooked with the leaves of the 'short fig' is good for parts affected with gout.
132	Vol. 8, Tab. 50	Vigna mungo FABACEAE	Surru pierru	'The Moors call [this plant] Tour, which they say is hot, and therefore give it for such as hot diet is proper.'	None

Book 4: Plants gathered from 1-4 April [1696] at Perre-pollum and Eremita-pollum, 12 or 14 miles from Fort St George, ground sandy, clay reddish, pretty plain

Specimen	Cross-references	Scientific name	'Malabar' name	Medical uses (Browne)	Medical uses (HM)
138	Vol. 4 Tab 40	Trema orientalis UL-MACEAE	Maula poo	'The natives who have pains in the head and in all their bones, fume with the powder of this whole plant, put on live coals and pretty well covered, which produces plentiful sweats, and does much good.'	Parts of the tree, the root, bark, leaves, and fruit, are considered a specific remedy against epilepsy, madness, and 'other similar diseases of the brain'.
142	Vol. 7, Tab. 5	Strynos minor LOGANIACEAE	Nella watta chedde	The powder or decoction of the root, bark, and leaves cures hectic and other fevers, consumption, cough, and asthma.	The root, crushed with pepper, stops diarrhoea and stomach ache; boiled with oil and smeared, alleviates the pains of joints.
143	Vol. 11, Tab. 27	Nymphaea nouchali NYMPHAEACEAE	Alle-poo	'The natives here give the root and flower for the running of the reins and to correct cholera, and they say 'tis cooling and refreshing.'	The flowers crushed in decoction are used for dysuria (difficulty or pain in passing urine); the seeds used with sugar are a suitable remedy for diabetes.
144	Vol. 11, Tab. 45	Limnophyton obtusifolium ALISMATA-CEAE	Cooltee yella Malab.	Grown in water, this cures the itch or scab, by applying the leaves ground to a pulp and washing with a decoction of the same.	None (or unknown)
145	Vol. 1, Tab. 15	Carica papaya CARICACEAE	Poppoi-chedde	None	None
146	HM, Vol. 6, Tab. 14, p. 25	Adenantha pavonina FABACEAE	Tande maraum	'[T]he natives put the leaves into hot oil to make them pliable, and lay them to rheumatic pains and pleurisies.' ¹⁰⁸³	'The seeds...are used for weighing things...Physicians know how to make a drink from crushed leaves for relieving pain of loins.'
147	HM Vol. 4, Tab. 6	Barringtonia ramosa LECYTHIDACEAE	Neer caddumba	A decoction of the plant cures the running of the reins ¹⁰⁸⁴ and making much urine.	The fruit-bearing stalks are used to make prayer necklaces. Powdered kernels of the fruits cure diarrhoea

¹⁰⁸³ An abscess of the ribs or inner surface of the chest; pain in the chest or the side, esp. when stabbing in nature and exacerbated by inspiration or coughing; an instance of this; any disease resulting in such pain.

¹⁰⁸⁴ 'The running of the reins' seems to refer to kidney problems.

148	HM, Vol. 4, Tab. 14.	Naringa crenulata RUTACEAE OR Catunaregam spinosa RUBI- ACEAE	Valanga	A decoction of the root and bark is cooling, good in choleric distempers. It also cures the running of the reins.	if given mixed with dung of goats, sugar, and butter milk. Taken with human urine, it is an antidote to any poison. The leaves are used against epilepsy. The root moves bowels, drives out sweat, heals colic pains and cardialgia (heart-burn). The dried fruits strengthen the stomach. Resists 'aire contagious from small-pox and malignant sand infectious fevers, and is considered an excellent antiote to various poisons'. For this reason, it is highly priced and 'is avidly sought by Arabs and other merchants'.
149	Vol. 6, Tab. 30	Helicteres isora STERCULIACEAE	Coodee-wengee	A decoction of the leaves, flowers, and fruit cures hectic and all continual fevers: and a drink of the root and bark is good for coughs and consumptions.	Juice of the root is used in empyemate (a collection of puss in any cavity, especially the pleura) and stomach-troubles and in exanthema (skin eruption accompanied with a fever).
150	Vol. 2, Tab. 31	Calotropis gigantea, ASCLEPI- ADACEAE	Erca-chedde	'The bark of its root chewed and held to the aching tooth cures it. The leaf and flowers made into a Poulitice and put to cods swelled (by stopping a Gonorrhoea too soon) takes it away, as also the pain, though never violent[ly].'	Its decoction with oil smeared on the affected part helps gout. The root given in decoction is good in cold fever and helps the swelling of women after they give birth. The same with water helps treat the bite of the <i>Cobra capella</i> and is good for toothache when chewed.

				A purge or laxative medicine is made by boiling the root, fruit and flower in water; 'giving 3 or 4 ounces of it purges choler and expels wind: Garcia ¹⁰⁸⁵ says the distilled water of the fruit was his panacea in cholerick fluxes, but here tis of no use...'	
152		(Areca catechu)	Pauck-maraum		n/a
155	Vol. 7, Tab. 57	Gloriosa superba LILICEAE	Calapeedcalunga	The root, is a rank poison inwardly taken, as the natives say; but they grind it in water and put it on pained or swelled joints'.	The part of the root growing to the north has sympathetic magical powers. The fruit prevents the growth of ulcers and, shredded with oil of Sergelim (sesame) and applied to private parts, makes delivery [of babies] easy. 'The juice pressed out from the leaves of this tree given with a little opium in the beginning of intermitting fevers, relieves their paroxysms. From the same leaves boiled in water, a "semi-cupium" is prepared for relieving arthritic pains.'
156	Vol. 5, Tab 16	Polyalthia korintii, ANNONACEAE	Malle-cungee	It stops the too great flux of urine, cures diabetes and gonorrhea (but is not as effective as SB 97).	
157	Vol. 1, Tab. 21	Nyycanthese arbor-triste NYCT- ANTHACEAE	Poula-mullee	None	None
158	HM vol. 4, tab. 41, p. 85	Zizyphus mauritiana RHAMNACEAE	Yellenda-maraum	A decoction of the root, bark, and leaves cures the gripes and all fluxes; the fruit also (which is bigger than SB 64) is binding.	The treatment of gonorrhoea, drawing off the stomach and clearing noxious fluids. Promotes sleep, clears delirium, and eases arthritic pains.
161	HM Vol. 6, tab 53 and 54	Jasminum augustifolium OLEACEAE and Jasminium Sambac.	Pecalah	'These seem two plants, but are both good for the same use, and are both climbers, the decoction or powder of either of these cures pox,	'The leaves of this boiled in oil remove defects of the eyes.'

¹⁰⁸⁵ Garcia da Orta in his *Colloquys*.

				buboes, itch, scabs etc. taken daily for fifteen or twenty days; it is a little laxative.'	
167	HM Vol. 10, tab. 4, p. 7	Heliocanthes elasticus LOR-ANTHACEAE	Chedde meel ched-dee	'twill prevent all distempers, and prolong youth: Taken night and morning cures leprosy, ¹⁰⁸⁶ it purges gently.'	'[T]his plant, crushed and boiled in rice-water, cures spells, if the natives are to be believed.'
168	Vol. 11, Tab. 48	Acorus calamus ARACEAE	Va sumboo	'[I]t helps digestion, stops vomiting and looseness, procures women's purgations, is diuretick. ¹⁰⁸⁷	The powder of the root is good for the teeth and heals cholera, and 'colic pains tearing the stomach'. Restores appetite and promotes saliva. Used in a bath to heal epileptic children.
170	Vol. 10, Tab.5	Helixanthera wallichiana LOR-ANTHACEAE	Cacian-cheddee	The root boiled is good for a cough	None

¹⁰⁸⁶ An infectious bacterial disease (*Elephantiasis Græcorum*), which slowly eats away the body, and forms shining white scales on the skin.

¹⁰⁸⁷ A diuretic is any drug that increases the flow of urine.

Book 5: These plants were gathered at Slawacka and Keraputta, 'about 30 miles from Madras, among stony ground, hills and mountains, the colour of the earth like rust of iron: there are some moist places, but the ground is generally dry and hard. Collected from the 23rd of July to the first of August 1696'

Specimen	Cross-references	Scientific name	Malabar' name	Medical uses (Browne)	Medical uses (HM)
180	Vol. 11, Tab. 64	Evolvulus alsinoides CON- VOVULACEAE	Visne crantee	'The decoction is good in hectic fevers, consumptions etc. Which the Hort Malab confirms, being boiled with cummin. '	'[B]oiled with cummin, it is taken against fever; it is given also in the thinning of the body and in chronic diseases. Taken with milk, cures also warm fever. Cooked in oil and smeared on the head, promotes hairs...'
181	Vol. 4, Tab. 3	Terminalia catappa COMBRETA- CEAE	Pan-neer Maraum	'The decoction of the root, leaves, bark, etc. cures the running of the reins and sharpness of urine'.	'Mitigates bilious fluids...cures head-ache arising from impeded fermentation of food in the stomach and cures severe colic pains'.
182	Vol. 10, Tab 15	Phyllanthus kozikodanus EU- PHORBIACEAE	Keela nellee	'The whole plant ground and made into pills, and two or three of them taken night and morning cures yellow jaundice and fevers...mixed with milk cures the gonorrhoea; mixed with a little tumerick it cures the itch and ringwing; 'tis also good in hec ticks and consumptions.'	'[T]he leaves crushed along with the root open up boils; leaves alone clean ulcers; fried in the oil of the Indian nut, cures wounds, the root with a few others of the same power does good to the coughing and rheumatism: crushed with onions cleans and consolidates the lacerations of testicles; and is a very effective (contrary) remedy for dysentery.'
184	Vol 5, Tab. 29	Syzgium cumini MYRATACEAE	Nauvel-maraum	The bark of the tree boiled and the decoction drank cures all fluxes, also the dysentery and gonorrhoea.	A mouthwash is prepared from the bark of the tree boiled in water for Aphthis (a small whitish ulcer on the surface of a mucous membrane). The root powdered and given cures diarrhoea, dysentery, and 'straining at stools'. From the fruits cooked in water, a gargle is prepared that is useful for removing afflictions of the throat'.
185	Vol. 5, Tab. 35	Benkara malabarica RUBIACAEAE	Peren-calla	None	The root of this tree dried and reduced to powder expels dead fetuses and placentas retained after childbrith. Unripe fruits check diarrhoea and diminish the flow of

					menses.
186	Vol. 5, Tab. 25	Allophylus cobbe SAPINDACEAE	Shala-maraum	'A drachm ¹⁰⁸⁸ of the powder of the whole plant cures the bites of a venomous horse fly, which the natives call Wandoo-gudee; its also good against the bites of other insects.'	None
189	Vol. 5, Tab. 41	Toddalia asiatica RUTACEAE	Mella Kurni	'The bark, leaves, and berries boiled in butter and about half a dram of it given to young infants cures the carpaun, scab and itch; the bark of the root ground and made into pills, and five or six taken night and morning expels wind and helps gripes, the decoction of the wood is good for pox and rheumatism as are the root, bark, leaves and grain boiled in gingerlee (sesame) oil and three or four spoonfuls administered at night.	From the root and green fruits fried in oil, an ointment is prepared against arthritic pains. From the leaves boiled in water, a bath is prepared for removing anasarchic cachexia (diffused dropsy in the skin and subcutaneous tissue), oedematous swelling of feet, and similar afflictions 'arising from too much serum'.
190	Vol. 2, Tab. 23	Tarena asiatic RUBIACEAE	Pautan-chedde	The decoction of the bark of the root, cures the gonorrhoea and sharpness of urine.	'[C]rushed together and mixed with woman's milk is used for smearing parts affected with pustules caused in the joints of feet and digits'
191	Vol. 8, Tab. 38	Clitoria ternatea FABACEAE	Vela Cacuanha	None	'The juice pressed out from it and with the oil of Schirgelim, when drunk, excites vomiting; its root crushed and drunk with warm water moves bowels'.
192	Vol. 8, Tab. 38	Clitoria ternatea FABACEAE	Carpa Cacuanha	Two types: blue and white, both of which act as a purge. 'Tis an excellent medicine in fluxes, jaundice, cachexie &c.'. Give in small pox, especially for children. Said to be a love potion.	'The juice pressed out from it and with the oil of Schirgelim, when drunk, excites vomiting; its root crushed and drunk with warm water moves bowels'.
193	Vol. 3, Tab. 29	Annona squamosa ANNONACEAE	Cheta paulum	None	'[P]laced over a malignant tumor, powerfully matures them'. Acts as a laxative.

¹⁰⁸⁸ One eighth of a fluid ounce. Also 'dram'.

193a	Vol. 3, Tab. 30	<i>Annona reticulata</i> ANNONACEAE	Ata paulum	None	None
194	Vol. 10, Tab. 24	<i>Glinus oppositifolius</i> MOLLUGIN- ACEAE	Terai	None. Used to flavour food.	The juice, drunk with ginger, pepper, and salt, removes the pains of the stomach 'called by the natives <i>Heniguimao</i> '. The root is useful in fevers originating from phelgm, when placed on the toes in the manner of a ring. The juice pressed out and drunk with sugar in cow's milk is good for 'fever of the bones' and itches. The root in decoction 'moves suppressed urine'. The crushed wood and fruits is put into wounds infected by the tail of the fish <i>Raye</i> .
196	Vol. 2, Tab. 39	<i>Tragia involucrata</i> EUPHORBI- ACEAE	Vella caunjerrie	A powder is made and given in milk for hectic, asthmas and coughs, as also for stoppage of urine. 'The natives with the fume of the powder of the root cures piles and old ulcers, the skin or rind of the seed in powder is a most excellent remedy in a gonorrhoea after purgation; it also stops all sorts of fluxes and dysenteries....'	'Helps in burning, malignant, and pestilent fevers, for which it is often given steeped in jaggery', used as a laxative in summer, for 'boiling of blood, non-quieting of thirst and skin disease and especially tuberculosis
197	Vol. 1, Tab. 23	<i>Tamarindus indica</i> FABACEAE	Pulea chedde		'The root crushed and drunk in cold water, serves for hot fever and burning of hands, and is good for those who spit blood; the same used with cold water mitigates headache, the same drunk in cow's milk helps to extinguish the burning of kidneys, so also 'The natives attribute to this plant the efficacy of love-potions (a drink to excite love). Juice pressed out from the leaves is an arrhynum (sternuatory) driving away cephalgia (head ache or gout in the head).'
198	Vol. 2, Tab. 13	<i>Ixora coccinea</i> RUBIACEAE	Chegga pumelleha	The bark and leaves are eaten with rice for pains of the back and joints, knees especially.	
199	Vol. 11, Tab. 60	<i>Ipomoea quamoclit</i> CONVOLVULACEAE	Vusha coddee	'This climber is not used that I know in physic but the natives rub the juice on their wives' heads to make them love them more'. '[T]aken inwardly is laxative; ground and outwardly applied cures pains and swellings in the knees and buboes'.	
201	Vol. 8, Tab. 43	<i>Canavalia rosea</i> FABACEAE	Mooellee		None

204	Vol. 12, Tab. 3	Tabrobanea spathulata ORCH-IDACEAE	Madel velladee	'[T]aking one dram of the powder for a few days night and morning; the decoction cures the gonorrhoea.'	The juice with Moschata nuts stops dysentery. The powder given with honey heals the mad tempers bile...'
207	Vol. 3, Tab. 43	Vol. 3, tab. 43 is Canavalia rosea FABACEAE and tab. 44 is Canavalia gladiata FABACEAE	Tammerten cheddee	'The root, bark, and fruit correct cholera, but are not used by the natives here for fever.'	The juice of the roots reduces the heat of fevers, the leaves crushed and prepared with infusion of rice softens and opens any boil (tumour). Juice pressed from the fruit heals itches and skin infections. The juice with Indian nut (popularly known as <i>Araque</i>) alleviates stomach ache and diarrhoea. The juice pressed out of the flowers of the palm heal inflammations. From the dried fruits crushed with betel, a powder is made that, given with the leaves of betel or with Indian nut, promotes labour and expels dead foetuses.
209	Vol. 11, Tab. 42	Sansevieria eb-racteata AGAVACEAE	Maurel chedde	'Its decoction cures the berberies ¹⁰⁸⁹ or dead palsy, ¹⁰⁹⁰ the juice of the leaves cures the noise and pain in the ears.'	The leaves crushed and reduced to the shape of pills are taken against ophthalmia...and jaundice of the eyes; with the root, adding garlic and orpiment (yellow mineral, arsenic trisulphide) and cooked in that oil Sergelim, ¹⁰⁹¹ heals gonorrhoea, namely if the head is smeared with that oil; the bulb crushed with citrus, sandal wood and buffalo's butter, gives an ointment, to be used in the contraction and burning of nerves. Therefore the whole plant cooked with oil and butter corrects all the defects of eyes.'
213	Vol. 11, Tab. 32	Pistia stratiotes ARACEAE	Aucashdammaree	None	'Mitigates bilious fluids...cures head-ache arising from impeded fermentation of food in the stomach and cures severe colic pains'.

¹⁰⁸⁹ Probably a reference to 'beri beri', an acute disease generally presenting dropsical symptoms, with paralytic weakness and numbness of the legs.

¹⁰⁹⁰ Palsy producing complete insensibility or immobility of the part affected.

¹⁰⁹¹ Sesame oil.

215	Vol. 10, Tab 11	Alternanthera sessilis AMAR- ANTHACEAE	Punangunne	'The juice of this root, put into the eye, cures ophthalmia's ¹⁰⁹² and pain, a poultice of the root, branches, and leaves beaten and applied to the eye is also good, the juice of the leaves rubbed on the head takes away the pain and stops defluxions of thin Rheum ¹⁰⁹³ .	'Crushed and smeared on head, relieves pains; taken with a bit of butter; rose water; and Muschati helps in dispersing gas; the juice pressed out and drunk with water; removes stomach ache and gas. The root crushed, mixed with cumin and sugar and according
216	Vol. 5, Tab. 37.	Canthium rheedei RUBIACEAE	Cauri chedde	'The natives cure the bloody or any other flux, by giving the leaves fried in butter to eat, it also helps the Tenasmus ¹⁰⁹⁴ and all gripes: the decoction of the root does the same: they always use it alone.'	'[F]rom the leaves of the tree boiled in butter a mouthwash is prepared against aphthas (small whitish ulcers on the surface of a mucous membrane). Root crushed and similarly boiled in water, if its decoction is taken, opens the obstruction of the liver, purifies blood, and cheers up the patient'. Cures empyemata (a collection of pus in any cavity, especially the pleura) and hidden abscesses of the bowel, with European and Malabaric hore-hound (Marrubium) cures cramp, swallowed with honey helps dropsy (hydropen). The root boiled with the oil of Sergelim, smeared with a rag and renewed every twelve hours, cleanses eruptions on the skin. With coconut milk cures spreading ulcers, the bark of the root has the same effect.
221	Vol. 10, tab. 45	Artemisia japonica ASTERACEAE	Masia pattree	'Of these and the leaves of red pepper beat, the natives make pills, which cure intermitting fevers, ¹⁰⁹⁵ for other things they use it, which are needless to insert, for I take it to be, if not the common, yet a species of mugwort.'	
223	Vol. 9, Tab. 41	Barleria prionitis ACANTHACEAE	Varanna Mulle	A decoction of the whole plant cures the dropsie, ascites, ¹⁰⁹⁶ and anasarca ¹⁰⁹⁷ by provoking much urine; a spoonful of the juice of the leaves	The leaves are used like betel (as an intoxicant). The juice helps in aphtis (a small, whitish ulcer on the surface of the mucous membrane) and the swellings of the intest-

¹⁰⁹²Inflammation of the eye, conjunctivitis.

¹⁰⁹³A discharge, possibly from the eyes.

¹⁰⁹⁴A continual inclination to void the contents of the bowels or bladder, accompanied by straining, but with little or no discharge.

¹⁰⁹⁵i.e. intermitting fevers.

¹⁰⁹⁶A collection of serous fluid in the peritoneal cavity; dropsy of the abdomen.

¹⁰⁹⁷A dropsical affection of the subcutaneous cellular tissue of a limb or other large surface of the body, producing a very puffed appearance of the flesh.

				drank cures the thrush or aptha (which the Hort. Malab. also confirms) it's also good in fevers.	ines by gas.
224	Vol. 2, Tab. 49,	Ludwigia perennis ONAGRACEAE	Yelle cootan	'The decoction of this the natives give to those that have a fever with a gonorrhoea and great sharpness of urine, all which it quickly cures...'	The plant crushed and drunk in sour-milk stops dysenteric flow. The same crushed and waved over the head, relieves its pain. Its decoction drunk serves to disperse gas, for moving urine, for purging the stomach and for curing lumbago.
226	Vol. 7, Tab. 44	Cassytha filiformis LAURACEAE	Cootan Malab.	'[G]round with butter-milk and a small cup of it taken night and morning cures the violent scalding of urine and gonorrhoea.'	The whole plant fried with ginger and <i>Nirvala-Pullu</i> , ¹⁰⁹⁸ pulverised and mixed with butter cures chronic ulcers. Smearred on the head with oil of Sergelim, strengthens the roots of hairs. Fried with the bark of <i>Ysjangelam-Parendi</i> , ¹⁰⁹⁹ powdered and mixed with opium, heals the ulcers of the head; with cardamom, milk, and oil of <i>sergelim</i> , and reduced to liquid removes fever in the head. The juice with sugar and jaundice of the eyes as a bath, removes hemicraniam (a headache on one side).

¹⁰⁹⁸ *Hygroryza aristata* (Retz.), POACEAE, see Vol. 10, Tab 12.

¹⁰⁹⁹ Not included in the HM.

Book 6: 'The following plants being less well known, and more enquired for by curious persons, I took them out of several books at different seasons and placed them here together.'

Specimen	HM	Scientific name	Malabar' name	Medical uses (Browne)	Medical uses (HM)
232	Vol. 3, Tab. 45.	Averrhoa bilimbi OXALIDACEAE	Coche Tammartia	The fruit is cooling and is used in atchar [pickles] and curries.	Ripe fruits are also eaten as a delicacy, unripe fruits are pickled with sugar or vinegar and brine... The bark of the root and stem with mustard and cummin stops vomiting and loose motions of the stomach. A decoction of the leaves with cummin promotes sweating and with the 'Malabar crocus' (<i>Manya Coua</i> ¹¹⁰⁰), it is an efficacious remedy for pains in the limbs.
233	Vol. 3, Tab. 47	Phyllanthus acidus EUPHORBIACEAE	Paringe Nellekai	None	
235	Vol. 9, Tab. 20	Neptunia prostrata FABACEAE	Poon chedde	'[T]he natives neither eat, nor use this in Physick, but they believe if the juice of it be rubbed on a woman's breasts, which are too big, it will make them little, and also will dry away milk.'	Given in decoction strengthens the stomach, promotes urine in fevers and relieves the pain of arthritis, crushed with butter ripens apostemata (boils).' 'A tincture of the leaves, together with the leaves of <i>Scedangu</i> , as much as a small gourd can hold, when drunk, relieves cholic pain, especially if the sick person stands with erect body with his hands extended to the sky'.
237	Vol. 6, Tab. 1.	Caesalpinia pulcherrima FABACEAE	Mail Conei	None 'Mr Browne says these flowers are consecrated to their idols'.	

¹¹⁰⁰ Or *Manja-kua*, *Bosenbergia rotunda*, ZINGIBERACEAE, HM, Vol. 11, Tab. 10.

238	Vol. 7, tab. 57	Gloriosa superba LILIACEAE	Shevanar calunga	Used to expel poison by vomiting. Made into an oil with vinegar. Distilled over a fire made with cow dung, it acts as a counter-poison 'but against that of the Cobree de Capello ¹¹⁰¹ 'twill do no good, as I have tried.'	Magic and metaphysical properties. The fruit 'prevents the abundant growth of flesh of ulcers, shredded with oil of Sergelim and its powder applied to the private parts, makes delivery easy'.
239	Vol. 8, Tab. 7,	Mukia mader- aspatana	Peape pingkai	'The juice of the fruit I have seen put up the nose of an apopletick ¹¹⁰² person, which caused him to void much slime and filth by mouth and nose, and in two days recovered him, contrary to expectation.'	The 'juice pressed out and with rose water and taken with the addition of a bit of moscati (raisins?) stops gas; a decoction of the root gives the same (effect); which when chewed by itself relieves toothache.'
240	Vol. 11, Tab. 38.	Crinum defixum AMARYLL- IDACEAE	Narra Villan Calunga	The juice of the root, or a decoction of it, helps sharpness of urine and gonorrhoea.	'From the plant cut into pieces and burnt, two knots are made, which placed on both cheeks cures those suffering from spasmodic distortions.'
246	HM, vol. 1, tab, 22	Cassia fistula FABACEAE	Conea maraum	One of four types of cassia fistula, according to local classifications, but only this type is purging: 'The natives cure anascarcas by applying boiled leaves all over the belly.'	'[T]he bark and leaves crushed and mixed with oil is good for besmearing parts affected by blisters. Beans given in decoction loosen and purify bowels, their powder is used for cataplasm (plaster or poultice).'

¹¹⁰¹ *Naja tripudians*.

¹¹⁰² A person suffering from apoplexy, a malady, very sudden in its attack, which arrests more or less completely the powers of sense and motion; it is usually caused by an effusion of blood or serum in the brain, and preceded by giddiness, partial loss of muscular power, etc.

Book 7: Grasses gathered between the 15 and 20 June 1696 'in the ways between Fort St George and Trippetee, which is about 70 miles off'

Specimen	HM	Scientific name	Malabar' name	Medical uses (Browne)	Medical uses (HM)
250	Vol. 12, Tab. 57	<i>Imperata cylindrica</i> PO-ACEAE	Comachee pillee	'Its sometimes by the natives put into their decoctions for fevers, and is good for coughs and thrush ¹¹⁰³ in children and with us is deservedly of more esteem.'	'[T]he root prepared as a drink checks salivation in fever'
253	Vol. 12, Tab. 53	<i>Cyperus michelianus</i> subs. <i>pygmaeus</i> , CYPERACEAE	Chenduppee Corea	None	'Boiled with oil and the body smeared with it allays itches.'
258	Vol. 12, Tab. 62.	<i>Perotis indica</i> POACEAE	Mautangee pilloo	None	None
264	Vol. 12, Tab. 51	<i>Chloris barbata</i>	Poo pillee	None	None
265	Vol. 12, Tab. 54	<i>Fimbristylis argentea</i> CYPER-ACEAE	Shanee Coree	None	'A broth prepared from this grass mitigates the heat of the body'. 'From the leaves an emmenagogue (medicine intended to restore or bring on menses) apozema is made. Placed on abscesses, makes them ripe and opens them. The root cooked in oil removes scabies and itches.'
268	Vol. 12, Tab. 46	<i>Saccharum spontaneum</i> PO-ACEAE	Naunel pu Malab.	None	A decoction of the plant controls thirst. The root in decoction is used in dry fever and diabetes.
273	Vol. 12, Tab. 52	<i>Kyllinga nemoralis</i> CYPER-ACEAE	Mucutang Corea	None	'From the root, with Mirabolan ¹¹⁰⁴ , a carthartical (having the power of cleansing the bowels), syrup is made'.
287	Vol. 12, Tab. 71	<i>Scriptus articulatus</i> , CYPER-ACEAE	Souta Cora	None	
289	Vol. 12, Tab. 44	<i>Paspalum distichum</i> PO-ACEAE	Ponne varaga pille	None	None

¹¹⁰³ A disease, chiefly of infants, characterized by white vesicular specks on the inside of the mouth and throat, and on the lips and tongue, caused by a parasitic fungus .

¹¹⁰⁴ Or 'Myrobalans', a name applied to certain dried fruits and kernels of an astringent flavour of various different plants.

291	Vol. 12, Tab. 73	Phragmites karka POACEAE	Corki pillu	None	'[T]he juice taken with onion, smeared on the palms of hands and feet cures spasms, boiled with ginger helps manias and hypochondrias....'
295	Vol. 12, Tab. 78	Eleusine coracana POACEAE	Cavaree Codee	None	The flour of the plant is made into pills and placed on the head for mania, mixed with egg and 'Indian nut' is used to strengthen the body, especially the loins, fried in Sergelim (sesame) oil and placed in cloth over a painful part of the body eases pains. The cooked seeds are used to treat cholera.
313	Vol. 12, Tab 70	Catri-conda	Nelle monnee	None	None, but the fruit are tied on the arms like bracelets.
314	Vol. 12, Tab. 79	Setaria italica POACEAE	Tenne	None, used to feed birds.	The crushed plant is placed over venereal boils. Boiled with water and drunk it thins of blood, cures stomach gripes, and gonorrhoeal abscesses.
315	Vol. 12, Tab 75	Spinifex littoreus POACEAE	Ravana Mese	None	'The root crushed and boiled with human hair is taken with great success by maniacs.'

APPENDIX 3

Select correspondence of Thomas Bowrey

MS Eur. E. 192. 2 (a-d)

Containing notes and correspondence relating mainly to oriental language, made c. 1680 and 1713

(a)

Item 3: George Psalmanazaar to Thomas Bowrey, undated

fol. 1r¹¹⁰⁵

Thursday evening¹¹⁰⁶

In order to pronounce the language well and prevent Confounding the signification of words take the following rules for the formosan written in Italian¹¹⁰⁷ characters:

Rh is pronounced gutterly',

Kh guteraly,

ph like like pf,

fl is pronounced unlike any other letter I know of in any language.

o marked \ is short as in omicròn if marked with / it is long as in ómega.

ú is pronounced as u in but or as a double o in English it is pronounced as the french u or as u in the word minute.

¹¹⁰⁵ Endorsed (v), fol. 1v. Captain Boree to be left at the Garter cofee house behind the Royal Exchange' [triangular stamp: Penny Post Payd, WTH].

¹¹⁰⁶ There is no other date given.

¹¹⁰⁷ i.e. in the language of Taiwan written in Roman script.

I am Sir your very humble Serv[an]t

G. P. Salmanaazaar¹¹⁰⁸

Item 5: Thomas Hyde to Thomas Bowrey, Oxford, 20 November 1700

fol. 2r¹¹⁰⁹

Thomas Hyde to Thomas Bowrey

Sr, your direction about Oojang and Jangin, and Éang shall be observed in the print. Your authorities about Hanscreeet and Sanscreeet are very great against me, and probably true. My opinion was grounded only on the authority of one who was Chaplain in India, to whom I wrote for some things in the Hanscreeet language: to which he answered that I must not call it Hanscreeet but Sanscreeet, and accordingly he sent me papers in the old Brachman language. [Marginal note: And I remember Mr Daniel Sheldon out of India received somewhat of the Brachman language called Sanscreeet or Sanscreeet].¹¹¹⁰ my Singala vocabulary hath not the numbers: only I see Ek for one, which is the Persian yek.¹¹¹¹ I have the parts of the Body nicely, in word and outward, too long to be written.

Isakes the Hands	AEha the legs	Kawala the beard	Aenghili the fingers	
Obutabala the scull	Katha the mouth	Bothuwa the neck	Niya potra the nails	
Ifamola the brain	Datha a tooth	Pithikura the	Ata the hands	Rira the heart
		hinderneck		

¹¹⁰⁸ Salmanaazaar is George Psalmanazaar (see Chapter 3). See also MS Eur E. 192 (c) J. 767, Item 16: 'Alphabet of the Iland fformosa on the Coast of China'.

¹¹⁰⁹ In Hyde's hand. Endorsed (fol. 3v, 'To my honoured friend Captain Bowry present these at his house in Marine Square near Goodmans fields').

¹¹¹⁰ Implying that Daniel Sheldon, a member of the EIC's Court of Committees in the 1680's (Knox, *An Historical Relation*, Dedication) either learnt some Sanskrit while in India or brought back some language materials. However, as noted by George Grierson in a letter to William Temple (MSS Eur 192. 2 (a), Item 34), the Sanskrit materials are copied from Anathasius Kirchner, *China Illustrata* (Amsterdam 1667).

¹¹¹¹ ēk is the sound of the number one in Sinhalese (as well as Sanskrit and other South Asian languages) and 'yek' is the sound for the Persian or Farsi.

Nalala the Forehead Diwna the tongue Kava the armpits Lieya the breast
 Kana the ear Nibatha the Chin Da kunata right Persapapiuwa the lungs

hand
 Wamata left hand

The words Abwana and AEladiwa also seem to signify the lungs: or else the meaning is omitted.

Names of the months

Mesa a month. Bakuaha April. Wesaluala may. Dahonuaka june. Aehalamaba july. Nikinniya
 august. Binarnamaka September. Wapuaka october. Macaha november. Uduwapulala December.
 Duvutta January. Kawauuaka february. Madindiive march.¹¹¹²

Days of the week

by their names¹¹¹³

Trida sunday

Anduda monday

Agaharuwada tuesday

Badada wensday

Burahaspolinda thursday

Sibuvada friday

Semasurada Saturday

by their marks or notes or figures¹¹¹⁴

Rabi sunday

Tsándora monday

Kuya tuesday

Budda wensday

Ghuru thursday

SúBara friday

Sani Saturday

Enquire about the names

whether its Síngala or

Chingalie¹¹¹⁵

Of your friend who understands the Telinga languages, perhaps you may get the Alphabet or a

¹¹¹² These are similar to, but slightly less accurate than the names of the months given in the printed 'Singala' vocabulary (MSS Eur 192 (b) J. 766, item 8, fols. 3-4), which are as follows: Bakmaha, April; Wesakma, May; Pohonmaha, June; Aehalamaha, July; Nikinniya, August; Binalamaha, September; Wápmaha, October; Ilmaha, November; Uduwápmaha, December; Durutta, January; Nawamma, February; Maedindine, March. Although there are some errors and the handwriting appears to be that of a European rather than a native speaker, the script given in the printed 'Singala' script is of good quality and the English transcriptions are closer to the sounds of the letters than the transliterated words used by Knox (personal communication, M.C.M Iqbal).

¹¹¹³ Again, these are similar to but less accurate than the names of the weeks given in the printed 'Singala' vocabulary, which are as follows: Hatdawasa, a week; Irida, Sunday; Haduda, Monday; Aghaharuwada, Tuesday; Badada, Wednesday; Burahaspolinda, Thursday; Sikurada, Friday; Senasurada, Saturday.

¹¹¹⁴ These are the abbreviated versions of the days of the week. Again, similar, the printed version is closer to the correct sound of the words and gives: Rabi, Sunday; Tsandara, Monday; Kuya, Tuesday; Budda, Wednesday; Ghuru, Thursday; Sukara, Friday; Sani, Saturday.

¹¹¹⁵ The former is used in the printed script (MSS Eur 192 (b) J. 766, item 8, fols. 3-4) and the latter by Knox, *Relation*.

Vocabulary, which were desirable.¹¹¹⁶ I entreat you to endeavour ^for^ the Tartar alphabet of Kithay, and the other if it can be as also for the language of Sófala.¹¹¹⁷

The mermaid or rather merman [deleted: which] ^whose^ hand was showed, was sayd to be killed upon the coasts of Denmark by Captain Juniper and the Surgeon of his ship was Mr Searson.¹¹¹⁸ The body was 70 foot long, and all the dimensions of prodigious greatness. I beg you to enquire about the truth of that story, and about the dimensions of the creature.

Of your business only that sheet which you saw, is now printed off: but no more yet ^is^ come to my hand. With my service to your Lady and Mr Russel.

I remain

Sr, your affectionate and humble servant Thomas Hyde

Nov. 20. 1700.

Christchurch Oxon

fol. 2v¹¹¹⁹

Oloona – the Head

Erekia – the Hair

Nalala – the Forehead

Kama – Ear

Nehe – Eye

Kata – Mouth

Data – Tooth

Diswa – Tongue

¹¹¹⁶ i.e. Telugu. The alphabet and some vocabulary is given in MS Eur E. 192 (c) J. 767, Item 3, fols. 1-2.

¹¹¹⁷ Sofala is in East Africa.

¹¹¹⁸ I have not yet found any information about this mermaid or merman's hand, but it may be worth noting that Tradescant's Cabinet of Curiosities, which formed the basis of the Ashmolean museum, was said to contain the hand of a mermaid. I have not found Hyde's book about the hand but he may have published it anonymously as with his other more populist work: [Thomas Hyde], An Account of the Famous prince Giolo' (London: R. Taylor, 1692).

¹¹¹⁹ In Bowrey's hand. These words are not present in the printed wordlist.

Rowla – Beard

Botwoa – Neck

Otta – Hand

Angoola – Fingers

Nepoot – Nail

Laput – Breast

Hitta – Heart

Maha or Mahoh – a Month

The new yeare always begins the 27. 28. or 29
of March

Earidda – Sunday

Sandooda

Clunghazooda

Buddooda

Burrahaopp Hinda

Sikkurada

Hemoorada

Item 7: Thomas Hyde to Thomas Bowrey, Oxford, 29 November 1700

fol. 1r

29 Nov 1700, Oxon

Sr, I received yours of the 27th of this instant, and thank you for your care of the Tartar business.

There is something brought over a white crumbly thing which is sayd to be the pith of the tree

Saga.¹¹²⁰ Some other time I should be glad to know something more of it, what kinds of Tree, with what ^leaves and^ flowers or fruit?

and what bigness? if you can be so particular in it.

As to the letter Nga is only the sound of Ng,¹¹²¹ as in Éang, jangon, Pedang, and all such others frequent in the malayan tongue.

As for cha or tcha its all the same sound, tcha being more plain and intelligible to every body, without possibility of mistake because cha being formed two ways, may breed mistake in those who do not minde your Rule exactly.

The Dutch who write about the Malayan tongue, say that true and good Malayan is spoken in Patania, but bastard and mixed Malayan in Tarnata and Java and Amboyna and the Molucca's: and they usually give a distinct List of the words used in these places, as being not genuine and good, as also of the Tarnation and Portuguese words usually mixed with the Malayo language. But no body hath given any account of the Arabick words therein, which I attribute to people's ignorance of the Arabic language. There are pretty many Arabian words therein mixed, which you may venture to say in your Preface, and I will justify it, if required.¹¹²² Wheat they call Ghendom and Barly Java ^Persian names^, when they are forced to use the Name, though they have not the Thing. I should be glad to know what kinde of language they use in Java and what the word Java signifies in that

¹¹²⁰ From Malay *sāgū*. According to *Hobson-Jobson* (p. 780-781) the farinaceous pith taken out of the stem of several species of a particular genus of palm. See also Hyde, *An Account of the Famous prince Giolo*, p. 3.

¹¹²¹ Referring to the names and sounds of the letters of the Malay alphabet, which are included at the end of the *Dictionary* and appear in draft form at the end of this volume of correspondence.

¹¹²² Here Hyde is following Marshall's comments in his introduction to the *Jang Ampat Evangelia* (see Chapter 2).

language. It certainly signifies Barly. But how came it to be so where Barley never grows, is the wonder of yr humble servant...¹¹²³

Tho Hyde

f. 1v

Nov 29 1700

To my honoured friend Captain Bowrey present these at his house in marine square near Goodman fields.

London

Why is it called Ayer Sao or water-Sago?¹¹²⁴ or is there two sorts of it?

Item 8: Thomas Hyde to Thomas Bowrey, Oxford, 7 February 1700

fol. 1r¹¹²⁵

7 Febr 1700

Sr,

I had formerly acknowledged the receipt of your Present for me and for the library, but that I thought with the same Candour to have given you notice of the finishing of the Syam and Singala plates:¹¹²⁶ but the Engraver is slow. The former is finished, and the other in good forwardness. They are fitted to the size of the paper of your malayo Dictionary: if you would have had them lesser to the size of the paper whereon you wrote your Letter to me you speak to late: so that you will be obliged to stick to the size of your Book in all things.

The Chinese compass and other things I have not been yet able to meddle with because of the

¹¹²³ The Sanskrit word for barley is 'yava' (*Hobsob-Jobson*, p. 454).

¹¹²⁴ 'Ayer' is the Malay word for water.

¹¹²⁵ Endorsed (v) to my worthy friend Captain Bowrey in his house in Marine Square near Goodmans fields.

¹¹²⁶ The alphabets, versions of which appear at the end of the volume (MSS Eur 192 (b) J. 766, Item 8, fols. 1-2 (Syam Alphabet' and 3-4 'The Alphabet of the Singhali or people of the Island Selân commonly called Çeylon in the East Indies').

coldness of the weather.¹¹²⁷ But I will dispatch them shortly.

Capt. Knox his Singala words are sounded as the vulgar, Dr Hermans as the more learned, which I must believe more exact because writ in their proper characters.¹¹²⁸ If Hindoolay is the vulgar way of sounding the name, I wonder at it, and cannot approve of it, and much less of the derivative from Hindoo, which cannot be right because the name is taken from Singha a lyon, as appears both by Dr Herman and by the Persian Book which mentions it. The name of India, is Hind: but Hindoo is an Indian man.

I thank you for your description of the Sago tree: whence you write next, let me know the bignesse and figure of the Leaves, and what kinds of fruit it bears, and whether it grows near water, because of the name Ayer-Sago. Any description of Trees or plants, or any seeds or plants, which might grow here if planted, would be gratefull to me. I finde sold on Ludgate hill Sago and Salop, which later should perhaps be called Selib, which is oil of a tree, as I think.¹¹²⁹

I cannot advise you to direct any of your Books to Oxford, because our Colleges are very backwards in all such things, neither can I get them to buy any of my Books. I discoursed with the chief of our Booksellers about it, and I Shewed the Book to him. But he sayd it was a frightfull price and too dear for Booksellers: but much fitter for merchants who are to go into these countries. However, ^he^ sayd that he dealt with Mr Childe out of your men from which he could have it if needfull. His advise was that you could get it put in the Gazet or into the Post-boy¹¹³⁰ or among the works of the learned by Mr Benet bookseller in St Pauls churchyard and that this might occasion people to send for them. You may treat with mr Benet and know you what termes he will insert it. And I should be glad to know what he sayeth, that I may insert my own Book also; if he hath not

¹¹²⁷ The Chinese compass appears at the end of the *Dictionary*. As the note on its verso and this letter imply, it was engraved in Oxford under Hyde's supervision and sent to Bowrey in London for inclusion.

¹¹²⁸ The botanist Paul Hermann and Captain Robert Knox. I have not found any specimens of Sinhalese script among Hermann's published works, but it is possible that Hyde had access to his letters or unpublished notes via his contacts with Sherard or the Royal Society. The examples of language do not correspond to those given in Knox, *Relation* (1681), pp. 108-9.

¹¹²⁹ Saleb or Salep seems to have been applied to various different medicinal substances sold in this period, including sassafras, which may be the reason for Hyde's reference to the bark of a tree (*Hobson-Jobson*, p. 784). The reference to Ludgate Hill is to an apothecary there.

¹¹³⁰ Both newspapers.

done it already.

As to the Chinese compass it may be set as you say: but then your Navigation or Naming of the Points, must be such as answers exactly to the Division of 24, which was your objection against joyning the Chinese names with other country names which were according to another Division greater or lesse than 24.¹¹³¹ If you can answer that difficulty, then it may be as you have placed it: but otherwise the Chinese must be by itself at least, if not a Circular figure.

The tryall of Skill in musick will not be till march, and my wife doth not think it fit to be concerned in it, because it is to be performed in a Play-house, which is not so fit for a Divines wife. And Seeing she never did yet sing within the walls of a Play-house, she will not now begin to do it. She gives her humble service to you and your lady. And you shall shortly receive some Plates from

Your humble serv[an]t Tho. Hyde

Item 15: Thomas Hyde to Thomas Bowrey, 9 June 1701

fol. 1r¹¹³²

June 9 1701. Oxon

Sr,

I have yours of June 7th, with the Bill enclosed; which therefore I thought fit to be signified to you with speed, that so you may be free from the fear of miscarriages. My Chinese Michael Shin Fo-
cung,¹¹³³ (for that was his name) was bred a Scholar in all the Learning of their country, read all their Books readily, and was of great honesty and sincerity, and fit to be relyed upon in every thing: for indeed he was a very knowing and Excellent man, very Studious and Laborious in all things,

¹¹³¹ In other words, the names of the points of the compass in other languages.

¹¹³² Endorsed (v), To my esteemed friend Captain Bowrey present these at his house in marine-square near Goodmans fields.

¹¹³³ Michael Shen Fo-cung or Fuzong, a Christian convert from Nanking (Nanjing) visited Oxford in 1687 and helped Hyde catalogue the Chinese books in the Bodleian. See Robert K. Batchelor, 'Shen Fuzong (c.1658–1691)', *Oxford Dictionary of National Biography*, online edn, Oxford University Press, Oct 2006 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk/view/article/95020>, accessed 17 July 2010].

and could speak Latine, whereby I conversed with him very freely and easily.

You seem to indicate that Gross things as well as precious things are ^at the China ports^ weighed by the same kind of Auerdupois pounds;¹¹³⁴ which must needs be a mistake: for no nation in the world did so. You well know that our Goldsmiths and Apothecaries sell by Troy weight:¹¹³⁵ and it would be madness to weigh an Hundred of coals or of cheese by Gold weights. The account I sent you about the Carpenters foot and the Goldsmiths foot I took from a journall of ^China^ vocabulary of my friend Mr John Dacres formerly a China merchant now dead these severall years.¹¹³⁶

Of those things taken from ^printed^ European missionaries or Voyagers, you can judge and they must answer for the truth of what they relate.

In what I wrote, you will often finde i.e. standing in short for id. est., in English, that is or that is to say, there is always some Explication.

The letter Caph ^for th,^ is formed severall ways, as [...] ¹¹³⁷, which in exactness might have been so printed in your Book.

You may have any parcell of Arab or Persian words printed at Oxford, when you tell me what your words are. And if so, you must send your words to me, and I will put them into their proper characters at any time.

My wife gives her service to you and your lady. And when you return from Tunbridge be pleased to signify the same to your humble servant Tho Hyde.

¹¹³⁴ Avoirdupois pounds were weights used for goods sold in bulk.

¹¹³⁵ Troy, the standard system of weights for more valuable items including precious metals.

¹¹³⁶ The vocabulary mentioned here is probably Bodleian MS Hyde 6, which includes a section reading, 'The China measure that which the silver smith useth is $\frac{3}{4}$ o an Inch shorter than our foot. That which the carpenter useth is but $\frac{1}{4}$ shorter: each of them are divided into 10pts more soe thatt the whole rule consists of a 100pts. Chidhoon – the last part; Chiksoon 1/10 part'.

¹¹³⁷ Gives the Malay letter cha in Arabic script, as in the handwritten list of Arabic sounds in this volume Item 11, fol. 1 and the printed version in the Malay dictionary.

Item 16: Thomas Hyde to Thomas Bowrey, 7 September 1701

fol. 1

Sept 7 1701, Oxon

I suppose by this time you may be returned from Tunbridge so that my letter may finde you at London. I should be glad to know in what forwardness ^{^is^} your Book intended about East India¹¹³⁸ and when you have engraven the Malabar Alphabet, I would beg you to favour me with a copy of it. If you are still in the minde that I should go on with 2 or 3 more China plates, I will try if I can get time to minde it. Such things will be very proper for your use, and its pity they should be lost, seeing we have them upon so good authority.

When any ship is bound for Bengall, I should be glad to know it, that I may trouble you with some enquiries.

I hear say that many ships are arrived from India, which may make you busy at present. But at your leisure I would entreat you to enquire among the merchants if they have any Arabick or Persian Books: for sometime they bring such things away with them. Or if any other strange language they chance to have, I would be glad to beg or buy or borrow them. Severall years ago I was told that Mr Flatman the Poet (now dead)¹¹³⁹ had a book in some strange language nobody knew. I would willingly get a vocabulary for the language of Sófala¹¹⁴⁰ which is near Madagascar, or else if we can finde any body who understands it, I would enquire the names of some things in that language, I having a considerable use for it. And I remain.

Your humble servant, Tho Hyde.

Item 27: Thomas Hyde to Thomas Bowrey, Oxford, 2 August 1702

¹¹³⁸ This implies that Bowrey was intending to publish the travel account which was eventually published as Thomas Bowrey, *A Geographical Account of the Countries Round the Bay of Bengal, 1669 to 1679* ed. by Richard Carnac Temple (Cambridge: Printed for the Hakluyt Society, 1905).

¹¹³⁹ The miniaturist and writer Thomas Flatman. See John Murdoch, 'Flatman, Thomas (1635–1688)', *Oxford Dictionary of National Biography*, online edn, Oxford University Press, Sept 2004 [<http://0-www.oxforddnb.com.catalogue.ulrls.lon.ac.uk/view/article/9675>, accessed 17 July 2010]. This story might just arise out of a garbled misremembering of Flatman's well-known poem to Samuel Austin poetaster of Wadham that "Our little fingers may our Verses scan, / But all our Noddles understand them can / No more, than read that dung fork, pothook hand / That in Queen's Colledge Library does stand." -- this is a reference to the famous book in QCL said to be written in the Devil's hand (personal communication, Will Poole).

¹¹⁴⁰ Sofala was the major port of Mozambique during this period.

fol. 1¹¹⁴¹

Aug 2. 1702

The copy of your letter for India being written in a bad hand, I sent it back for you to write over in your own hand which I can read very well. So that I do daily expect it from you. But in the meantime I have hereby ^{^sent^} our Arabic letter for Mocha. Now this letter you must not seal up, but leave it unsealed and put it into a silk Purse, putting your seal upon the strings of the purse, for that is the Eastern way.

Now because you may not know which is the top or bottom of the Arabick letter, I have at the bottom put this © circle in black lead, I having left less room at the top and greater room at the bottom of it, that there may be space for the seal of the publick Notary and for your names.

I have also according to your permission, sent a Paper of my Requests, one whereof is to get from India a Dragonsblood cane with a Copper Head Embossed and worked the Indian way: a good handsome cane about a foot long.

The seeds and berries or fruits and stones of our fruits are for our physick garden. And if some small branches of the plants or Trees can be put to dry into any paper booke, they may Easily be brought away with the names written by them. And this would be a great help to our Physic-gardener to see the branches, in case we cannot raise the plant. This would be well if you have any man whose ^{^own^} curiosity leads him that way: other ways it may be difficult.

Some small patern¹¹⁴² of the Oryx and the Beryl I desire because moses tells us they are common in Arabia and peculiar to that country, and so may cost but little.

Otherwise if they cost much, I do not desire them.

Some coffe berries fresh so as to grow with us, would be welcome. Its best to have the whole Pods or Cods which contain the seeds, and also a small dried branch of the coffe tree called in Arabick

¹¹⁴¹ Endorsed (v) For my esteemed friend Captain Bowrey in his house in Marine-square near Goodmans fields. London.

¹¹⁴² In the sense of 'example'.

Bun' . Bun¹¹⁴³

I will not now mention any thing else till your ship is gon, that to there may be more leasure for you and for your humble servant.

Tho. Hyde

I will dispatch your India Letter if you send it. But there should have been more time allowed, because it requires trouble and good consideration. You were best also to send a copy of your letter in English attested with the same hands. Perhaps they can find an interpreter.

Item 28: Thomas Hyde to Thomas Bowrey, Oxford, 7 August 1702

fol. 1¹¹⁴⁴

Aug 7 1702

Sr,

I have here ^sent^ your letter for India, which I have put also in Arabick. I know that Persian is the court language: but thats nothing to the outward Port where you trade for all the Governing port are moors, that is mohammedans and do understand Arabick.

The word Nabob is a vulgarism of the common people, corrupted from an Arabick word: but the sound of Nabob is never to be written in Arabick.

I desire to know where Mr Searson or his wife liveth, that so if I ever come again, I may enquire my self: therefore let me know where his house is, and when he will return?

I was by a very ^good^ hand informed, that about 4 years ago in the Straits a mermaid laying hands on the side of a ship, the captain of the ship did cut off its hand which was 5 foot long, and carried ^it^ to the Tower in London among the Rarities. I pray you enquire if its there now, or let out to

¹¹⁴³ Hyde spells out the word again in a neater hand. For 'bun', said originally to be derived from an African name for coffee, see John Crawford, 'On the History and Migration of Cultivated Plants Producing Coffee, Tea, Cocoa, etc.', *Transactions of the Ethnological Society of London*, 7 (1869), pp. 197-206.

¹¹⁴⁴ Endorsed (v) To my esteemed friend Captain Bowrey present these at his house in Marine-square near Goodmans fields.

shew and to whom?

But this I take to be a different thing from that Hand attested by mr Searson, which is in his Testimoniall he sayth was killed in the sea of Denmark. But the whole body was too much to be brought away and besides it was convenient to leave it behinde, lest for the sake of it, the female could have pursued after it and endangered their ship.

I desire to be exact and curious in these enquiries, because I shall (if I live) put something of it into print, which I desire may be true ^and well attested^ and not deceive my self nor others.

If at any time you chance to hear of any Jackall in London I would have its picture tricked out by some Engraver. Its a little beast like a small fox. But here at oxford 2 years ago they shewed a different American beast and falsely called it a Jackall: whereas it was really a Racoon as big as a cat. But the Jackall belongs to the East an not to the western parts of the world.

I remain your humble servant Tho. Hyde

I took some extraordinary pains to despatch this Letter quickly, lest your ship be gon.

Item 30: Thomas Hyde to Thomas Bowrey, Oxford, 17 November 1702

fol. 1¹¹⁴⁵

17 Nov 1702. Oxon

¹¹⁴⁶Sr,

This ^is^ to thank you for being mindfull of me about the Red Sea and be pleased to give my thanks to Mr Tarver, begging his leave to raise a few scruples about it. As for the NE arme which goes into Arabia, he sayth its 60 ^fathoms^ miles deep: and yet you say that he standing on a Hill on the Northside, he could see the bottom, which to me is strange. As for the Israelites crossing the Arm to

¹¹⁴⁵ Endorsed (v) To my esteemed friend Captain Bowrey present there at his house in Marine Square near Goodmans fields.

¹¹⁴⁶ Here Hyde inserts a small sketch of the Red Sea, with the position of Mt Sinai and Mount Peron and a red line showing the place he thinks the Israelites crossed over.

swim it is impossible, whatever the natives may believe: for the Israelites were on the Ethiopia side. You have put mount Sinai between the two armes, which is not right: for between the 2 armes, is mount Peron, according to the maps of Ptolemy. But mount Sinai is in Arabia on the north side of the NE arm, as I have drawn the red stroke. I suppose the people to have passed over near the narrow end of this arm, where it might be about 8 or 10 miles over, because they passed it in one night; which they could not have don as the other broader arm going up to Suez, which is about 40 miles over, which such a great Army with women and children could not have done.¹¹⁴⁷

As for the Chinese you mention in London, I scarce believe its the same who ^was^ with me, whose name was Shin Fo-Sung, a man of Nankin, and he understood Latine, and did write and read his own China language very well.¹¹⁴⁸ You may do well to enquire him out, and learn his tongue and whether he understands Latine and to write and read his own language, and how long he stays in England. If its my Chinese who was at Oxford, I can write to him in Latin and receive his answer. But if it is another, I cannot correspond with him, not knowing what European language he understands.

But if you have a minde to be at the charge of two plates I can supply you ^well^ enough out of my papers, about Grammar and their formes of speaking and discoursing, and the names of animals, which things are very proper. But however, you may enquire about this Chinese, and let me know. And I remain

Your humble servant Tho. Hyde

[Text written sideways in the margin: my wife gives her service to you and your Lady. She is now pretty well recovered from a wound in her hand made by a pair of sharp-pointed scizzers which touched upon a Tendon and made sad work ^for^ a surgeon, too long to tell you.]

¹¹⁴⁷ All in reference to the story of Exodus. Presumably, Bowrey was trying to map the story onto contemporary geography. For a similar attempt, see Joseph Moxon's 'A Map of all the Earth And how after the flood it was Divided among the sons of Noah', 1670 (BL Maps cc. 2. a. 12) and Paradise or the Garden of Eden, With the Countries circumjacent Inhabited by the Patriachs' (undated, c. 1695-1700, Maps 700.1).

¹¹⁴⁸ Another reference to Shen Fuzong.

Item 31: Thomas Bowrey to the Directors of the East India Company, an undated draft

fol. 1

To the Hon[oura]ble: the Directors of the

English East India Company

May it please your Hon[our]s,

Having for some time past Employed myself in a Malayo Dictionary, which by your Hon[our]s Approbation and Incouragement is now made publick,¹¹⁴⁹ & has left me at leisure to Employ my mean capacity in other Improvements relating to India.

I find very much desired here by severall Learned Men Alphabets, & short Vocabularys of the Severall Languages and Characters of India. it is theirs & my opinion that a Collection of some such things being Printed would be a foundation & Intimation to those who goe in your Honourable service to India: to set them on making a further progress in Learning the Languages and writing the Characters of India: and consequently inable them to doe your Hon[ou]rs much the better service. I have some things of that Nature already but not so many as by your Hon[ou]rs: favouring me with your orders to yo[u]r severall Factories in India & China; for them to Procure Alphabets & Vocabularys in all the Languages & Characters by them procurable and to returne them to me [deleted: by the first ships which here...] ^which by granting an order of Court to that affect^ if your Hon[ou]rs pleasd to favour me with I will send them the Method they ought to take in doing it, & when returned shall be published by me.

I know by my own experience, & am constantly confirmed by the complaints of others, the many faults of our Sea Charts of India to remedy which; it was I suppose always & is now an Article in all East India Charter parties that the Capt[ai]n shall give a Journall of the Voyage to the Company, which I presume was recognized chiefly for the amending Sea Charts, for it cannot be supposed that any one man can ever have the opportunity of searching all the Large Sea Charts &

¹¹⁴⁹ Bowrey, *Dictionary*, the subscribers from the Court of Directors are listed at the beginning, before the preface (no page numbers).

Ilands &ca: of India & China; But by some one Persons perusall of all such Journalls (in every of which tis probable somewhat is or might be Discovered not rightly placed in the Maps before) our Maps would be greatly Improved, to the great safety of Shipping, & your Hon[ou]rs Estates going on those Seas.

I doe presume to acquaint your Hon[ou]rs that the Clause about the Journalls in the Charterparties ought to be more perticular, as that they shall give an account of the daily runs of the Ship, of the Lattitude, Longitude, Variation, Winds, Weather, Form of all the Lands, the Courses and Distances ^& Lattitude^ of all the Sea Coasts ^with^ the Depths ^of water^ the setting of all Tides and Currents, the Drafts in large of all the Roads, Habours, & Rivers, with the going into them, [deleted: with the soundings] ^the^ forms of land Towns or Castles &ca. in sight of such Roads, Habours or Rivers, with the going into them, the Flowin, Setting & Lifting of the Tides [deleted: in all such Places] and all other Occurences.

It was my [deleted: own] practise when in India, when I met with any sea chart which I liked I either bought it or Copied it, & in all such places where I Navigated & found my Chart erroneous, there I precisely amended it, by which means I have now by me a large collection, & perhaps severall of them the truest now in being.¹¹⁵⁰ By the help of which; and if your honour shall see fit to lett me have the Persuall of all the Journalls which shall be returned by your shipping I doe hope I may be inabled in a great Measure to correct those many Errors now Extent, by which meanes all Shipping in your Hon[ou]rs Service will be supplied with Proper Maps, which they now often go without to the great Indangering of them and your Hon[ou]rs Estates the Preservation & Increase of which is desired by

Your Hon[ou]rs most Humble Servt.

Thos: Bowrey

¹¹⁵⁰ Bowrey's collection of maps is held in the British Library.

APPENDIX 4

Robert Knox's 'Tonqueen' Journal

A truncated account of Knox's voyage to Tonkin, beginning in 1681. The account, which is not in Knox's hand, breaks off suddenly after describing Cape Verde, but provides some interesting comparisons between the plants of these islands and those he had encountered in Ceylon.

John Strype¹¹⁵¹ Miscellaneous Collections - Lansdowne 1197 fols 12r-13v

A Journal of a Voyage to the Kingdom of Tonqueen bordering upon China, in the East Indies. By Captain Knox

On the one & twentieth of September MDCLXXXI I set sail out of the Downes¹¹⁵² ^in the good ship, call'd the Tonqueen merchant^ being in company nineteen sail of us: some bound for the Canaries, some for Guiny,¹¹⁵³ & six sail of us for East India in the service of the Honourable the East India Company.

[margin right note: Arrived at ye Il of May] 'Arrived The eight & twentieth of October wee arrived at the Ile of May,¹¹⁵⁴ & anchored on the S.W. side of the Iland in twelve fathom water about a mile of the shore.

All this way coming I find nothing worth marking, onely when wee fel in with the Iland of Palme,¹¹⁵⁵ wee found our selves generally mistaken, being ^some^ twenty leagues more Eastwardly

¹¹⁵¹ Cousin of Robert Knox (see Chapter 4).

¹¹⁵² An area of sea lying between the Thames Estuary and the Straits of Dover, which favourable winds made a popular departure point from England (See <http://www.pepysdiary.com/p/1257.php>, accessed 12 July 2010).

¹¹⁵³ The area around the Gulf of Guinea.

¹¹⁵⁴ Maio, in the Cape Verde archipelago.

¹¹⁵⁵ Isla de la Palma in the Canary Islands.

than all our reckoning made it: whether it may bee our error, or the fault of the Plats,¹¹⁵⁶ I cannot say.

[margin right note: May & Zeilon producing the same plants] At the Ile of May I took notice, that the difference of Longitude doth not much chang or alter ye nature of ye Climate as ye Latitude doth. For notwithstanding Zeilon¹¹⁵⁷ Lyeth Degr. log ½ to the Eastward of this Iland, yet here I saw several Plants growing wild, which grow in the same manner upon Zeilon. Neither could they have been brought over from any other Country, & transplanted hither; because the Inhabitants know nothing of use & virtue in them.

[margin right note: Bintombracole] One of these plants is that which the Chingulais call Bintombracole.¹¹⁵⁸ It groweth on long strings running upon ye ground after the manner of our Pumpkins in England; & takes root al along as it runs, lik ^{our} Strawberries. It bears onely a flower most like the socket of a Candlestick. There bee two Sorts of them, distinguished onely by the colour of the flower, the one being white, & ye other of a murry¹¹⁵⁹ colour. But that which bears the white flowers the Chingulais¹¹⁶⁰ chiefly esteem, & make ye most use of: namely for sores. On Zeilon I have [deleted: found] ^{had} the experience, & found the benefit of them.¹¹⁶¹ They bite the Leafe with their teeth to bruise it, & wet it with spittle, & so stick it on the sore and it will both draw and heal.

[margin right note: Warracola] Another plant I saw growing there, which in the language of Zeilon

¹¹⁵⁶ i.e. the sea charts.

¹¹⁵⁷ i.e. Ceylon (Sri Lanka).

¹¹⁵⁸ Identified by the Director of the National Botanic Gardens of Sri Lanka as *Ipomoea pes-caprae* (Linn.) Roth. (family *Convolvulaceae*). The plant is used in medicine across Asia and the Malay world and is regarded as cooling and astringent (Hwee Ling Koh, Chua Tung Kian, Chaay Hoon Tai, *A guide to medicinal plants: an illustrated, scientific and medicinal approach* (Singapore: World Scientific Publishing Co, 2009, p. 77-78).

¹¹⁵⁹ The colour of mulberries, a reddish-purple.

¹¹⁶⁰ Sinhalese.

¹¹⁶¹ In other words, Knox had received or self-administered this remedy.

is called Warracola.¹¹⁶² The leafe resembles a Cabbage both in thickness & colour; onely not so large. It is full of white thick milk, or juice, if yo[u] break the leaves which is soon done, being very brittle. The Chingalais do usually spread these leaves one by one, & so they lay their rice on them and eat: & it doth them no harm. Yet great cornes or Lumps o salt being layd on a soking ^an whole night^ in the milk that issues out of this plant, when broken & ^then^ put into a draught of water boyled with a little rice, & so drunk fasting: wil cause Vomiting. For which end also they do thus prepare it, & take it. These two sorts of Leaves the Chingulais put to many medicinal uses: & here in this Iland of May they grow in great plenty, just above the sand on the sea shore.

[margin right note: Endraatta] Here is likewise that seed the Chingulais cal Endra-atta,¹¹⁶³ of which they make oyl: which is excellently good against aches & paines in the body or limbs, which annoynted with it; & of this the Inhabitants of this Iland say, they are sensible.

I saw nothing else remarkable here, thinking it not worth my time to go up into the Country, it appearing to bee a barren, dry & rocky land, full of long grass like bents¹¹⁶⁴ or strawes; the earth is full of rocks & great stones. The steep cliffs do swarm with sparrows: which are both by Language & habit¹¹⁶⁵ ye very same with ours in England: & having no houses to build in, do make the cliffs of the rocks serve them for holes to build their nests in. Where it is more difficult to come at them, than in the thatch of our barnes.¹¹⁶⁶

¹¹⁶² There is another Fruit, which we call *Jacks*; the Inhabitants when they are young call them *Polos*, before they be full ripe *Cose*; and when ripe, *Warracha* or *Vellas*; But with this difference, the *Warracha* is hard, but the *Vella* as soft as pap, both looking alike to the eye no difference; but they are distinct Trees (p. 14). The 'jack' is mentioned again in Chapter V. 'Of their Roots, Plants, Herbs' (p. 18) the section on medicinal plants, but here it seems to be identified with aloes. Identified as *Artocarpus heterophyllus* (see Chapter 4).

¹¹⁶³ Identified by the Director of the National Botanic Gardens of Sri Lanka as castor *Ricinis communis* (family *Euphorbiaceae*), one of the most poisonous plants in the world (see Chapter 4).

¹¹⁶⁴ *Agrostis* or 'bentgrass'.

¹¹⁶⁵ In other words, their plumage and song is similar to English sparrows.

¹¹⁶⁶ An apparent reference to the practise of eating sparrows! For discussion of this practise and the 'sparrow-pots' used in capture sparrows nesting in roofs, see Don Cooper, 'Sparrow Pie Anyone?' *London Archaeologist*, 10 (2004).

[margin right note: A description of St Iago] At S. Iago¹¹⁶⁷ the soyl is much ye same; onely being better watered it affords more fruits; of such sorts as grow in the East Indies; as oranges sweet & sower, limes, Cokernuts, Grapes, Plantans, water-melons, &c. The Bay is on the South side of the Iland: wherin is very good riding,¹¹⁶⁸ the wind constantly blowing N.E. which maketh smooth water there; the ground clear and sandy. Wee rode with but nine poynts open to the Sea.

[margin right note: The people] The people here do call themselves Portuguezes, being of their Religion, & subject to their King. At whose cost ^& care^ it is probable these Ilands were first inhabited, by transplanting some people of Guinea hither; who by the opportunity of having Portuguez magistrates, & soldiers amongst them, it may bee perceived, have endeavoured to make their offspring like their Superiors. Howbeit they do very much resemble the old Stock, that came from Guinea, in complexion, [deleted: feat] hair, & features.¹¹⁶⁹

[margin right note: Fortifications] Here are some smal Fortifications with Guns; & a few [deleted: curled pater] curle-pated pockified soldiers to stand by them. For the Pox, I see, is the principal disease that reigns among them.¹¹⁷⁰

I see nothing of ingenuity among this people, worth taking notice of: unles it bee, that they are very expert in snatching a Coat, or hat or Cap, or the like, from any of our men; & as nimble to run away with it, when they have done.

[margin right note: Commodities] Cotton grows here; which people spin with a stick as the

¹¹⁶⁷ Santiago in Cape Verde.

¹¹⁶⁸ Anchoring.

¹¹⁶⁹ Accounts indicate a Creole-speaking Luso-African population in Cape Verde at this stage, descended from Portuguese colonists, who arrived in 1462, and slaves brought to the previously uninhabited land from various places around the Gulf of Guinea. See José da Silva Horta, 'Evidence for a Luso-African Identity in "Portuguese" Accounts on "Guinea of Cape Verde" (Sixteenth-Seventeenth Centuries)', *History in Africa*, 27 (2000), 99-130.

¹¹⁷⁰ See K. David Patterson, 'Epidemics, Famines, and Population in the Cape Verde Islands, 1580-1900', *The International Journal of African Historical Studies*, 21 (1988), 291- 313.

Chingulays do with a wyer,¹¹⁷¹ turning it on their thigh: & to get the seeds out of it, they lay it on a flat stone, one ^seed^ at a time; & with a small round stick, they rowl the seed out of it, as wee rowl dough with a rowling pin.

[margin right note: Buildings] By what you have heard of their ingenuity, you may judg what manner of building they have. The Governor & Officers have houses built with stones, & clay insted of mortar, thatched with leaves of Coker nut trees, tyed on, as the Indians use on Zeilon.¹¹⁷² But riding on horseback to the City, I had a prospect of their Country villages, which are far inferior to those on Zeilon. The wals were made up of the natural ^rough^ stones, & covered with long grass: the [deleted: whole house but] ^whole house little more than^ big enough for a man to creep into; & in number not passing three or four houses together.

[margin right note: The way to the City] The City, as they call it, is some ten miles to the Westward of the Bay, where wee rode with our Ships. The way thither al hilly & mountainous, the Land exceeding stony, so that it is not possible to bee tilled. In some places the stones are very like the Iron stones they have on Zeilon; & to my judgment they might make Iron of them.¹¹⁷³ Wood I see little or none; doubtles firing¹¹⁷⁴ must bee very scarce. In some places by the way, there run smal streams of water; which tast sweetish, or brackish, as wee generally say. [margin right note: Allacola] By some of these streams growes a Plant wee have on Zeilon, which there they call Allacola: it bears a broad leaf, somewhat like a Heart. The Chingulays boyl them & eat them but this people understand them not.

¹¹⁷¹ A wire. The growing and manufacture of cotton in Ceylon Paulusz, *Relation*, i, p. 351 and ii, p. 72 and 497-499. Judith Carney, *Black Rice*, p. 75 notes that cotton had been introduced to Cape Verde from West Africa and that the island functioned as an exchange point in the transplantation of this and other crops to the Americas.

¹¹⁷² 'Indians' was commonly used by Europeans for all South Asian people in this period. For houses in Ceylon, Knox, *An Historical Relation*, Ch. VI, p. 82.

¹¹⁷³ See Chapter 4 for a similar recommendation for the use of iron stone on St Helena made by Knox.

¹¹⁷⁴ Firewood.

[margin right note: Attanagcola] Another plant I observed [deleted: here] ^in our travail towards the City^ which wee have also on Zeilon, called there Attanag-cola,¹¹⁷⁵ & by the Portuguez, in India, named Dotra: it is of an intoxicating nature. The Chingulais use it for several medicins; but the Portuguez women in India give it in some food obscurely to their husbands, to lull them asleep, while they cuckold them.¹¹⁷⁶

[deleted: by this time we are arrived near the city]

[margin right note: The way to the City] The way to find the city is commendable onely for prospect, for it is altogether as I said before, over mountains, & not a tree to interpose in the way of your sight. The City, such as it is, standes by ye Seaside under a steep hill or Cliff: on top whereof is a Fort with four bastions, tho but few guns thereon. This Fort Standeth so high, & the hil so steep that they may shoot right down into the City, or ships that ride in the rode. Such is the steepness of this Hill, that the passage up & down is made crooked like the Letter Z, for safer & easier ascent & descent. For my own part I was affraid to venture down on other than mine own legs, the way consisting all of rocks & loose stones. There are Guns also standing on a Brestwork by the Seaside: The houses stand in rows, so that there are streets between them. The place ^whereon the city stands^ is but smal & the ground hilly, & very uneven: the situation over warm by reason of the reflexion the sun casts from the hill, that it stands just behind it; which also preventeth the general North East wind from blowing in upon them. The buildings are very mean according to the quality of the place & people.

[margin right note: Water-melons] There is a fruit growing here, wee call Water-melons, as big as a mans head, in colour green: some of which I carried with mee to sea; & one of them I kept to

¹¹⁷⁵ Attang-cola is a reference to the intoxicant *Datura stramonium* (M. C. M. Iqbal, Personal communication, see also Iqbal, Raheem, and Tennakone, 'Fascinating Facets', p. 17 for Knox and Hooke's discussion of *Datura*. Footnote 26 notes Hooke's reference to the use of *Datura* in Ceylon).

¹¹⁷⁶ *Datura* (see Chapters 2 and 5). This story about women 'cuckolding' their husbands with the drug was a commonplace of European travel narratives by this period.

Bantam, being onely slung ^& hang'd^ up in my Cabbin with ropeyarnes. It did not so much as chang the colour all the way, but when I arrived at Bantam it was as fresh & good, as the day it was gathered, notwithstanding my passage ^from this island^ was six months and...

[the page ends here and there is nothing further]

APPENDIX 5

Overview of resources in Indian and Sri Lankan Archives for the History of the English East India Company, 1599-c.1720

National Archives of India – Delhi

The National Archives is a pleasant place to work and documents are delivered promptly. For foreigners, entry requires a research visa and letters of introduction from the host institution and consulate or embassy. The library contains many works of relevance to the period. NAI holds no original English-language material from the 'Company period'. There are, however, a few manuscripts in the Home and Foreign Departments which contain transcriptions of material from this period, some of which may fill in gaps in the India Office collections at the British Library. The catalogues held at NAI and Ghose¹¹⁷⁷ can be misleading as they list the documents by the date of the material contained within them rather than the date at which the manuscript itself was created. I could not identify the series of Public Consultations from 1704 mentioned by Low, Itlis and Wainwright¹¹⁷⁸ or the series of Madras papers that they describe.

Home Misc., Vol. 1: Letters from Court 1680-1681 contains handwritten copies from the India Office of letters from Court (series 'E' in the British Library). The first letter dates from January 1681 and is addressed to Job Charnock in Pattana (Patna). Charnock is ordered to make further investments in the cloth trade; raw silk is in particular demand. Further letters addressed to the Chief and Council in the Bay of Bengal give more details regarding the cloth trade and also advise the agents to procure diamonds and sugar. Letters to Fort St George and Hugli also sent during early

¹¹⁷⁷ Sainen Ghose, *Archives in India: History and Assets* (Calcutta: Firma K. L. Mukhopadhyay, 1963).

¹¹⁷⁸ D. A. Low, J.C. Itlis, and M.D. Wainwright, *Government Archives in South Asia: A Guide to National and State Archives in Ceylon, India and Pakistan* (Cambridge: Cambridge University Press, 1969).

1681 complain about unfaithful servants and the 'interloper' Thomas Pitts.

Home Misc., Vol. 2: Hugli Letters Sent from December 1680 to November 1681 contains letters to the Hugli factory discussing investments and local politics. The handwritten transcription and binding is dated 1952. 'Home misc, Vol. 3, Fort William letters, 15 November 1703 – 23 December 1709' is typed and appears to contain précis of the letters rather than transcripts. These are letters from Fort William and some of the earlier letters might duplicate those contained in the India Office Records Volume IOR/G/7/8 (1700-1705), but the later letters do not appear to survive in the British Library.

The letters begin by noting 'the English Reputation at a Low ebb' because of the acts of piracy they are being held accountable for. They report the English trade being blocked by Mughal and local authorities. One letter dated 30 November 1705 reports the loss at Madagascar of the ship *Degrave* and notes that 'the Ships Company killed Captain Young and were afterwards killed by the Natives.' This was the ship that Robert Drury was on when he was shipwrecked and captured on the island. He later wrote an account of the island that was until recently attributed to Daniel Defoe as a work of fiction. Two letters during 1707 and 1709 report slaves sent from Fort William to Sumatra (referred to as 'the West Coast'). Other letters report the growth of the area that would become Calcutta: 'Revenues especially the Rent to the 3 Townes encrease yearly people flocking there to make the Neighbouring Jemidars [Zamindars] envy them' and discusses plans to drain the area 'to carry away the standing waters and cleanse the swampy ground of this town to make it healthy'. Competition with the Dutch over the opium trade is noted. In January 1709, the letters report a battle expected near Golconda and add 'All in arms about Delhi, Agra and Patna. Rashpoots [Rajputs] have seized Severall posts of Consequence from the King'.

Foreign Department, Volume 4 was compiled in the mid-nineteenth century for the purpose of solving a contemporary dispute between the East India Company and the Nawab of Cambay (Gujarat). The volume is headed: 'Précis containing information in regard to the first connection of the Honorable East India Company with Cambay, as far as the same can be traced from the Records of the Bombay Government, commencing with the year 1630 and brought down to 1847'. These records consist mainly of a series of letters between the Surat factory and their subordinate factories. Some are partially transcribed. A few letters between the East India Company agents at Surat and the Mughal Emperor Aurangzeb in 1662 are also transcribed: these relate to a dispute over the sale of guns in Ahmedabad. Some letters from Surat to London also dating from the 1660s relate to the sacking of the city by Śivaji and the Emperor's rewarding of the English part in the defence with an abatement in customs. A 'phirmaund'¹¹⁷⁹ from the Emperor relating to goods transported by land between Bengal and Surat is given in translation. After this there is a further gap until 1697, when some of the correspondence relating to the English involvement in piracy against Mughal ships – for which they blame the French and Dutch – is transcribed. A letter from 1701 concerning the conflict between the 'old' and 'new' East India Companies is transcribed reporting a conversation between the Ambassador William Norris and the Emperor in which the latter refused to ban the 'old' Company from trading as requested, stating that his ports are open to all traders. After this point until the end of the 1720s, the letters transcribed mainly contain information on the factory. They note a change in the Governor appointed by the Mogul Emperor and further Maratha sackings of the town.

Foreign Department, Volume 5 contains a similar late nineteenth century précis of the dealings of the Company with Turkish Arabia with the names of the 'several British Presidents and Political Agents who have been stationed at Baghdad and Bussora¹¹⁸⁰ between AD 1646 and 1846'. The

¹¹⁷⁹ Pers. *farmān*, 'an order, patent, or passport,' (*Hobson-Jobson*, p. 354)

¹¹⁸⁰ Basra in modern Iraq.

author notes that the earliest information regarding the establishment of a presidency at Bussora dates from 1630 and that the earliest documents are copies of some letters from the chief in council of the factory at Surat during the same year. These are addressed to vessels anchored off Surat and to the Chief in council of subordinate factories at Ahmedabad, Cambay, Broach, Brodera, Agra, and Masulipatam. The earliest letter is dated 26 July 1630 off Madagascar from William Rastell which proposes the establishment of the factories in Persia so that ships could combine stops for refreshment with trade and defence. Letters follow between the Bussora and Gombroone¹¹⁸¹ factories. Some materials relating to Istaphan and Shiraz and a relevant section of the Surat consultations of 1661 are also included in this volume. The volume contains some details of a treaty for trade concluded between Charles II and Mahomed the Sultan of Turkey in January 1661.

The Persian Documents held in NAI have a useful English presslist.¹¹⁸² Some of the later documents were written in Persian by members of the East India Company including Lord Clive to the Nawab of Awadh and Warren Hastings and the Marquise of Wellesley to the Diwan of Mysore (1801).

The Maps Department of NAI holds the map of Ceylon by 'Sieur de l'Isle' that appears in the seventeenth century French translation of João Ribeiro's account of the island. It appears to be a contemporary copy, but whether it is a French original or an English copy is unclear. For the later period, NAI has a good collection of the original Survey of India maps.

Maharashtra State Archives (in Elphinstone College, Mumbai)

This archive is probably the most important for the East India Company records in this period. It contains several volumes of material on the 'New' Company that are not preserved in the British

¹¹⁸¹ Bandar Abbas in modern Iran.

¹¹⁸² *Descriptive List of Acquired Documents (1356-1790 AD)* ed. by RK Perti, 3 vols. (National Archives of India, New Delhi).

Library. Some volumes give important information about the relations of the English with the Maratha leaders Śivaji and Śambaji and with the Siddis of Janjira – aspects of the records that might be interesting to local historians as well as students of the East India Company. The archives are a friendly place to work, the helpful staff deliver documents promptly and there is no limit on the number of documents that can be requested at one time. Unfortunately due to lack of facilities for conservation and poor storage conditions, the documents themselves are in a very poor condition to the extent that it was not possible to open some of the volumes without destroying the contents. In addition, some volumes listed by Khan cannot be found.¹¹⁸³

Surat Diaries:

Vol. 1 1660-1696 contains: Vol. 1 1661-1668: this covers 17 January 1661 to 6 August 1662. The consultations from 1661 fill in a gap in the India Office record G/36/2. These are mostly routine business of the factory, commissions to sailors for voyages and complaints about the Governor of Surat impeding the trade. The consultations in this volume recommence on 10 September 1666 and run until 07 September 1668. This fills in a small gap in the India Office records but mostly overlaps with G/36/2-3. These consultations discuss the coming take-over of Bombay from the Portuguese and the arrangements to be made. Vol. 1a covering 1670 and 1669 (in that order): The consultations for 1670 overlap with those in IOR G/36/3. The Surat factors have moved to Bombay and are discussing the administration of the island. Interesting sections on the administration of justice occur on fols. 181-182. From 12 March 1670, the Council return to Surat, which they note is 'at present in a most Distracted condition occasioned by the Inhabitants fear of Sevagy whose late Success and conquest as also his neare approaches being sometimes within twenty leagues hath made them Jealous of his having Designe against this City'. The few documents from early 1669 at

¹¹⁸³ Shafaat Ahmad Khan, *Sources for the History of British India in the XVIIth Century*, Series: Allahabad University Studies in History, Vol. IV. (London: Curzon press, 1975). Missing materials listed by Khan include the Bantam 'inwards letter books, 1679-83'.

the end of the volume (which fill in a gap in the India Office records between G/36/2 and 3) are accusations against Henry Young, the Governor of Bombay and a commission to sail around Bombay in a 'country vessel' taking depth soundings.

Vol. 2 1699-1707: this volume is miscatalogued. It is in fact an 'outwards' letter book covering 1699-1704. These are the records of the 'New' Company, which are not replicated in the India Office. The volume opens with complaints that the Company's presents to the Mughal Governor of Surat were being ridiculed and the Ambassador William Norris was denied access to the Emperor Aurangzeb. In 1700, the letters reveal the domestic political divisions between the 'old' and 'new' companies: the later complaining that the former were supporting the exiled King James. According to other letters, the intrigues of the 'old' company extended as far as a plan to poison Norris. During early 1701, the letters report the Mughal Emperor's intention to send the Siddi to sack Bombay if the old Company's debts were not paid and the imprisonment of John Gayer and his wife. The letters also record the rapprochement between the two companies and negotiations about the distribution of posts in the United Company. The volume contains information about the movements of the new Company's ships.

Vol. 3 1701-1704 (old Company): It was impossible to read this volume without destroying it. A list of Company personnel on the first page confirms that this is a diary of the 'old' rather than the 'new' Company.

Vol. 4 1702-1704 (new Company): This volume appears to be consultations covering this period – corresponding roughly to the time period of the letters in the volume labelled 'Surat Vol. 2.' The entire volume is damaged to the extent that it is impossible to read – the first half is too torn and the second half too water-damaged.

Outwards or order books

Vol. 1a part. 1: 1656-1701: Most material is from 1656 and 1657 and consists of letters from Surat and its subordinate factories including Gombroone. A few letters from 1697 from Surat to London blame the French for acts of piracy attributed to the English by the Mughal authorities. Part 2: 1663-1673 (some sections may correspond to IOR/G/36/86 1663-1666 Surat: Copies of letters despatched: 19 Dec 1663 to 2 Jan 1665, 13 Jan 1665 to 27 Aug 1666; G/36/87 Surat: Copies of letters despatched: 30 Sept 1671 to 13 Dec 1672, 1 Nov 1673 to 29 Oct 1674; and IOR/G/36/88 1673-1675 Surat: Copies of letters despatched: 8 Nov 1673 to 14 Dec 1674. 22 Sept 1674 to 12 Dec 1675). The letters from January 1664 give a very detailed description of the sacking of Surat by Śivaji and discuss proposals from the Queen of Aceh for a trading agreement in return for protection from the Dutch. The records from 1671 fill in a gap in the India Office records. February 1671 has a section headed 'Proposals: Touching the Bombay Island'.

Vol. 2: 1676: May correspond to some material in IOR/G/36/89. Begins 6 December 1675 (this letter is in poor condition and hard to make out, although the condition improves a few folios in). There is a full run of letters in good condition throughout 1676 until the last letter which is dated 25 November 1676. Probably this does not fill in any gaps in the IOR as both copies seem complete.

Vol. 3 1677-1700: In relatively good condition. Mostly consists of instructions from Geo Aungier and council at Swally Marine to the Council at Bombay. The most interesting document is probably the agreement made with a 'prominent Banian from the city of Diu' (Gujarat) to settle in Bombay. The agreement includes freedom of religious worship and a guarantee of freedom of trade and protection of goods in case of war (fols. 22-23).

Inwards or order books

Vol. 1 (diary number) 1646-1647: a typed copy from the India office. The original was apparently very badly damaged, with most pages missing some sections.

Vol. 39 1689: This is an 'old' Company document. The first few letters of this volume are difficult to read but the condition improves thereafter. The volume is particularly interesting for the negotiations with the Siddis of Janjira it contains. The volume includes proposals for a treaty between Siddi Heutcan 'General of the King's Fleet' and the English. A Portuguese priest, Ambrosia da Costa, seems to have acted as the intermediary in these negotiations (fols. 18-20), low level conflict between the English, Siddis and Portuguese around the island of Mahim is reported. Some other interesting episodes include the questioning of a sailor about his involvement in slave raiding in the Comorros islands by East India Company vessels as well as French pirates (fols. 303-306); several letters from 'Ipahaune'¹¹⁸⁴, including a response to a request to describe 'Prestor John's country'¹¹⁸⁵ and a planned take-over of an island near Bussora¹¹⁸⁶ (fols. 357-70); a letter from the Anjengo factory.

Secretariat Records (i.e. Bombay) – Diaries and 'Inward' start laterOutwards

The 'outwards', or volumes of letters sent, begin with Vol. 4 1677-1687: the volume begins in January 1677 with a difficult-to-decipher letter from Bombay to Surat about the hostilities with

¹¹⁸⁴ Esfahan in modern Iran.

¹¹⁸⁵ A fabled Christian kingdom supposed to exist somewhere in Africa.

¹¹⁸⁶ Basra in modern Iraq.

Śivaji and the Portuguese, lack of soldiers, and deaths from fever. The letters continue until August 1677 on similar themes. This section duplicates the India Office Record G/3/8. After this is a gap until July 1686, when the letters between the two factories recommence. The tone of the letters implies dissent between the agents and the Surat factory apparently accused Bombay of 'submitting to the Portuguese'. The letters continue through 1686 and 1687, filling in a gap in the India Office records between 1682 and 1694 (G/3/9 and 10). They contain information about the Siddis of Janjira, including a report that they had captured forts from Śivaji and were thought to be planning an attack on Bombay (fols. 98-102); the arrival of the new Governor Sir John Wybourne in Bombay (fols. 112a-116) reports of piracy (fols. 118-119); the capture of a Mughal ship by Captain Robert Knox (fols. 139-140) and dissent in the garrison (fols. 146a-7).

Vol. 5 1694-96: This letter book may duplicate some of the IOR documents in G/3/10-10a but fills in gaps during early 1694 and summer 1695. It contains mostly commissions and orders concerning the governing of Bombay, regarding the garrison, the licensing of punch houses, voyages to destinations including Carwarr, Muscat, Calicut, Conge, and Gombroone. The later part of the volume contains letters from London to the Persia, Surat and Bombay factories.

Vol. 6 1697-99: This volume was too damaged to read the front sections without destroying the document. The letters may correspond to those in G/3/13-16. It begins 7 February 1697 with a letter to Surat. This section finishes on 8 May 1697 and the next begins on 27 June 1698 with a letter to Calicut. There is a pretty consistent run through 1698 without too much damage and it probably duplicates G/3/15 and 16. Interesting passages include: a conflict with the Portuguese at Goa over the return of slaves (fols. 155-156); a description of arrangements made for a visit by the Ambassador of Ethiopia (fols. 169-174 the role of the English in this is not entirely clear, they may be providing convoys as ordered by the Mughal Emperor); and a discussion of relations with the

Siddis, who the Bombay factory describe as friends but not ones to be trusted entirely as they are ultimately vassals of the Mughal Emperor (fols. 209-218). After Jan 1699 (c. fol. 230 onwards), the pages are again too damaged to use except for a couple of legible letters around September-October 1699, fols. 438-489).

Vol. 7 1699-1702: Some of the contents may correspond to IOR G/3/17. The volume is in poor condition but mostly legible. The date of first letter is obscured but the second is from 8 April 1699. One letter, which dates from June 1699, fills a gap in the BL records, then there is a gap until Feb 1699/1700. Although in the same period as the BL records, these are to the Company in London rather than Surat whereas those preserved in BL for 1700 are to Surat only. This volume also fills in a gap in the BL records between 1700 and 1702. Interesting sections include fols. 46-51, which contain more on the discussions with the Portuguese about the return of runaway slaves, and fol. 316, which contains an interesting analysis of Mughal politics.

Miscellaneous records

Selections: Miscellaneous documents. fols. 1-55 is a complete list of all expenses, creditors and debtors to the Carwar factory dating from 1685. On fol. 54 there is a list of all payments to Asian and European merchants are given. Interestingly, this list also contains large sums paid to the 'Mogull King of India', describes as for 'oppression and wrong' and to 'Sevagee (Śivaji) Raja' for customs duties. Other major expenses include the popular spirit arrack and arms and ammunition. Fol. 61 dates from 4 September 1782 and is headed 'An account of the several Disbursements made by Governor Abdulla for the use of the Ship's Company and Compan's recruits of the late ship Brilliant..'. The payments are for doctors, food and medicines for the sick crew and a pilot on the island of Johanna.¹¹⁸⁷

¹¹⁸⁷ Modern Anjouan also known as Ndzuwani in the Comoros.

Copies from the India Office: These are typed selections of letters, charters etc. Vol. 1 covers the period 1660-1664.

Tamil Nadu State Archives (Egmore, Chennai)

Many of the records of the East India Company held in TNSA have been published previously and are held both in the library at the archives and in the British Library. A useful document that is not held in the BL is the 'Press list of ancient documents in Fort St George', which gives a summary of every entry in the letter and consultation books beginning from 1670 (arranged chronologically rather than according to the categories of record). There are also some remaining unpublished records in the TNSA archives.

'Sundries'

Two of the sundry books are published: 'Sundry book of 1686 affairs in Bengal, Madras' and 'Sundry Book of 1680-81', both printed by the Madras Government Press, 1913 and 'Letters from Fort St George to Subordinate Factories', published in 1915. Unpublished sundries are as follows:

Sundry Book of 1677-1678: This volume mainly consists of letters from the Madras factory to their subordinates at Cassumbazar¹¹⁸⁸ and Hugli. Mostly concerns efforts to procure a 'phirmaud' from Shasta Khan including gifts of 'rarities' such as a 'speaking trumpet'. Also notes attacks on Chittagong by renegade members of the Company. A macabre story about the apparent murder of a rich merchant referred to as 'Mallacca Coffree' by the crew of a Company ship also appears in this volume.

¹¹⁸⁸ Kasim Bazar, Cossimbazar, or Kasimbazar.

Sundry Book Vol. 5 'Index to the standing orders': This is a mid-nineteenth century document containing rules taken from the Company's orders at various points between 1664 and the time of the compilation. The subject headings are: 'Admiralty Court; Asiatic seamen and Lascars, Botanists and naturalists, British subjects, charities, China, Country languages, Country powers, courts of judicature, diamonds, fines and forfeitures, diamonds, firmans, general trade, goods, hospitals, illicit trade, medicine, military service, native servants, opium, plants, poison, Roman Catholics, sea customs, slaves, surgeons, unlicensed Europeans.'

Sundry book Vol. 6 1712-1789: Mostly rules given here are also included in Vol. 5. Additional subjects covered include laws regarding Company lands, rules to prevent the marriage of Company servants to Hindus or Muslims and to restrict Company posts to Europeans and the barring of Armenians from residing in 'white town'.

Sundry book Vol. 7 1663-1723: Another list of instructions and rules, mostly duplicating those listed in Vol. 5. Some interesting sections include instructions to the Bencoulen council about their slaves, regulations about the oaths to be accepted in court from Hindus, encouragements for Company factors to learn Tamil and Telugu, bans on sending home diamonds in Danish ships.

Later 'sundries' of interest include: 40 List of Company servants, 1787; 41 'Letters from independent Europeans in Madras'; 47 'Dr Roxborough's Botanical descriptions'; 53: 'Dr Anderson's disbursements for the introduction of cochineal and silk'; 'Dr B Heyne's Botanical and other reports.'

Mayor's Court

Volume 1 of the Mayor's Court is said in the catalogue to date from 1689 but this could not be

found. Vol. 2 1716-1719 includes the election of aldermen; several cases of inheritance among the different communities; public works – e.g. draining – carried out at the expense of the community; cases involving the transport and sale of elephants and of tobacco to Aceh; one murder case and the punishment for those found guilty.

Later volumes of the Mayor's Court include: II Minutes begin from 1736-1737; V Pleadings begin in December 1731; VII Wills and probate begin in 1735; VIII Cash books: Vol. 1 1733-1735.

General and territorial ledgers of FSG

These are accounts of the expense of the factory in this year. Each is divided across two pages into 'August 1687' – with heading for the item and 'April 1688'. The items listed include the cost of setting up new settlements. For example, the cost of the Pryaman factory is given as 140629 pagodas, single voyages, including one to China that cost 3056 pagodas, costs for establishing St Mary's Church, 453 pagodas and for the purchase of slaves, 414 pagodas.

Dutch records: These include 45: 'Correspondence with the English, 1695 and 1696'.¹¹⁸⁹

St Mary's Church Records: The earliest baptism, marriage and death registers are held in the Fort Museum. Later volumes remain in the church itself. These are a good source for the private lives of the EIC factors and also record the baptism of slaves.

Kolkata and environs

The Fort William archives were destroyed twice: once by a flood in 1731 and again by fire in 1756 during the capture of the Fort by Nawab Sirajuddowlah of Murshidabad. This means that the factory

¹¹⁸⁹ For more details regarding the Dutch records in this archive, Towards a New Age of Partnership (TANAP), 'Tamil Nadu Archives' (<http://www.tanap.net/content/archives/archives.cfm?ArticleID=202>, accessed 19 July 2010).

records do not survive here. The National Library in Kolkata and the Asiatic Society both hold interesting collections from the later period, however. The National Library rare books department has a good collection of early printed books, including the mid-eighteenth century French translation of João Ribeiro's history of Ceylon. It also holds a very well preserved collection of European maps of Asia from Linschoten's 1596 map onwards, many of which are discussed in Susan Gole's 'Early Maps of India' (held in the map department). Persian documents from the period are also in the rare books division. The Asiatic Society library has a good collection of materials beginning from the later eighteenth century, especially of multi-lingual dictionaries.

The small archives at Serampore College include some unusual and valuable works on medicine and science including Peter Breton's 'A essay on the Venom of Snakes' in Hindi and Urdu with some very detailed anatomical drawings and a *Materia Medica* attributed to Vifaz Udwiye Abd Allah Nur Aldin. This gives plant names in Urdu and sometime Sanskrit and English. An unattributed manuscript Latin-Chinese dictionary is also in this archive.

Other local archives in the area may provide more information on the English and other European companies. In particular, the museum at Chandannagar holds manuscript materials from the French period.

Goa State Archive, Panaji contains a large collection of Portuguese records from the seventeenth and eighteenth centuries. Documents I looked at were relating to slavery in Goa during the seventeenth century¹¹⁹⁰ and missionary work in Bengal.¹¹⁹¹ The library at the archives is very useful and the archive's publication *Purabhilekh Puratatva* can be bought there. The Central Library in Panaji is also useful and contains several bi-lingual Portuguese and Asian-language dictionaries and

¹¹⁹⁰ Item 860 – Alforria dada aos escravos, 1682-1759.

¹¹⁹¹ Bengala 2760.

some theological works relating to the Jesuit fathers. The Xavier Centre for Historical Research in Alto-Porvorim just outside Panaji has a useful library and the archives contain documents in French, Portuguese and the Modi script (including the Mhamai papers, some of which have been translated in Hindi with English summaries and published by MK Mhamai) relating to eighteenth and nineteenth century trade and religion.

In **Sri Lanka**, I used the archives and libraries in Colombo and Kandy (none of which required a research visa, although letters of introduction are needed). The National Archives in Sri Lanka in Colombo contains the records of the Dutch administration from the seventeenth century.¹¹⁹²

Interesting records here include: 24/1 a Dutch-Sinhalese dictionary; 25/1.2 an English translation of Dutch government regulations; 25/1.3 English translation of Dutch regulations regarding slavery; 25/1.6 'Composition of Malabar laws and customs by Dessare Class Issakz of Jaffnapatam' dated 1707; 25.1/41 – various eighteenth century letters several regarding slavery and its abolition.

Documents of potential interest in the C.P. Bell collection include: 42H – F. Navaretta's account of Ceylon (c. 1671); 308A – Dutch documents on coffee plantations; 313 – Canerolle Sansare – translations of a letter to representatives of the French *Companie des Indes* from King Rajasingha of Kandy asking for help against the Dutch. The library of the Museum in Colombo and of the Social Science Association are useful. The archives in Kandy hold the records of the British administration from 1795. The Museum has a few publications on Kandy's history for sale and there are specialist bookshops in the town. In Peradeniya, the libraries of the botanical garden and the University also hold good collections including many rare books about the history and botany of Sri Lanka.

¹¹⁹² TANAP, 'National Archives of Sri Lanka' (<http://www.tanap.net/content/archives/archives.cfm?ArticleID=201>, accessed 19 July 2010).

APPENDIX 6

Introduction to the Seventeenth Century Records in the St Helena Archives

St Helena is a small island in the South Atlantic Ocean and one of fourteen remaining British overseas territories. Now known mainly as the final place of captivity of Napoleon, the island has a much longer and richer history. St Helena was first discovered by the Portuguese in 1502-5 during Vasco da Gama's journey to the East Indies. During the sixteenth century, the island was visited by travellers as diverse as two teenage Japanese princes *en route* to visit the Pope and an unlucky follower of Alfonso Albuquerque, who was marooned there after defecting to an enemy. It was also the site of what can be described as the first ever 'science fiction' novel, Francis Godwin's 1638 'Man in the Moone'. After being abandoned by the Portuguese, the island passed between Dutch and English hands until 1659, at which point the East India Company established their 'government' there. Apart from one further short period of Dutch occupation in 1673, Company rule endured until the island was transferred to the Crown in 1834. Thereafter, almost every English ship, and many vessels under other flags returning from the East called at the island for refreshment, repairs, and rest, bringing goods, news, and people. The island's population was formed from a small band of initial recruits from England who were Company servants, soldiers, or smallholders, referred to as 'free planters' and their families. They were joined by slaves from West Africa and Madagascar, European and Asian sailors, prisoners, and exiles, and other arrivals including Huguenot refugees from France and the occasional stranded pirate from the Americas.

Like other 'factories', the Governor and Council of St Helena were required to keep detailed accounts of their meetings in 'Consultation Books', as well as a series of 'Letter Books' which recorded all the correspondence sent and received. Two copies of each of these types of record were made, one to be retained by the factory and the other to be sent on a ship returning to England and

kept in the headquarters of the Company. However, the journey back to England was long and hazardous and these documents were often lost or stolen during the voyage, particularly during the early period. This means that the India Office records now held in the British Library are incomplete while those on the island supply a far better picture of its life in the seventeenth century. This is a brief guide to the digital photographs of the collection and the accompanying indexes made during a visit to St Helena during March to June 2008.¹¹⁹³ This work was supported by a Central University of London Research Grant.

East India Company Consultations, Volumes 1-6 (1678-1700), Letters from England (1673-1683) and Goodwin's Abstracts (1677-1713)

Organisation and numbering of digital copies:

A complete index is included here and each DVD has an index to the section of the volume included. The first five DVDs contain one volume each and the last contains the relevant folios of Volume 6, Goodwin's Abstracts and the First Letter Book (LB1). Each photograph is one page numbered to correspond to the folio numbers given at the top of each page. In several of the volumes the folio numbers do not run consistently. Therefore, folios that are not numbered are given the number in sequence. When folio numbers are missing or two different numbers are given this is indicated in the 'notes' column. When two or more folios have the same number this is indicated by (i), (ii) etc. in brackets. This is also used for pages which are not foliated but are interleaved after a page that does have a number.

Language and abbreviations

The text is readable without any background in paleography. Note that because of the gradual

¹¹⁹³ The indexes and a map showing the St Helena trade routes are accessible from *Lives and Letters*, 1 (2009) URL: <http://journal.xmera.org/lives-and-letters-volume-1-no-1-spring-2009/>, accessed 19 July 2010. DVD copies of the images are available from me on request. A copy was also given to the British Library.

transition from the Julian to the Gregorian calendar, the records use either the former or the later or both simultaneously. For example, 1 January 1680 may be written 1 January 1679 or 1679/80 as well as 1 January 1680. The year according to the Gregorian calendar is given in the indices. In some sections of the texts, '7ber' is used for September, '8ber' for October; '9ber' for November and 'Xber' for December. Again, the date according to the Gregorian calendar is always given in the indices. Common abbreviations that occur in the texts include 'y^t' for that, 'w^{ch}' for which and 'y^e' for the, Hono^{ble} 'honourable'. In some places 'v' is used instead of 'u', e.g. 'vpon' is 'upon'. The long 's' also occurs in some passages.

Scope and other collections:

The first five volumes of the records cover the period from 1679 until 1699. Although copies of the records were sent to London, there are significant gaps in the records housed in the India Office collection in the British Library: in particular, there are no records for the period between summer 1676 and spring 1682 or between early 1685 and mid 1694 and none between 1696 and 1699. All of these gaps can be supplied by the St Helena archives. The index to each volume shows which records are duplicated in London. Letters from England to St Helena are preserved in the general 'E' series which contains all letters from the Directors to 'their servants in the East', but separate volumes of correspondence with St Helena preceding the nineteenth century are not preserved in London. The surviving book of seventeenth century letters in the St Helena Archives covers the period 1673-1683, containing letters from England and from several of the factories in Asia.

Goodwin's abstracts, made in 1708, give extracts and notes covering the period from 1673 to 1713 as well as list of rules for slaves made by the inhabitants with the approval of the Governor and Council.

Published accounts of the records:

The main source is H. R. Janisch's *Extracts from the St. Helena Records* (St. Helena, 1885) which presents sections of the Consultations interspersed with letters from London and editorial comments. There is a column in each index showing whether or not the content of each folio was included by Janisch. As for the sections that Janisch does include, he is fairly reliable in most places, the main problem being that it is hard to tell when the records are being quoted directly and when he is summarising them. Many passages also miss out text mid-quote which in some cases changes the sense of the text. In other cases, Janisch notes part of a story but misses out other details, which can be misleading. For example, in some legal cases he notes the punishment but neither the presence of a jury nor the evidence given. These instances have been noted in the column for Janisch.

Another source which makes extensive use of the records is Philip Gosse's *St Helena 1502-1938* (London, 1937). However, this work does not give any references for the sections that have been consulted. A more recent work which directly draws on and references the records for this period is Stephen Royle's *The Company's Island* (London, 2007). Folio numbers given in this work should match those given here. Philip and Myrtle Ashmole's *St Helena and Ascension Islands* (Shropshire, 2000) also draws on the records in its account of efforts to control the destruction of timber and plant life by fencing and culling wild goats.

Overview and points of interest:

The records give a vivid picture of many aspects of early life on the island and can be drawn on by specialist and amateur historians for information about a number of subjects. Some examples are given below. This is not an exhaustive guide and the indexes and images should be referred to for more details.

Crime and punishments: The early records note frequent complaints between the inhabitants for minor crimes such as theft, fighting, and insults as well as the moral transgressions noted below. Vol. 1 fol. 82 orders that these complaints should be brought to the Council monthly. From 1688, a 'Court of Justice' was set up in Session House near Fort St James and the Governor and Council were ordered to sit as a 'Court of Judicature' four times each year (Vol. 3, fol. 3-4). A jury, made up of twelve men of English descent, was called for each session and judged all cases. Some more serious cases also occurred and the evidence, testimonies and judgments are given in detail: for example a trial and verdict of manslaughter is described in Vol. 1 fol. 85 and Vol. 2, fol. 222. A keeper for the prison is appointed in Vol. 2 fol. 15. Punishments ran from fines to the duckings often used for women (e.g., Vol. 2, fol. 18) to 'riding the wooden horse' (e.g. Vol. 2. fol. 3) public whipping at Flagstaff on the naked body (e.g., Vol. 2, fol. 297; Vol. 3, fol. 95) to branding with the letter 'R' ('rogue') (e.g., Vol. 2, fol. 55 and 269) and castration (Vol. 3, fol. 403). In cases of execution, the methods were often extremely violent, including being hung, drawn and quartered or starved to death. Deterrents included forcing other inhabitants to watch and placing body parts in public places. Such punishments were disproportionately inflicted on slaves (e.g., Vol. 2, fol. 268, 390; Vol. 5, fol. 174) and the use of torture to exact confessions from slaves was noted in 1692 and 1697 (Vol.3, fol. 402 and fol. 417; Vol. 5, fol. 64-65). Deportation to Barbados and Bombay was also used for planters and soldiers involved in the rebellion of 1684 (Vol. 2, fol. 138 and 142 and Vol. 3, fol. 149) and disgraced members of the Company were sent to Bencoulen (Bengkulu in Sumatra, renowned in this period as disease-ridden) (e.g., Vol. 3, fol. 1).

Environment, agriculture and conservation: Several conservation projects have aimed to reconstruct the record of indigenous and endemic species of St Helena, as well as the times at which other species were introduced. A list of trees introduced is given in Letter Book (LB) 1, fol. 32v (see also fol. 22 which notes that fruit trees have been sent). The records for this period record

experiments with seeding rice from paddy sent from India (LB 1 fol. 35), the planting of tobacco (Vol. 5, fol. 62), and of grape vines after the arrival of French vintners in 1690 (Vol. 3, fol. 146 and 184). The staple crops of yams and the endemic cabbage trees are mentioned throughout (e.g., Vol. 3, fol. 382; Vol. 5, fol. 57), with shortages of yams after a drought reported in 1699 (Vol. 5, fol. 190 and 200). A scarcity of lemons and fines for inhabitants who gather them is reported on Vol. 1 fol. 39, restrictions on cutting timber are described in Vol. 1 fol. 220 and fol. 229 and Vol. 2, fol. 190 and 198. Goodwin's Abstracts (fol. 39) records concern about the over-use of 'roots and fruits' in distilling arrack, which it is warned may soon consume all the available timber. When the resettlement was made, the Company were required to take all wild cattle into their possession (LB1, fol. 6), from which stock they were to supply each planter family with two cows. Changing policies on culling of wildlife can be traced from the prohibition of killing wild goats in Vol. 1 fol. 21 and Vol. 5, fol. 152 until this was finally allowed in 1698 on the grounds that they were damaging plantations (Vol. 5, fol. 169). In 1674, a stock of Carmentia goats from Persia along with combs were sent from Surat in the hope of encouraging wool production. Swine are mentioned as a problem in the Great Wood and inhabitants are required to mark those that they own in Vol. 1 fols. 52 and 65; Vol. 2 fol. 59; Vol. 3, fol. 374. The taming of wild cattle was ordered in 1678 (Vol. 1, fol. 14).

Fortifications, defences, buildings: Defense was an important consideration in the resettlement of the island. In 1673, inhabitants were granted the right to build houses 'provided they build the said houses regularly in order to a Town of Defense' (LB1, fol. 7r). The records for the years after the re-taking of the island from the Dutch include the fortification of several parts of the island (e.g. Vol.1, fol. 3 records the establishment of watches at five points around the island; the construction of fortifications is recorded from Vol.1, fol. 55 onwards and the fortification of Sandy Bay against a feared attack from France (Vol. 4, fol. 235). The inhabitants are delegated to various points of

defense in Vol. 1, fol. 8. Complaints about failures to attend these points of defence begin on Vol. 1, fol. 35 and also occur in Vol. 1, fol. 424. Depending on the level of the perceived threat from French and Dutch competitors, watches were reduced (as in LB 1, fol. 13 and 16v; Vol. 1, fol. 43) or increased (Vol. 1 f, 160, 396, 425; Vol. 3, fol. 307-308 and fol. 430-432; Vol. 4 and 56; Vol. 4, fol. 211-212). In 1689 (Vol. 3, fol. 123), slaves were also required to participate in the duties of watching. Vol. 1, fol. 45 demonstrates the state of uncertainty that often reigned regarding whether England was currently at war with her European rivals and Vol. 3, fol. 109-122 about the result of the 'Glorious Revolution' of 1688. The construction of a market and store house is recorded in Vol. 2, fol. 106, 119, 185, 225. The rebuilding of Fort House is noted in 1694 (Vol. 4, fol. 122).

Land and inheritance: Planters were allotted land by the Company, which they were forbidden to sell or exchange until they had 'planted and improved' it for at least four years, a period which was later raised to seven years (LB1 fol. 23r; Vol. 1 fol. 238). However, Vol. 2, fol. 77 imposes restrictions on digging, planting and 'improving' land. LB1, fol. 24; Vol. 1, fol. 62 and fol. 277 note the beginning of the surveying and mapping of the island after the inhabitants sought assurances of the security of their land from the Company and details of the history of particular plots of land can be traced through the allocations and exchanges (whether authorised or opposed by the Company) that are recorded throughout (e.g. Vol. 1, fol. 113 on land in Plantation Valley). A jury for 'inquiring about land' was appointed in 1682 based on Company instructions of 1679 (Vol. 1, fol. 281) and registration of land was required in 1684 (Vol. 2, fol. 75). A list of landholders by 1681 is given in Vol. 1 fol. 190. The care of orphans and their land and property is recorded throughout (e.g. Vol. 1, fol. 49, 325, 330, 359; Vol. 2, fol. 46).

Medicine: As many early inhabitants or visitors to St Helena were there as a result of being left sick off one of the ships returning from the East Indies, disease and medicine were important parts of

island life. As well as the official appointments and dismissals of the surgeons which are recorded (LB 1, Vol. 8r and fol. 46; Vol. 1, fol. 402; Vol. 3, fols. 365-6; Vol. 5, fol. 4 and 235) and some complaints about the lack of a surgeon (Vol. 5, fol. 183), there are several references to other inhabitants performing cures (e.g. Vol. 1, fol. 308 and 310; Vol. 2, fol. 50; Vol. 3, fol. 6 and fol. 335). A general epidemic is reported in Vol. 2, fol. 24. Medicine from India is mentioned in Vol. 3, fol. 230 and a chest of medicines and 'chafing dishes' were received in 1694 (Vol. 4, fol. 152). Goodwin's Abstracts also imply that slaves were practising medicine among themselves (fol. 76).

Pirates and 'interlopers': Ships not commissioned by the East India Company sometimes arrived at the island (LB 1 85), and although at first they were officially banned from aiding them, the Governor and Council allowed them to take on supplies (Vol. 1, fol. 186-188). A warning was issued banned them from allowing private ships from using the island to meet ships returning from India, thus evading customs duties (LB 1 fol. 85v). In 1685, a planter was fined for trading with another interloper (Vol. 2, fol. 238). Detailed information about pirates was provided in 1696 by three men who had previously been part of the crew on ships from the West Indies that called at Madagascar, from where they attacked ships trading with Mocha in the Red Sea (Vol. 4, fol. 32). A further account was given by a boy left off a pirate ship which called at both Madagascar and St Helena in 1698 (Vol. 5, fol. 95-97 and 106).

Rebellions and mutinies: A charter preserved in the LB1 and dating from 1673 (fols. 1-4) grants the Governor and Council the power to administer justice including the suppression of 'rebellion, mutiny, or sedition, refusing to serve in a war or flying to the enemy'. The first major rebellion on the island occurred in 1684 (Vol. 2, fol. 108-114), after which all inhabitants were required to take an oath of allegiance and those involved had their land removed (fol. 109). The trials are documented in Vol. 2, fol. 129-34. Assemblies were banned in 1685 on pain of being dealt with as

‘rioters and seditions’. A second rebellion occurred in 1693 in which Governor Johnson was killed by the soldier Henry Jackson (Vol. 4, fol. 1-9). After plundering the fort and destroying the defences by spiking the canons and taking several hostages the rebels escaped in the ship of Capt. Pitt (Vol. 4 fols. 22-35). A planned rebellion by slaves was discovered in 1695 (Vol. 4 fols. 237-260) and eleven slaves were subjected to execution or to receive up to 100 lashes and branding. Planned rebellions or ‘dangerous’ or ‘divisive’ comments are reported on Vol. 1 fol. 158; Vol. 2, fol. 87 and fol. 99; Vol. 3, fol. 73-78). Foreigners like Nicholas Matthews (Vol. 1 fol. 139) and the group of Dutch sailors who visited in 1695 (Vol. 5, fol. 25) were often suspected of planning to betray the island to the Company’s rivals. Inhabitants were also punished for complaints about the Governor and Council and for denying their authority (Vol. 3, fols. 253-256, fol. 337-8 and fols. 444-446; Vol. 5, fols 126 and 175). The incident of Captain Holden’s refusal to obey the orders of the Governor, who he called a ‘rebel’ (Vol. 2 fol. 302-318, 330-363, 379-383) demonstrates conflicts over the nature of the Company’s authority within the Council itself. In 1695, a further rebellion was feared after a conviction for drawing powder from the guns in front of Fort St James (Vol. 4, fols. 222-232).

Religion and morality: Inhabitants were required to make payments towards the building and upkeep of the churches (Vol. 2, fols. 180, 194, 219; Vol. 5, fols. 75-6) and schools in churches are referred to Vol. 1 fols. 13, 142, and 337. Two churchwardens were appointed by the Governors from a list of four suggested by the planters, with their duties being written down in 1697 after some apparent conflict over the office (Vol. 5, fol. 63 and 78). The island often lacked ministers however, a consultation of 1694 noted that there had been no priest on the island for eleven years (Vol. 4, fol. 210). This situation resumed after 1696 when the minister who had been appointed left for the West Indies (Vol. 4, fol. 280). The charter of 1678 and letters from the Directors in London constantly stress the importance of keeping the Sabbath (Goodwin, fol. 3-5) and policing the morality of the inhabitants (LB 1, fol. 21), which is also emphasised in the proclamation of William and Mary

received in 1694 (Vol. 4, fol. 143). The early records contain examples of trials conducted for: breaking the Sabbath (Vol. 4, fol. 256; Vol. 5, fol. 191); swearing or blasphemy (e.g. Vol. 2, fol. 117 and 151; Vol. 4, fol. 213-214); adultery (Vol. 1, fol. 300; Vol. 1 fol. 311); lewdness (Vol. 5, fol. 241), giving birth to an illegitimate child (Vol. 1, fol. 374; Vol. 5, fol. 242); and treasonous comments (Vol. 3, fol. 71). Gambling was also described as a crime to be punished with imprisonment (Vol. 1, fol. 125, Vol. 3, fol. 5 and 105). Accusations of witchcraft appear in Vol. 1, fol. 278 and Vol. 4, fol. 262-278(i) and a slave, Jamy, was burned to death for sorcery in 1693 (Vol. 5, fol. 156). Suicide was punished by burial at a crossroads with a stake driven through the heart (Vol. 4, fol. 273; Vol. 5, fol. 40 and fols. 74-5). In a speech of 1698 (Vol. 5, fol. 113), Governor Poirier explicitly linked such moral transgressions to the earthquake in Jamaica in 1692, warning that a similar fate would befall St Helena if such sins were not prevented in the future.

Slavery and race relations: These records reveal the extent to which St Helena depended on the slave trade in its early years. Most came from West Africa or Madagascar, but some also arrived via settlements in the East Indies (e.g. Vol. 2, fol. 332; Vol. 5, fol. 47). The numbers of slaves owned by planters (i.e. excluding Company slaves) on the island can be reconstructed from the sections of the records in which the inhabitants are required to make payments towards the compensation of owners of slaves who had been executed (e.g. Vol. 2, fol. 284; Vol. 3, fol. 247, Vol. 5, fol. 187). The total number above the age of 15 is given as 200 in 1687 (Vol. 2, fol. 395) and as 127 in 1699 (Vol. 5, fol. 187). The Company expenses also occasionally give the numbers of slaves employed in carrying provisions or working on the plantations (e.g., Vol. 4, fol. 80). Sales of slaves are also reported, with prices given (e.g., Vol. 3, fol. 106-7). The laws relating to slaves that are summarised in Goodwin's abstracts (fol. 71-77) can be traced through the records, often as reactions to threatened or rumoured rebellions by slaves against their masters, especially after reports of such uprisings in other colonies. Concerns about a possible rebellion or take-over by slaves begin with

the trial of Sattoe for murdering his owner John Boston in 1679 (Vol. 1, fol. 67-70) which was followed by rumours about a plot by slaves to cut the throats of soldiers in Lemon Valley and take over the island (Vol. 1, fol. 71). Trial by jury was ruled not to be necessary for slaves accused of offenses in 1686 (Vol. 2, fol. 262). A case of poisoning in 1687 sparked further rumours of a rebellion (Vol. 2, fols. 388- 389 and Vol. 3, fols. 140-144). A plan to run away with the Company's boat was rumoured in 1691 (Vol. 3, fol. 331). A law against trading with slaves was introduced in 1684 after a robbery by slaves (Vol. 2, fol. 21) and Vol. 2, fol. 22 imposes restrictions on slaves going onboard ships and Vol. 2 fol. 274 on going outside at night. A further proclamation warning planters against allowing slaves out at night was issued in 1693 after rumours about a planned rebellion in 1693 (Vol. 4, fol. 64). In 1695 a plot among slaves to cut the throats of their owners, take Lemon Valley fort and leave on the next ship (as the rebel soldier Jackson and his allies had done) was uncovered. Those involved severely punished, with the three identified as ringleaders killed (Vol. 4, fol. 237-260).

These records also record the treatment of the few black people who were not slaves, referred to as 'free blacks'. The family of 'Black Oliver', who was freed after assisting in the re-taking of the island in 1673 (LB1, fol. 9) remained free. His son, Jack Oliver was employed as an apprentice after his death in 1685 (Vol. 2, 244) but was harshly punished after unsubstantiated allegations made against him in 1690 (Vol. 3, fol. 175-6). Martha and Marcy Oliver were both harshly punished for bearing an illegitimate children, one to a planter and the other to a slave (Vol. 5, fols. 57, 86, and 242) and Martha was later deported to Bencoulen for unspecified offenses after giving evidence in an adultery trial (Vol. 5, 209 and 242). Instructions received from the Company in 1673 (LB 1 fol. 9r) ordered that slaves who publicly accepted Christianity were to become free planters after seven years, however, it is not clear from the records whether this order was ever followed and it is significantly absent from Godwin's Abstracts.